

Towards the concept of business action media – frameworks for business interaction in an electronic marketplace setting

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Abstract

This paper concerns support for understanding business interaction. The aim is to compare and enrich two existing theoretical frameworks with such a scope. The two frameworks have proven useful in interpreting interaction in contemporary business settings. Both the so-called MRM (Media Reference Model) and the BAT-model (Business interAction & Transaction framework) has been used to understand interaction on various types of electronic platforms. The comparative study has been carried through in two steps: (a) by outlining key concepts and constituents of the two models, and (b) by doing a comparison using an empirical illustration of a so-called B2B electronic marketplace. The result supply knowledge on how to complement insights from the two frameworks. This complementary view gives a more comprehensive base, founded in the introduced phenomena business action media, for understanding business interaction on electronic platforms.

Keywords: Business communication, electronic marketplaces, business action media

1 Introduction

It is today common that IT is used as a mediator in business interaction. Different business models evolve in which IT plays a vital role. In contrast to conventional information systems other demands are put upon such systems. One such demand is the integration between the business processes and the role of the IT-system (Österle, 1995). IT-systems need to be a part of and support different patterns of interaction in and between different organisations. In the era of electronic commerce, inter-organizational IT-applications have become a part of many companies' everyday business life. Such applications differ from traditional intra-organisational information systems. This also means that when developing IT-systems for business interaction there is sometimes a need for support that goes beyond traditional ISD methods (Alter et al., 2001). Beyond ISD methods, there is also a need for appropriate conceptual frameworks when developing such applications, Frameworks for business interaction have been presented by a number of scholars; confer e.g. Ahlström (2000) for an overview. A well-known reference model for electronic markets, the so-called Media Reference Model (MRM), has been presented by Schmid and Lindemann (1998). Within the so called language/action tradition there are several business interaction frameworks, see for example Medina-Mora (1992), Goldkuhl (1998), Weigand and van den Heuvel (1998), Dietz (1999) all building on the speech act insights from Searle (1969). These approaches are important since they emphasise actions, communication and interactions in the relations between customer and supplier.

One setting within electronic commerce is marketplace interaction. This phenomena means that there is a mediator, between suppliers and customers facilitating

business interaction. The concept of *market* was introduced in the English language during the twelfth century and then referred to locations for livestock trade (Selz, 1999). The Greek equivalent *Agora* is even older and denotes the ancient city square where attendees met to trade and socialize (Zimmermann, 1995). Today the term market still depicts the same economic mechanisms for directing business interaction. A market can according to Bakos (1998) be characterized by three main functions (1) the matching of buyers and sellers; (2) the facilitation for information-, goods-, service- and payment exchange and (3) the supplying of an institutional infrastructure (a legal and regulatory framework). The impact of physical constraints regarding a specific *place* has yet decreased. *Electronic marketplaces* (EM) of today's electronic commerce reality might imply world-wide access to IT-enabled Agoras with various directions:

An electronic marketplace (or electronic market system) is an inter-organizational information system that allows the participating buyers and sellers to exchange information about prices and product offerings.
(Bakos, 1991, p. 296)

Bakos definition should be understood as including the least common denominator. Contemporary marketplaces are not restricted to the exchange of offerings and price information, but do often enable means for thorough business execution. The inter-organizational aspect is explicit when the buyers and sellers consist of companies and/or public sector actors (cf. Covisint (<http://www.covisint.com>) in the car industry or the Nordic marketplace IBX (<http://www.ibx.com>). The interest of this paper is set on so-called business-to-business oriented marketplaces. Another crucial point is that our notion of an electronic marketplace does not include just any Internet based platform with trading capabilities. A website where one company provides ordering facilities for its own customers is thus not to be regarded as a marketplace in this sense. A contemporary marketplace is, in our view, often enabled by a web-based system where different customers (C) may carry out business interaction with many different suppliers (S) (Figure 1). The marketplace is operated by a mediating third part – a marketplace host (H).

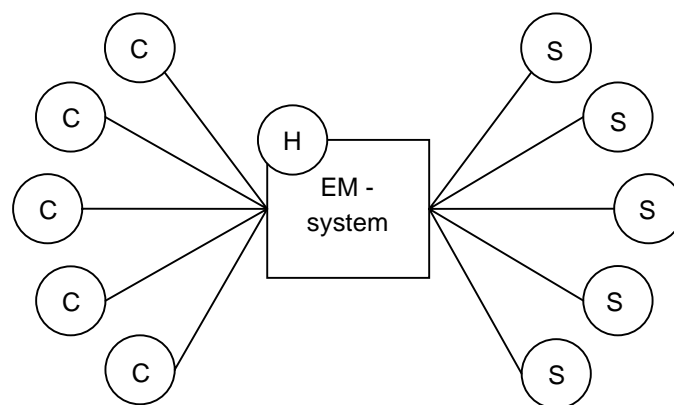


Figure 1: An Electronic Marketplace enabled by an EM-system operated by a host (H) as mediator between many customers (C) and many suppliers (S)

BAT and MRM has their merits and shortcomings. The aim of the paper is to compare and enrich these two existing theoretical frameworks for enhancing the development of business interaction. The two frameworks, the BAT-model (Business interAction & Transaction framework) and MRM (Media Reference Model), have proven useful in interpreting interaction in contemporary business settings. They however direct attention towards similar, but also different aspects of business interaction. Both these frameworks have been used to understand interaction via various electronic platforms (see section 4.3 below).

