Emphasizing symmetry issues in business interaction analysis and IOS

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ABSTRACT
This paper argues for the need to thoroughly understand the issue of symmetry and asymmetry, when analysing business interaction supported by inter-organisational information systems (IOS). Business interaction can be defined as consisting of business communication and exchange of value. Business action theory (BAT) divides business processes into six generic phases encompassing generic, interactive actions between a seller and a buyer. Different types of exchange occur in these phases. However, the BAT phases do not, in the present version, take the issue of symmetry and asymmetry (power between suppliers and customers) into enough account. In this paper, we elaborate the concepts of symmetry and asymmetry in business interaction in order to reach a better understanding of different types of relationships. We also highlight IOS as an important means that can both facilitate symmetry and cause asymmetry in a business interaction. The aim of the paper is to enhance the applicability of BAT for business interaction analysis by including and emphasising the notion of symmetry and asymmetry.

Keywords
Symmetry, asymmetry, power in organisations, business interaction, business action theory, inter-organisational information systems

1. INTRODUCTION
The balance of power between a supplier and a customer in a business relation can be labelled in terms of symmetry and asymmetry (see e.g. [21]). In the case of symmetry, two parties are equal in terms of power, information access, initiatives, commitment and so on. In the case of asymmetry one party in a business relation controls the actions and resources. In the latter case, especially small suppliers or customers may feel "locked in" [19]. Information asymmetry means that there exists a knowledge difference between people or companies that affects their bargaining power [11].

There are different kinds of information asymmetry. There might be asymmetry between organisations acting as customer and supplier in a business-to-business (B2B) interaction. An example of this situation is when the supplier has strategic knowledge about negotiations and agreements with the customer's competitors. Such knowledge can be used for manipulating the customer in different senses, e.g. in order to force the customer to accept a higher price. There are often information asymmetry between customer and supplier in a business-to-consumer (B2C) interaction, as well. The customer may have difficulties in judging whether the price is fair compared to the product quality, for example (cf. The market for "Lemons"; [2]). There are also examples of information asymmetry within an organisation; management may have more knowledge about certain issues than employees or the information access between departments might differ. In this paper, we use an empirical example from an imaginary (virtual) organisation, where information asymmetry between partners occurs, which is yet another example of such asymmetry.

New Internet-based services play an important role in decreasing information asymmetry, as anyone (both employees and end-consumers) are able to access information that earlier was reserved for one certain part (e.g. the supplier). It is now possible to compare prices, examine judgements from previous customers, etc. and this new information obviously changes the power balance between customer and supplier [11].

Both the history, with its traditional power balance between customer and supplier, and the new changing balance in different kinds of electronic commerce settings, imply that symmetry issues are important to study. In this paper, we argue for the need to thoroughly understand the issue of symmetry and asymmetry, when analysing business interaction supported by inter-organizational information systems (IOS). IOS are information systems that in some sense cross organisational boundaries – i.e. support B2B interaction. IOS exists in a dialectic relation with business processes and structure. A higher level of structure and formalization can be a result when using IOS in B2B interaction. This can be a source for conflict or a conflict solving process [22].

Kumar and van Dissel [22] stress that a motive for using IOS is to support and implement co-operation and strategic alliances between two or more organisations. In order to identify and avoid possible conflicts between organisations using an IOS, they develop an interdependency-based typology for IOS, where they distinguish between:

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ICEC'04, Sixth International Conference on Electronic Commerce
Edited by: Marijn Janssen, Henk G. Sol, and René W. Wagenaar, pp 312-318

- Pooled information resource IOS (pooled interdependency)
- Value/supply chain IOS (sequential interdependency)
- Networked IOS (reciprocal interdependency)

These IOS types are ordered along the dimension of interdependency in inter-organisational relationships. Kumar and van Dissel [22] use these three types of IOS to discuss the risks of conflict attached to each IOS type. By doing so, they provide important understanding of how different types of IOS can be handled in order to manage the associated risks in a feasible way. Asymmetry is one of several aspects that can be related to these inter-organisational conflicts. Asymmetry might both be the cause of conflict and the result of conflict.