The paper is structured in the following way. First we introduce a fictitious example covering an electronic marketplace setting followed by a description of our research method. The example is based upon experiences and insights concerning electronic marketplace research (Pettersson, 2002; Ågerfalk and Pettersson, 2002) and used here for the sake of obtaining a straightforward illustration of ideas. Secondly we present the constituents of the two theoretical frameworks. The presentation is followed by an analysis where crucial similarities and differences are identified as aspects for elaboration. The aspects are presented according to two main themes and concern both framework application and theoretical foundations. The concluding section then summarises the elaborated aspects and draws upon how the two frameworks could complement each other (as suggestions for further research).

2 Electronic marketplaces - an illustration

This section will be used to outline a brief, fictitious electronic marketplace scenario. The purpose of the illustration is twofold: first it used as a reference during analysis and secondly to complement the definition of electronic marketplaces presented above.

Scenario: a consortium in building materials operates our fictitious *third party* marketplace 'EMEx'. Operating the marketplace means owning the inter-organizational system and mediating the exchange between buyers and sellers (c.f. Bakos definition above). The building material consortium hence adopts the role of *host* and has a central role as responsible for the information system. The host role can be expressed in terms of responsibility for the systems *action potential*, i.e. being responsible for the repertoire of tasks that can be fulfilled by using the system (Ågerfalk and Pettersson, 2002). The scope of the marketplace is to match wholesalers and retailers (e.g. hardware- and "do-it-yourself-stores") to cut transaction costs for retailers. I.e. sellers – wholesalers in constructions – are being exposed to competition while the buyers cut costs when it comes to finding products and business partners.

EMEx is thus *buyer centric* – the marketplace is based on a retailer interest and offers a variety of services for its participators. The EMEx services are accessible through the joint web-based information system that also is partly open to everyone through public Internet access. Our marketplace has a functionality that is supported by three main services (see Figure 2). The services are (1) an *electronic catalogue* service a (2) *request for quotation* service and finally a (3) *rating functionality*. This means that this marketplace does not support all stages of communication in a business transaction. These circumstances are quite common when it comes to real world marketplaces (Grieger, 2003). Some parts of the business transaction needs to be handled by a direct contact between the particular retailer and the particular wholesaler.

The first service – the electronic catalogue – is a database system that provides a possibility for retailers to search for products and suppliers. Some wholesalers in the

catalogue are represented just by contact information and product repertoire while others present offers through the system. The electronic catalogues of EMEx thus include online order functionalities where retailers can put their orders. The second main service provides means for making so-called *request for quotations* (RFQs). That is a possibility for buyers to announce their needs to buy something in an open list visible to all participants. There is also a more fine-tuned, tailored subscription feature, where automatically filtered buyer-requests are sent to specific sellers.

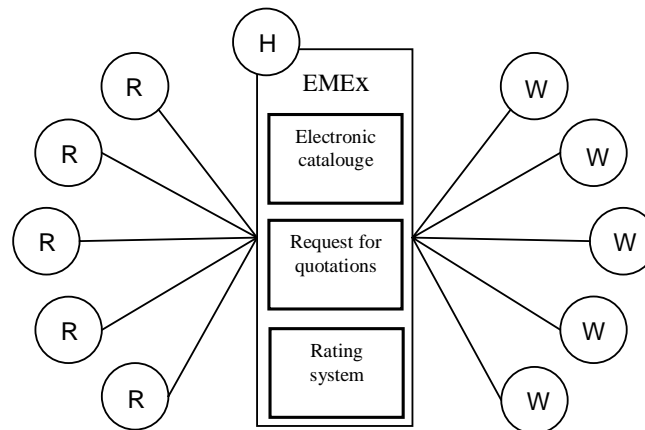


Figure 2: The host (H) provides services for mediating retailers (R) and wholesalers (W) on the EMEx marketplace

The rating functionality is enabled by a database where the retailers' opinions of conducted business interactions are stored. This record of wholesaler 'behaviour' is free to access for all marketplace participants.

3 Research method

This research involves a comparative approach by studying similarities and differences between the two frameworks – MRM-BM and BAT. Our goal is to compare and enrich these two frameworks for business interaction. The enrichments are driven by an interest to create something that includes positive characteristics from the two frameworks. This approach is closely related to theoretical matching according to what Cronholm and Goldkuhl (2003) refers as 'multi grounded theory'. An (inductively) evolving theory is then confronted with other existing theories.

We are also inspired from a dialectic research approach in which positive characteristics are identified from contrasting two objects (the thesis and the antithesis) against each other. This in order to develop something (the synthesis) that avoids negative characteristics within each object (Skirbekk and Gilje, 2001). The analysis performed in this paper is thus driven by a dialectic approach complemented with a fictitious and illustrative example for identifying pros and cons with the two frameworks.

The fictitious example has the role of directing attendance towards important aspects of business interaction in a marketplace setting. Empirical data from real applications has not been used since the purpose is rather to add a generative and illustrative

tive power to the analysis. One could of course argue that a real world example and gathered primary data would increase the reliability of our propositions. We surely hold this to be true, but believe the fictitious illustration to serve our purposes for pinpointing our ideas. The next step of further research would preferably include more of traditional empirical grounding (c.f. Cronholm & Goldkuhl, 2003).