In B2B interactions supported by IOS, the information systems may have the function of a technical bond. At the same time, linking technology poses specific problems and makes certain activities and adaptations more important than others [19]. As a business relation develops over time, possible technical misfits have to be avoided in order for the relation to be successful [ibid.]. In activities concerning adaptations, avoiding misfits etc. the case of power in a business relation is present – and needs to be dealt with when interpreting IOS. Another important aspect related to the use of IOS is that the role of the technology can change over time. The use of an IOS can start out with the intentions of cooperation and later on be part of a conflict [22]. The IOS can be used as a tool to reenforce domination over trading partners [ibid.] and cause asymmetry in a business relation. Thus, a power shift may occur, as asymmetry in information implies asymmetry in power [11].

The business action theory (BAT) phase model is one of several models for business interaction analysis, see e.g. [18] and [1] for other models. We have chosen to focus on the BAT phase model since it benefits from some characteristics that, we claim, make it useful for business interaction analysis. These characteristics are shortly (see [5] for a thorough discussion of these characteristics):

- The phase division including generic business actions and their corresponding exchanges of communication and value that gives structure to complex business transactions.
- The distinctiveness in business communication, inherited from speech act theory, which implies that e.g. promises, requests, commands, and declarations, are focused.
- The possibility to divide the seller and buyer roles into several co-operating actors, which simplifies the picture of the business transaction compared to only viewing the imaginary organisation as an entity.

Although we argue that the BAT phase model has many advantages compared to other analysis models, we consider it to have one flaw when it comes to handling symmetry issues. Symmetry is only mentioned in BAT when emphasising the importance to study both customer and supplier with equal attention, which we agree upon. Nevertheless, the power balance between the customer and supplier is not made to an object of analysis, which we argue it must be. Therefore, in this paper we use BAT and its phase model for two reasons:

1. As a point of departure for our elaboration of symmetry and asymmetry in business interaction, including the understanding of potential effects of IOS.
2. As an object for further refinement.

The aim of the paper is to enhance the applicability of BAT for business interaction analysis by including and emphasising the notion of symmetry and asymmetry. In order to reach this aim, we will discuss possible effects that the use of an IOS might have, in terms of symmetry and asymmetry, on a business relationship.

The paper is arranged in the following sections; after this introduction we discuss the notion of symmetry and asymmetry in business interaction in the second section. In the third section, we discuss business interaction analysis by introducing BAT, its theoretical sources, and the BAT phases. After this we present our empirical case. In the last section we discuss how BAT can be further developed according to the issues highlighted in this paper. The paper is concluded by a set of questions relevant to ask in order to visualise symmetry issues in different business phases.

2. SYMMETRY AND ASYMMETRY IN BUSINESS INTERACTION

If we take a closer look at symmetry and asymmetry between actors in industrial markets (B2B interaction) they tend to have resources and capabilities that are more balanced compared to typical situations in consumer markets [19]. Buyers in industrial markets tend to have resources (human, knowledge, financial, technological) that are superior to those of suppliers [19]. The amounts of resources that are controlled and the possibilities to exercise influence (for example the power to take initiatives and promote changes, see also [24]), on the other hand, seem to be more balanced. Typical relationships in business networks, thus, appear symmetrical in terms of resources and initiative of the actors (in firms) involved [19].

There will, however, always be ambiguities and contradictory interpretations and interests within every important business relationship. Håkansson and Snehota [19] believe that these aspects are embedded relationships, despite whatever communication efforts that are made. Human actors will have to live with these relationships and network attributes of ambiguities and inconsistencies. The latter is a challenge when designing computer based information systems, e.g. IOS.