4 Elaborating on models for business interaction

By model we mean a simplified view of reality (which in this case is about business interaction). Another notion is that such simplified view of reality illuminates certain aspects but also leaves other aspects in the backcloth. This implies that one model of reality does not necessarily have to be more ‘true’ than another one – it is often a matter of perspective and focus. This analysis can therefore be expressed as an endeavour to combine two ways of looking at business interaction. Before comparing two theoretical models, it is suitable to present arguments on why the models are at all comparable. The line of arguments takes the three following themes as point of departure: (1) claimed *scope and pragmatic impacts*, (2) areas of *model implementation*, and (3) basic *unit of analysis*. Our claim is that similarities according to these themes speak in favour of the possibility and fruitfulness of doing a comparison as a basis for a combination.

4.1 Similarities in scope and pragmatic impact

The first aspect is similarities in scope and pragmatic impacts. MRM (and thus MRM-BM see section 5.1 below) is claimed to provide a structure for modelling the application of media in e.g. electronic commerce. According to Lechner et al. (1999, p. 96): “The MRM defines which communication acts have to be distinguished, captured and distinguishes the semantics of those communication acts and provides a generic structure according to which communication acts can be described.” The explicit focus of BAT is (a) to enable understanding of business processes and (b) to constitute a framework for evaluation and design of such processes and its supporting information technology (Goldkuhl, 1998). The claim is also that by using this theoretical point of departure one utilizes a perspective that takes a symmetric position when addressing business communication. The view on business processes in BAT is founded in communicative and material actions for business interaction. We thus understand both models to be based on an ‘instrumental’ view on theory. The two models share a pragmatic scope in their explicitly stated aim to be used for *design* of business interaction.

4.2 Similarities in model implementation

Both models have been applied by scholars in various, contemporary business contexts. An examination of articles covering those applications gives a picture of clear similarities: MRM-BM as well as BAT has been used for understanding *electronic marketplaces* (as defined in section 1 above) in Zimmermann (1997) and Schmid (1999) respectively Petersson (2002) and Ågerfalk & Petersson (2002). Both models have also been used for understanding so called *virtual organizations*, see Selz (1999) and Axelsson (2003).

4.3 Similarities in unit of analysis

MRM-BM divides a process of business communication into different phases delimited by the sender's intended meaning by sending a message (Lechner et al., 1999). E.g. the intention behind confirming an order, sorts such a *message* to the MRM-BM contracting phase (see section 5.1). BAT also uses this aspect expressed as the *illocution* of a message when dealing with so-called *business acts* as the constituent of business communication (see section 5.2).

5 Two frameworks for business interaction

In this section the two theoretical frameworks will be further outlined and discussed. At this stage, it is crucial to make explicit that each model are a member of a larger 'theory family'. That is, MRM-BM is a subset of 'media reference theory' and thus has a number of siblings directing other aspects of IT-mediated communication (Schmid, 2002). BAT on the other hand constitutes a part of 'socio-instrumental pragmatism' a generic theoretical body also addressing communication but from an explicitly action oriented perspective (Goldkuhl and Röstlinger, 2002).

5.1 MRM – Media Reference Model

The *media theory* presented by Schmid (1997) has been used as a point of departure for understanding various contexts induced by IT (e.g. Lechner et al., 1999; Selz, 1999; Greunz and Stanoevska-Slabeva, 2002). The *media reference model* (MRM) is a conceptualization that have been used to outline implementations in mainly four different settings: online communities, knowledge transfer, product design and business interaction (Schmid, 2002). MRM provides a structure for modelling media and capturing what is to be modelled. The interest of this paper, regards the applications of media in electronic commerce and thus using this concept for understanding a setting of business interaction. Such applications have been studied in e.g. Schmid & Lindemann (1998) and Greunz & Stanoevska-Slabeva (2002) by the help of what is today referred to as the *MRM Business Media* (Schmid, 2002). MRM Business Media should be understood as an applied version of the generic MRM model while we will use our own acronym MRM-BM in the subsequent text. Before outlining the actual model it would be suitable to introduce the key concepts of the media theory. Metaphorically, media is anticipated as "spheres for communities of agents"(Lechner et al., 1999, p. 94.). Further a medium is defined as:

A medium consists of a channel system for the transport of information over space and time, a logic, for capturing syntax and semantics of the information and an organizational system (roles and protocols) for structuring the behavior of its agents. (Lechner et al., 1999, p. 95)

A medium comprises three components: first the medium constitutes what is called a logical space through a shared syntax and semantic system for the information to be communicated. The structure of the logical space is closely connected to the specific domain a medium supports. Secondly, the medium contains a channel system for carrying information – this is the physical part of the medium – its (IT-) platform. The third component concerns the medium as organizational system where the participating agents' expected behaviour is formalized. Different media imply different

roles expressed as protocols of interaction. The notion of a medium is thereby broad and “applies to artefacts, social systems as well as artefacts embedded in social systems” (Lechner and Schmid, 2001, p.2). When a medium is used primarily for business communication between agents it can be labelled a business media. Thus when addressing electronic marketplaces, such as the likes of our EMEx example (see section 2), the media perspective gives the following interpretation:

Electronic markets are addressed as a medium which enables agents to perform market transactions local and (partly) time independent, and which support the agents in all transaction phases with the desired functions and services. (Gisler et al., 1999, p. 4)

Figure 3 depicts the graphical illustration of MRM-BM and shows its division into horizontal views (or levels) and vertical phases. Using the uppermost view one considers an electronic marketplace as a *business community*. The community, constituting an arbitrary third party marketplace, involves actors in roles such as *operator (host)*, *buyers*, *sellers* and/or *information suppliers* (Schmid and Lindemann, 1998). A marketplace host offers the technology and is responsible as guarantor for certain aspects of quality regarding the marketplace services. The host can therefore be seen as a trusted third party that buyers and sellers commission to act as intermediary.