In order to discuss symmetry and asymmetry further we use Johnsen and Fords's [21] three types of customer and supplier relationships. They claim that most industrial marketing literature refer to asymmetry by characterising the concept in terms of e.g. commitment, power or dependence. They mean that symmetrical and asymmetrical relationships seldom have been defined and compared in enough detail. In order to handle this research gap Johnsen and Ford [21], thus, distinguish between three types of customer and supplier relationships in their typology; asymmetrical customer-dominated relationships,

asymmetrical supplier-dominated relationships, and symmetrical relationships. The three types of relationships are characterised by its mutuality, particularity, inconsistency, intensity, dependence, and power, in order to offer a thorough understanding of symmetry and asymmetry.

3. ANALYSING BUSINESS INTERACTION

There are many kinds of models that aim at visualising sequential steps or phases along a business process. Håkansson [18] describes a perspective on interaction as a reciprocal action performed both by a seller and a buyer in an interaction model. This model consists of four groups of variables, so-called main elements (italicised below). These main elements have an influence on the interaction between the buying and the selling company: 1) Variables that describe the involved actors, both as *organisations* and *individuals*. 2) Variables that describe the elements and the *interaction process*. 3) Variables that describe the *environment/context* in which the interaction takes place. 4) Variables that describe the *atmosphere* that has an influence on, and is influenced by the interaction. Håkansson's [18] interaction model focuses on a dyad.

Interaction between firms can be characterized in different ways. (1) Complexity, (2) symmetry and (3) informality are structural characteristics of a relationship [19]. The *complexity* in a relationship can comprise the number, type and contact channels for those from each organisation who are involved in a business relation [19]. Also, contacts can vary from level to level between firms. *Symmetry* will be further discussed later in this paper. The relationships often demonstrate a *low level of formality*. Even though formal contracts exist, they are seldom referred to [19].

Generic models for business interaction analysis make it possible to identify and distinguish between different steps or phases, and also to identify feasible ways to integrate information and actions along a business process. We will now introduce the interaction model based on business action theory. The business action theory (BAT) is a conceptualisation of business interaction (business communication and exchange of value). BAT divides business processes into six phases encompassing generic, interactive actions between a seller and a buyer; e.g. offer, order, confirm order, deliver, and pay. The first version of BAT was presented by Goldkuhl [13]. BAT has then been further refined and documented by for example [14], [23], [6], [15], [7], and [5].

3.1 Theoretical Sources of Business Action Theory

A dyad consists of a supplier and a customer performing actions directed towards each other. These actions together form a business interaction. Parts of this interaction consist of exchange of information (i.e. business communication) and parts of it can be labelled as exchange of value, i.e. exchange of products (goods/services) vs. money. The communication cannot be seen as mere information transfer. The business communication consists of communicative acts that include both representation of the world as talked about and certain "relationship creators". When performing a communicative act, an actor is not only presenting some facts of the world but is also doing something when communicating in relation to the recipient; e.g. commitments and expectations are raised.

A theory of business interaction benefits from a genuine understanding of communication. Speech act theory of Austin [3], Searle [25] and Habermas [16] offers a conceptualisation of communication. The main thesis of speech act theory is that all communication should be seen as action and that every such act consists of two parts: 1) The propositional part (i.e. references to the world talked about) and 2) the illocutionary (or performative) part (i.e. the action mode with force to establish different inter-personal relationships).

Austin [3] criticised the "descriptive fallacy" in philosophy and science, i.e. the misconception that language is used only for description of the world. We use language to describe the world, but we also do a lot of other things with language. We promise, request, command, declare, issue, appoint, excuse, and thank for example. Speech act theory has been used as a main source of inspiration for several generic business models. One model describing business interaction and performance is the Action Workflow (AW) model [9]. The basic principles from speech act theory and the ideas of generic acts and phases of business interaction (from AW) form the starting point for BAT.