The next MRM-BM level – the implementation view – highlights the business interaction that takes place between the marketplace actors. Below follows the transaction view where various marketplace services provide means for executing the processes. This is handled by a set applications dedicated for different types of transactions. At the bottom level lays the infrastructure view, focusing on the enabling technology.

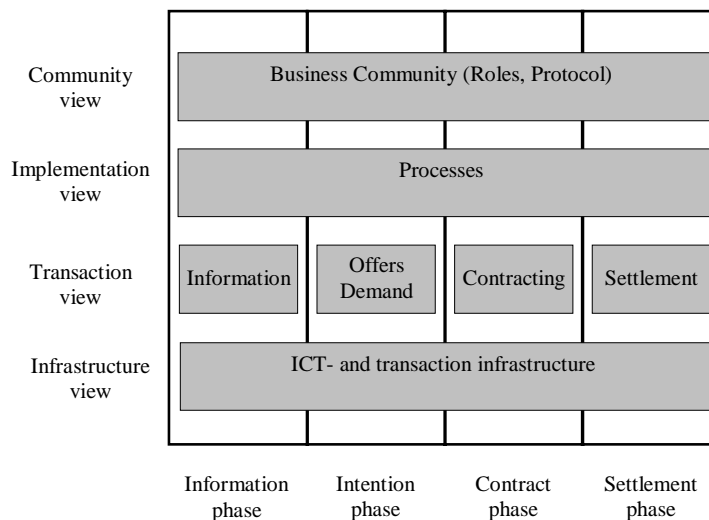


Figure 3: The Business Media Framework of MRM-BM (Schmid, 2002)

The vertical sections of MRM-BM (see Figure 3) depict four different phases of business communication. The following description of MRM-BM phases can be

found in various sources (cf. Schmid and Lindemann, 1998; Schmid, 1999; Lechner and Schmid, 2000; Lechner and Schmid, 2001; Greunz and Stanoevska-Slabeva, 2002; Schmid, 2002).

The first phase of business interaction is the *knowledge phase* where the different actors communicate assertive information about each other, the business context and the medium itself. In MRM terminology this is about agents sharing knowledge about the shared logical space (as discussed above). The knowledge phase is thereby setting the prerequisites for the interaction in the remaining phases.

The second phase – the *intention phase* – is about agents signalling their intentions. Agents express their needs, according to the linguistic rules established the first phase. *Supply* and *demand* are the two typical types of communicated intentions according to MRM.

The third phase is the *contracting phase* where messages become binding. This means that messages such as offers and counteroffers turn into obligations between participating agents if the negotiation is successful. The typical messages of the contracting phase are offer, counteroffer, acceptance and rejections.

The last MRM-BM phase is the *settlement phase*. This is when agents act following the contracts. These actions include shipping goods and handling payments.

5.2 BAT – Business interAction & Transaction framework

The BAT-model is a six-phase model describing a generic business interaction logic (Goldkuhl, 1998). The basis is about one party having capability (= supplier) and another party lacking capability (= customer). These capabilities are developing (on each side) during business interaction. BAT describes interaction between particular actors as well as interaction when expressing a general interest aiming at potential customers/suppliers (Goldkuhl and Lind, 2004). Two levels of business interaction are thus distinguished; the market level and the dyadic level (see Figure 4). On the market level suppliers and customers search for knowledge and contacts concerning the correspondent party. On this level there is also an exposure of a supplier's capability towards a market of customers and vice versa. The interaction on this level is, according to BAT, driven by a *general business interest* of both suppliers and customers.

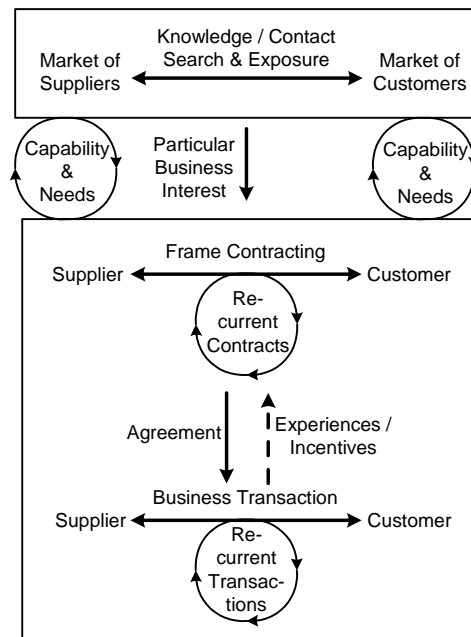


Figure 4: Levels of business interaction (Goldkuhl and Lind, 2004)

When a contact is established between a particular supplier and a particular customer, the general business interest is turned into a particular business interest. The business interaction moves to the dyadic level. On this level there is a distinction made between frame contracting and business transaction (see Figure 5 and Figure 6). Sometimes frame contracts govern business transactions. Other times business transactions are instead governed by separate (single) transaction orders and no frame contracts exist.