3.2 The BAT Phase Model

One of the most important parts of BAT is a phase model of business interaction between supplier and customer. These phases are arranged around a business transaction. Business interaction is divided into six generic phases: 1) Establishing business prerequisites phase, 2) Exposure and contact search phase, 3) Proposal phase, 4) Contractual phase, 5) Fulfilment phase, and 6) Assessment phase.

The first phase (1) is concerned with establishing prerequisites for performing business. On the supplier side the keyword is ability. The supplier must have ability (a capacity and a know-how) to perform business; to make offers and contracts and to fulfil these contracts. This ability can exist within the supplier's own organisation or be mobilised by the supplier from external actors. The customer does not have the corresponding ability (or has certain reasons for not utilising such an ability). In the operations of the customer there are lacks and needs which may be satisfied by potential suppliers and their products (goods/services). This first phase represents the processes of establishing prerequisites for business interaction. Business prerequisites are not only placed within the firm itself. To a large extent a firm is interested in combining external resources with their own, as is the case in imaginary organisations like Netshop in our empirical case.

The second (2) and third (3) phases can together be viewed as a business interest stage. In the second phase both parties search for contact. The ability of the supplier is exposed and offered to the market. The lacks and needs of the customer give rise to desire and potential demand, which guide a possible search for products or suppliers. To find each other the supplier and the customer must expose (e.g. advertising) their interests to perform business.

When supplier and customer have found each other they establish contact and perhaps start negotiating (phase three). The communication here can be described as proposal stating.

Bids and counter bids are made. The desire and demand of the customer are expressed. The supplier can make different offers. In many cases there are fixed (and standard) offers, which have to be taken or rejected as such. Proposal is the key notion in this phase. If we analyse proposals from a communicative action perspective, a dual character can be seen. A proposal from a supplier (i.e. an offer) can be seen as both an attempt to influence a potential buyer to make a purchase decision and an expression of willingness to sell under certain conditions.

The negotiation in phase three can be transferred into a contractual phase; i.e. the fourth phase (4). The keyword here is agreement. Customer and supplier come to an agreement concerning the business transaction. The contract is a mutual communicative action expressing the mutual commitments made. This involves a delivery promise of the supplier. The order of the customer also includes an obligation for future payment. We use the concept of contract in a generic sense. We do not presume written contracts – oral agreements can also be the case.

These different commitments must be fulfilled, otherwise the contract is broken. The supplier must deliver and the customer must pay (phase 5). These material actions can be guided and accompanied by different communicative actions. The supplier can for example enclose a delivery slip together with the delivery made.

If not satisfied with the delivery, the customer can make a claim. The supplier is requested to make some modification in the delivery. Correspondingly, the supplier can make payment claims. This is the sixth (6) and last phase that involves assessments of the fulfilment leading to satisfaction or dissatisfaction.

This generic business interaction model describes the inherent business logic when customers and suppliers perform business with each other. It describes generic business actions of both communicative and material character performed by supplier and customer. BAT acknowledges the iterative nature of performing business. There can be iterations within a business transaction between different phases. There is also a cyclic nature of doing business; a performed business transaction will be a basis for future business transactions. Thus, from phase 6 there is a possible return back to phase 1.

So far, applications of the phase model have been focused mainly on dyadic business situations consisting of interaction between one customer and one supplier. This does not, however, imply that the BAT phase model is limited to this kind of one-to-one dyad level. The model can also be applied to illustrate business interactions between several actors [5]. This means that when going through the six phases of a business transaction, different actors act as supplier in different phases (as in the Netshop case below). The two roles of customer and supplier, on the other hand, still exist as a pair throughout the entire transaction.