Figure 5 depicts that frame contracting consists of two phases of exchange prior to recurrent business transactions (covered in Figure 6) and a phase of assessment after the realisation of these business transactions. The frame contract agreed upon in the commitment phase of frame contracting thus governs the realisation of business transactions.

From figures 4, 5 and 6 it can be derived that there are a number of phases of interaction covered in the BAT-model. A phase is distinguished by the type of exchange made between the parties in the business interaction. In the BAT-model both communicative and material exchanges are acknowledged.

If one considers the case of realisation of one single business transaction the phases of interaction covered are:

1. knowledge/contact search and exposure
2. exchange of proposals
3. exchange of commitments
4. exchange of fulfilments and
5. exchange of assessments.

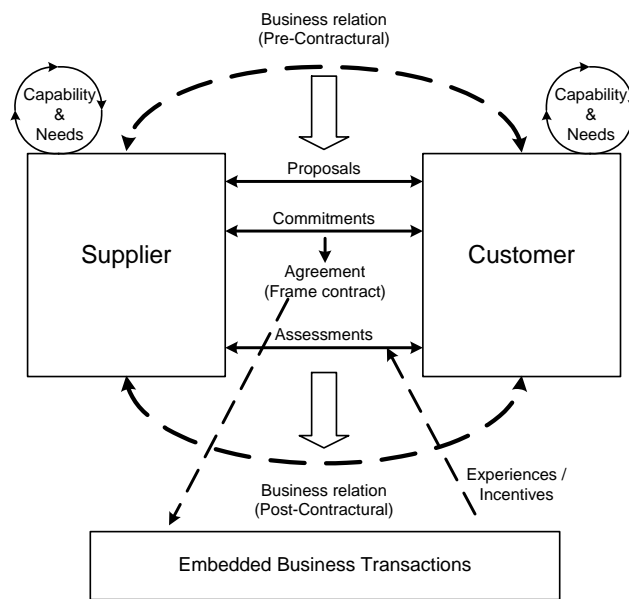


Figure 5: Frame contracting (Goldkuhl and Lind, 2004)

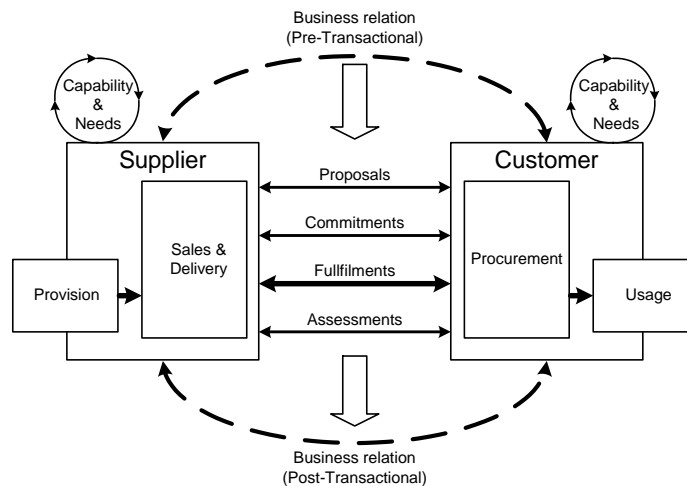


Figure 6: The business transaction (Goldkuhl and Lind, 2004)

In the case of realisation of one frame contract embedding several business transactions the phases covered are:

1. knowledge/contact search and exposure
2. exchange of proposals (frame contract level)
3. exchange of commitments (frame contract level)
4. recurrent business transactions involving:
 - (exchange of proposals)
 - exchange of commitments
 - exchange of fulfilments
 - exchange of assessment
5. exchange of assessments (frame contract level)

The BAT-model proposes different aspects of *dynamic* business interaction. This concerns the continual development of capability, needs and business relations. But also recurrent frame contracts and business transactions based on made assessments. The basic unit of analysis is the business act, which is a component constituting of action pairs, exchanges, business transactions and transaction groups (Lind and Goldkuhl, 2003). The model is characterised as a comprehensive framework that (Goldkuhl and Lind, 2004):

- see business action as a building block,
- emphasise the exchange character of business interaction and
- adopt a symmetric view on business parties and their interaction,
- acknowledge both communicative, material and financial interaction.

The BAT-model is a generic framework for business dyads to be understood as a pragmatic instrument. The scope of the model is to be used for evaluation, modelling and design of business interaction (Lind and Goldkuhl, 2003).

As mentioned above this model is a conceptualisation belonging to the ‘theory family’ of socio-instrumental pragmatism (Goldkuhl and Röstlinger, 2002).. A related concept of interest here is then information systems actability (ISAT) According to this view a computerised system is an action system (*ibid.*). It is both an instrument for performance of action and a support tool for humans to perform their actions. Information systems should be actable. IS actability is defined as “an information system’s ability to perform actions, and to permit, promote and facilitate the performance of actions by users both through the system and based on information from the system, in some business context” (*ibid.*). The theory of information systems actability has two essential ingredients. The first one is the distinction between three type of IS usage situations:

- Interactive usage situation (where users performs actions interactively together with and through the system)
- Automatic usage situations (where the system performs actions by itself based on predefined rules)
- Consequential usage situations (where users performs actions based on the information from the system)

Sjöström & Goldkuhl (2002) have further related these different usage situations to different types of actions. The claim is the need for focusing on social actions and the action relationships between the involved actors instead of focusing usage situations. Thereby the focus is set on human-to-human communication in which the IT-system takes part. The different types of actions acknowledged in this context are interactive action, automatic action and consequential action (*ibid.*). The second ingredient is the interpretation of an IS as consisting of (Goldkuhl and Röstlinger, 2002):

- An *action potential* (a predefined and regulated repertoire of actions)
- *Actions* performed through and by the systems
- An *action memory* (a memory of earlier performed actions including prerequisites for actions)
- *Messages* and *document* (where some documents are action media for user's interactive actions)

From a BAT view this imply that computerised information systems is to be understood as supporting as well as performing actions in business interaction. In the latter case, the IT-system is an artificial agent performing actions on behalf of an organisation (customer and/or supplier).

6 Analysis

The following analysis will discuss comparison and possible enrichment between the two frameworks MRM-BM and BAT. As the descriptions of section 5.1 and 5.2 have shown, both frameworks pinpoints a set of interaction phases. The principles of phase division are in rough outline the same (see section 4.3) and may therefore serve as point of departure for the following analysis. We will conduct this by using the simplified illustration in Figure 7 below.

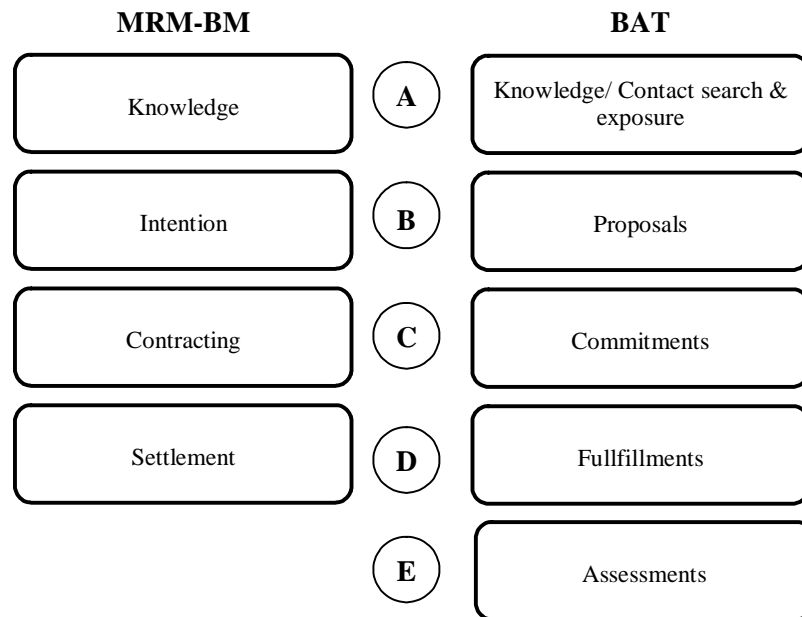


Figure 7: Phases of business interaction according to MRM-BM and BAT

The figure depicts the phase divisions according to MRM-BM and BAT. The figure is a simplification to serve our comparative purposes. One such simplification is that the phase borders are not exactly equivalent in the two frameworks. The figure however gives an overall picture of the similarities and differences between the two frameworks.

6.1 Creating knowledge as a basis for business interaction

Both frameworks articulate an initial phase that (phase ‘A’ in Figure 7) that embraces creation of knowledge as a prerequisite for further communication. There is however an interesting difference between the frameworks here. The MRM-BM framework emphasises the need for agents to understand (and accept) the conditions for further communication by “establishing the logical space” (Lechner and Schmid, 2000). The logical space embraces a need for knowledge about a domain (e.g. a market) as well as knowledge about the medium itself. The latter theme is the most prominent in MRM and concerns semantics, syntax and rules for agent communication within a particular media. BAT on the other hand has the focal point on capabilities of sellers and buyers. As mentioned in section 5.2 seller capabilities can be addressed as *business ability* i.e. seller’s know-how and capacity in financial and material assets (Goldkuhl and Röstlinger, 2002). The lacks and needs of buyers can hopefully be matched to and fulfilled by certain supplier abilities. BAT does not explicitly pinpoint the inherent effects of IT-mediation. This aspect has been touched upon as an announced area of improvement in BAT(Goldkuhl and Röstlinger, 2002) but becomes salient in the comparison to MRM-BM.

This issue is a possible area of complementation between MRM-BM and BAT. Bearing the EMEx illustration and Bakos (1991) marketplace definition in mind imply that the actual shaping of the medium itself effects the possibility to do business.

This would be true for both wholesalers and retailers in our example. Awareness and know-how regarding certain EMEx features would for instance have an impact on actor trust. It is a matter of what Keen (2000) addresses as obtaining “trust by design”. Knowing how to use the EMEx rating functionality could for instance assist retailers in getting a picture of presumptive sellers prior to actual business. Awareness of the same system feature might also affect wholesaler incentives for sticking to made agreements.