4. THE NETSHOP CASE – AN ILLUSTRATION OF SYMMETRY ISSUES

In order to reach our aim of the paper, we use an imaginary organisation called Netshop to illustrate some symmetry and asymmetry issues. A case study was conducted in this organisation from autumn 1998 until autumn 1999 [8]. The case study aimed at exploring how co-operation between organisations and information systems is conducted in an imaginary organisation. This was done with an interpretive and qualitative research method, comprising interpretation, pre-understanding and the use of multiple methods and perspectives [10], [26] and [27]. In this paper, however, the Netshop case is only used as an empirical example and the empirical findings from the case study will not be reported here.

The organisation is anonymous in all reporting from the study and has therefore got the fictive name Netshop. Netshop sells a physical product via Internet and has no other market channel besides the Internet-shop. Netshop was established in 1997 and had, at the time of the case study, Internet-shops directed towards the Nordic markets (one shop for each country). The case study was conducted at the Swedish office with ca. 30 employees. Netshop has 3 000 suppliers in Sweden, England, and USA. These suppliers provide totally 2 millions of products to the customers. Netshop is primarily focused on private customers but does also sell to organisations. Netshop does not possess any own product stock. Instead, Netshop orders the products from the suppliers when the customer has ordered the product from Netshop. Thus, Netshop mediates products between customers and product suppliers. Netshop interacts with external actors for logistics, economy, systems development, database design, advertising, graphical design of the web-system, suppliers of products and text writers for the web-system. Netshop is what Hedberg and Olve [17] describe as an imaginary organisation. An imaginary organisation is led and designed by an imaginator (an inter-organisational leader) who brings different actors (other legal units) together to establish an organisation that from the outside looks like one single organisation (i.e. bigger than it really is), but actually consists of different organisations interacting with each other in order to produce products or services for a customer. The interacting parties all possess different kinds of core competencies, which together form a competitive entirety. Hedberg and Olve [17, p. 2] present a definition of imaginary organisations:

Imaginary organisations are organisations where important processes, actors and resources appears both inside and outside the legal unit of enterprise, both outside and inside of the accounting system and of the organisation charts. Market and hierarchies are interconnected through networks of cooperating people and coordinating information technology.

Hedberg and Olve [17] put the "imaginator" or the "director" as a person or role in focus. A role that seems to include the power of the imaginary organisation compared to "external" actors (e.g. product suppliers and logistic partner in the Netshop case, see below) and an illustration of an asymmetrical customer-dominated relationship [21].

Netshop has a web-based IOS for the order and purchase process. The customers place their orders in this web-based

IOS. The external actors; i.e. product suppliers, sales ledger, and logistic partner, have their own internal information systems which they use to interact with the web-based IOS, mainly through sending and receiving files by e-mail. In table 1 below, we present some characteristics from the case.

Table 1 Characteristics of the Netshop case

Characteristics	Netshop
Business process automation	Partly automated. Interaction with the customer is fully automated. On the other hand, the activities to fulfil the business process after the customer has ordered the product is automated to a lesser extent.
Product type	Physical, standardised product.
IS architecture	Distinct inter-organisational IS architecture consisting of clearly defined autonomous IS which interact through computerised messages. The message interaction is governed by mutual contracts between the external actors. Each IS has an own local database, there are no integrated databases.
Netshop's influence on and responsibility for IS architecture	Netshop is dependent on external actors to a high extent. No single actor is responsible for the entire IS architecture. Netshop has designed the IS architecture, but cannot take full responsibility and make decisions about IS belonging to the external actors.
IS interaction	Complex. Each of the external actors has its own IS supporting the fulfilment of their parts of the entire business process. This puts great demands on the IS interaction. In order to make full use of all external core competencies, the IS interaction between all these external systems has to work perfectly. Netshop has 3 000 suppliers, thus, it is not realistic to try to establish IS interaction with all these actors.
Legacy problems	Existing. Netshop has designed its own business process, but has to consider existing restrictions in the external actors' IS.
Strategically importance of external actors	Netshop is much dependent on their external actors, which play important roles in the fulfilment of the business process.
Outplacement of core competencies	The core competencies placed outside Netshop are systems development, IS responsibility, logistics, economy, IS design, and text writing.