An IOS and the communication it mediates constitute the actual marketplace setting. By emphasizing medium specifics as a prerequisite for action, it would be possible to understand e-market business actions more situational. Again, using the terminology of IS actability (section 5.2) this would be highlighting the marketplace mediums’ *action potential*. The key to fully understand and utilize this kind of potential lays in the need to design the media with appropriate prerequisites to communicate the possibilities and restrictions within the medium itself (as suggested by MRM-BM).

We would also like to address another circumstance related to the initial phase of knowledge creation. In both frameworks is a distinction of character between the initial phase and the subsequent ones. According to MRM-BM the first phase can be viewed as a meta level in relation to the following ones that are addressed as more specific object levels. Again this stems from the shared notion on the knowledge phase as setting the conditions for further communication. BAT though takes a refined position in this matter and highlights a separation in two levels of business interaction – market level vs. the dyadic level (Goldkuhl and Lind, 2004).

We believe this level-distinction to be of importance when it comes to understanding a marketplace setting. Some initial activities are targeted to the market as a whole while others are conducted to prepare interaction between specific actors. An example of this is when EMEx retailers (see section 2 above) use the possibility to request for quotations i.e. post their needs to buy something on the website. The intentions by sending such a message might as well be related to the market level as to the dyadic level. A retailer’s aim can be to find a set of possible business collaborators just as well as fulfilling the need of some specific goods. A possible second step of gathered RFQ answers can be to pose additional questions to the selection of suppliers. Such actions are of another character than interactions included in a specific dyadic interaction (see section 5.2). It is a matter of difference in actor intention and would as such preferably be taken in to account here.

6.2 To settle fulfilments

As outlined by the presentation in section 5.1, MRM-BM does not embrace the equivalence of the last BAT phase of assessment (phase ‘E’ in Figure 7). MRM-BM ends with the settlement phase and thus the shipping of goods and transaction of money (section 5.1). The MRM-BM suggestion that “A message in settlement reduces the obligations of a contract [...]” (Lechner et al., 1999, p.98) does in our understanding only refer to one of several possible outcomes during settlement.

Backed by the theory on business acts we believe that also, the communication *after* the actual delivery is crucial to stress here – this is expressed as *exchange of assessments* in BAT. There is a close connection between the outcome of assessments and the activity of fulfilling made commitments. Both interacting parties could express dissatisfaction regarding the settlement and make reclaims directed to the other

party (Goldkuhl and Lind, 2004). Thus, a matter cannot be regarded as fully ‘settled’ before both parties accept the outcome. The need to stress assessments is evident also in frictionless cases of settlement. All results from conducted evaluations have a potential to become important future knowledge. Besides triggering possible iterations (reclaiming) in the occurring interaction, this knowledge forms the prerequisites for future business interaction (recurrent as well as with new parties).

The rating system functionality of EMEx (section 2) is an illustration of medium potential when it comes to assessment. Retailers can share their experiences (and store them over time) from doing business with particular wholesalers. Such a repository could contribute to other actors’ decisions when choosing sellers at a later stage.

7 Conclusions

The conclusions from trying to compare and enrich the two theoretical frameworks of MRM-BM and BAT can be summoned up according to the two themes of section 6.1 and 6.2 in our analysis.

The first theme regards the initial phase of business communication. Here the EMEx illustration depicts how it would be fruitful to complement BAT with MRM-BM and the latter’s emphasis on understanding the medium itself as a prerequisite for further communication. The participating actors need to have a good understanding of the *medium* as well as their own needs and the capacity of other actors. Another aspect that also has to do with ‘setting the scene’ (in the first phase) is about the distinction between market- and dyadic directed communication. Here we see a fruitful contribution from BAT to MRM-BM. Using the EMEx illustration (the RFQ issue) shows that sender intention (cf. section 4.3) can be quite divergent for the seemingly same preparatory actions.

The second theme of enrichment concerns acknowledging assessments as an important aspect of business communication. This could be understood as a case of ‘framework granularity’ – i.e. that the original MRM-view embraces this understanding (but on a higher level). We though believe that this matter constitutes such an important impact on business interaction that it has to be acknowledged as an own phase based on primarily two arguments. Illustrated by the EMEx example we mean that a business process including retailers and wholesalers cannot be considered as ‘settled’ before both parties accepts the outcome. Reaching this mutual satisfaction, and hence settled interaction, then has to include evaluation and exchange of the results of such an assessment. The second argument is evident in cases of electronic marketplaces where the third party (the marketplace host) offers means for sharing opinions on participating actors (as illustrated by EMEx). Assessments then become a prerequisite for further (and possibly recurrent) interaction.

As a concluding remark we would like to state that we understand the development of MRM-BM as getting closer to the language action perspective adopted in BAT (by delimiting business phases by means of sender intentions). This means a shared focus where the *speech act* is used as a unit of analysis. It would accordingly be interesting to see the outcome from future cross-fertilization where an MRM-BM application adopts the idea to go beyond speech acts. I.e. in adopting the BAT utilization of *business action* as the unit of analysis (Lind and Goldkuhl, 2003). This would mean a further exploration of the concepts of communicative as well as business acts in the two frameworks.