4.1 Symmetry Aspects in the Netshop Case

In the proposal phase (BAT phase 2 and 3), the imaginator gives the customer a product proposal based on insufficient information from the product suppliers. There is no promise from the product suppliers that they will be able to deliver the products that the imaginator offers to the customer. This implies that the imaginator at that stage cannot know if the proposal is possible to fulfil. The customer has to consider a "fictive" proposal that might be rejected by the imaginator in the next business phase (4). On the other hand, the customer does not have the same freedom to change his or her decision later on in the business process. Thus, there is an information asymmetry between the imaginator and the product suppliers, which is hazardous for the imaginator's reputation and implies a risk for the customer. Due to the design of the web interface, many customers do not understand that the proposal is fictive. Naturally, they become disappointed when they are informed that the ordered products will not be possible to deliver.

In an imaginary organisation, the business process might be designed in different ways so that dependencies on actors outside the imaginator's occur in different phases of the business interaction. The power and control of the business interaction might be more or less symmetrical, depending on which core competencies that are possessed by the partners. In the Netshop case, the imaginator is most dependent on its business partners in the most critical phase of the business transaction; i.e. when the agreement of the customer's and the supplier's mutual commitments is going to be fulfilled. This implies that the imaginator does not control the fulfilment phase (5), but are relying on the product suppliers, the sales ledger (invoicing), and the logistic partner (deliverance) in this phase. There is a power asymmetry caused by the design of the business process in this case.

The web-based IOS is used for handling customer orders (the purchase process at the imaginator's), but much of the business communication between the business actors are made by sending files and documents via e-mail, fax, or mail. Many ineffective, manual or semi-manual, ways of communicating business information might be the result of an emerging business interaction rather than a designed interaction based on proper analysis. The illustration of the Netshop case implies that an extended IOS, developed for the entire imaginary organisation, would possibly simplify matters and make business communication more effective and reliable. An extended IOS solution could also imply that some of the asymmetry problems, mentioned above, would be possible to solve, e.g. the insufficient information from the product suppliers.

5. DISCUSSING SYMMETRY ISSUES IN BUSINESS ACTION THEORY

In this section we use the discussion of symmetry and asymmetry, sometimes caused by an IOS, in order to refine and improve business action theory. We distinguish symmetry and asymmetry in a perspective sense, when viewing a business relationship, from the power balance within the relationship.

5.1 Symmetry and Asymmetry in Perspective and Relationship

The BAT phase model is an interaction and exchange model. It avoids building a theory of one party viewing the other one. This is often done in much marketing literature; an active supplier influencing a passive customer. Such uni-direction has been criticised (e.g. [12] and [4]. Instead, a more symmetrical model is sought.

The view with an active supplier influencing a passive customer is rejected. In the basic model of BAT the two roles have been given equal importance. ([14] p. 14)

This is also in accordance with communicative action theories making sender and recipient equally important in a basic theoretical stance, cf. Habermas [16, p. 323 f].

Our argument here is that there has to be a clear distinction between symmetry vs. asymmetry in the *perspective* of the viewer and the used *framework* on one hand, and the *actual business relation* between the two studied parties (and their interaction) on the other hand. This does not mean that an analysed business relation needs to be, or should be symmetric to be successful in some sense. Asymmetric business relations can also be successful for both customers and suppliers. The most important aspect, from our point of view, is that the perspective does not a priori take one part's side that has an influence on the analyst and the analysis.

In our empirical example we have highlighted IOS as an important means to both facilitate symmetry and cause asymmetry in a business interaction. In order to develop IOS that support B2B interaction between customers and suppliers reducing the potential conflicts, these characteristics are important to consider. For the refinement of BAT this means that IOS for B2B interaction should be viewed as tools both possible to support and strengthen the relationship *and* as potential sources to conflict if not handled in a suitable way. Kumar and van Dissel [22] suggest that we need corporate "statesmen" to nurture the co-operation by anticipating potential risks and manage them proactively. This is close to the "integrative relationship" mentioned by Johnsen and Ford [21], meaning that both parties in a relationship have to be prepared to integrate, adapt, and develop their resources and activities for the benefit of the other in order to be able to create a long-term sustainable relationship.

5.2 Using the BAT Phases for Questioning Symmetry in Business Interaction Analysis

In this subsection we present some examples of symmetry and asymmetry and IOS use related to the different business phases in BAT. We also use the BAT phases to address symmetry questions that are important to take into account during business interaction analysis.

In an asymmetrical relationship, where the customer or the supplier dominates the relationship, the goals and interest concerning IOS use can be related to different phases of an exchange process. In the BAT fulfilment phase, for example, the information need can be influenced mainly by one part's interest concerning the amount of information, its presentation, and standard. The weaker part merely adopts to the situation. In a symmetrical relation these aspects can be more commonly defined, agreed upon and benefit both parties. Direction of interaction can also be dominated by one part if the relation is asymmetrical, if we follow Johnsen's and Ford's [21] line of thinking. A dominating customer for example may use interaction and IOS to gain access to, and information from, a supplier's unique resources, capabilities and know-how (business prerequisites in the BAT phase model).

In an asymmetrical relationship the risk for inconsistencies may be high because of lacking intensity of relationship leading to ineffective B2B communication [21]. Discussing this aspect related to IOS there is a high risk that conflicts and misunderstandings occur and are built in, in the IOS. Each party has its own focus and priorities are not mutual. Related to BAT this can effect the contractual phase when defining the promises. If the relation is more symmetrical the risk of conflicts and misunderstanding in this phase can be reduced.

In table 2 below, we summarise this discussion by putting forward a set of questions related to the BAT phases. By asking these and similar questions, symmetry issues are focused in a way that facilitates that the power balance between customers and suppliers is designed in a conscious way. The questions are related to different business phases, which help us to recognize how symmetry issues affect different stages of a business process.

Table 2 Symmetry questions related to the BAT phases

BAT phases	Questions relevant to ask
1. Establishing business prerequisites phase	Is the business process designed in a way that creates unintended and ineffective dependencies and power structures?
2. Exposure and contact search phase	How does size, information access, economy, technology adoption, etc. affect the possibility to find customers vs. suppliers in this case?
3. Proposal phase	Is the information access sufficient to make reliable proposals? Does the IOS reflect the status of the proposal?
4. Contractual phase	Is there an information asymmetry between customer and supplier? Is this intended? What kind of promises are made and by whom? Is the IOS transparent enough to give a proper understanding of the mutual commitments made by customer and supplier?
5. Fulfilment phase	Who controls the fulfilment? Are actors from different organisations (legal units) involved? Is the fulfilment phase designed in an intended and efficient way or the result of an evolving process in an ad hoc manner?
6. Assessment phase	How is responsibility divided between different actors inside and outside the organisation? Who handles complaints and problems?

5.3 Concluding Remarks and Further Research

In this paper we have used BAT as a means to discuss business interaction, especially focusing on the issues of symmetry and asymmetry in customer and supplier relationships. We have done this with two aims. First of all we wanted to gain further understanding about dyadic analysis of business interactions by elaborating the concepts of symmetry and asymmetry. In order to reach this aim we have discussed what possible effects the use of an IOS might have, in terms of symmetry and asymmetry, on a business relationship. Secondly, we aimed at elucidating and improving BAT by including this discussion into the theory and also showing that the BAT phases can be used to illustrate how a specific power balance

between a customer and a supplier may effect different business phases.

Further research concerning conceptualisation of the BAT phase model based on the findings above is needed. This conceptualisation must for example be tested when analysing business interaction and IOS use in other empirical cases. More theoretical work concerning the relation to previous IOS research also has to be done.

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