An all-pervading characteristic of our comparison can be acknowledged as a strive to find a bridge between focusing *action* and *medium*. We would like to state this bridge as exploring a *medium's action potential*. A medium for e-business could be regarded as more or less *actable* (Ågerfalk and Petersson, 2002). I.e. the medium constitutes an instrument with more or less appropriate capacity for mediating communication. Knowing the medium itself – its semantics, syntax and rules for communication – is key knowledge when it comes to utilizing the action potential. By combining key terms from the two examined models, it is possible to sum up our contribution as a first attempt to address a *Business Action Media*. This concept is to be understood as an important mean for creating understanding about the role of media in business interaction. Our belief is that these aspects are vital in settings of electronic commerce where IT-artefacts and their context gets more and more integrated (cf. Alter et al., 2001). We therefore believe that the level of generality from this study is to be regarded as high. There does however exist more research to be conducted before managing to include such a concept in the studied frameworks or similar theoretical constructs.

References

- AHLSTRÖM M (2000) Offset management for large systems: A multibusiness marketing activity. Dep of Management and Economics, Linköping, Sweden.
- ALTER S, EIN-DOR P, MARKUS ML, SCOTT J and VESSEY I (2001) Does the trend toward e-business call for changes in the fundamental concepts of information systems? Communications of the AIS 5(10), 1-59.
- AXELSSON K (2003) Analysing business interaction in a virtual Organisation – using business action theory to study complex inter-organisational contexts. Journal of Electronic Commerce in Organizations 1(3), 1-27.
- BAKOS Y (1991) A strategic analysis of electronic marketplaces. MIS Quarterly 15(3), 295-310.
- BAKOS Y (1998) The emerging role of electronic marketplaces on the Internet. Communications of the ACM 41(8), 35-42.
- CRONHOLM S and GOLDKUHL G (2003) Multi-grounded theory – adding theoretical grounding to grounded theory. In Proceedings of the 2nd European Conference on Research Methods in Business (2ECRM), Reading, UK.
- DIETZ JLG (1999) Understanding and modelling business processes with DEMO. In Proceedings of the 18th International Conference on Conceptual Modeling (ER'99), Paris, France.
- GISLER M, HÄUSCHEN H, JÖHRI Y, MEIER A, MÜLLER O, SCHOPP B and STANOEVSKA K (1999) Requirements on secure electronic contracts. Working paper, MCM institute, Universität St. Gallen, Switzerland.
- GOLDKUHL G (1998) The six phases of business processes – business communication and the exchange of value. In Proceedings of Beyond convergence: The twelfth biennial ITS conference (ITS'98), Stockholm, Sweden.
- GOLDKUHL G and LIND M (2004) Developing e-interactions – a framework for business capabilities and exchanges. In Proceedings of the 12th European Conference on Information Systems, Turku, Finland.

- GOLDKUHL G and RÖSTLINGER A (2003) Towards an integral understanding of organizations and information systems: Convergence of three theories. In Dynamics and change in organizations: Studies in organizational semiotics. (GAZENDAM, HWM, JORNA, RJ and CIJSOUW, RS, Eds) pp. 132-162, Kluwer Academic Press, Boston, USA.
- GREUNZ M and STANOEVSKA-SLABEVA K (2002) Modeling business media platforms. In Proceedings of the 35nd annual Hawaii international conference on systems science (HICSS'02), Big Island of Hawaii, IEEE Computer Society Press, Los Alamitos, CA, USA.
- GRIEGER M (2003) Electronic marketplaces: A literature review and a call for supply chain management research. *European Journal of Operational Research* 2003(144), 280-294.
- KEEN PGW (2000) *Electronic commerce relationships : trust by design*. Prentice Hall, Upper Saddle River, N.J, USA.
- LECHNER U and SCHMID BF (2000) Communities and media – towards a reconstruction of communities on media. In Proceedings of the 32nd annual Hawaii international conference on systems science (HICSS'00), Maui, Hawaii, IEEE Computer Society Press, Los Alamitos, CA, USA.
- LECHNER U and SCHMID BF (2001) Communities - business models and system architectures: the blueprint of MP3.com, Napster and Gnutella revisited. In Proceedings of the 34th annual Hawaii international conference on systems science (HICSS'01), Hawaii, IEEE Computer Society Press, Los Alamitos, CA, USA.
- LECHNER U, SCHMID BF and KLOSE M (1999) Media – towards a model for coordination, communication and organization in ecommerce. In Proceedings of the Sixth Research Symposium on Emerging Electronic Markets, Muenster, Germany, Computer Science V - Information Systems, Aachen University of Technology, Germany.
- LIND M and GOLDKUHL G (2003) The constituents of business interaction – generic layered patterns. *Data & Knowledge Engineering* 2003(47), 327-348.
- MEDINA-MORA R, WINOGRAD T, FLORES R and FLORES F (1992) The action workflow approach to workflow management technology. In Proceedings of the Conference on Computer-Supported Cooperative Work, CSCW'92. (TURNER, J and KRAUT, R, Eds) pp. 281-288. ACM Press. New York, USA.
- PETERSSON J (2002) *Lokala elektroniska marknadsplatser - informationssystem för platsbundna affärer*. Licentiate Thesis, Univ. Institutionen för datavetenskap, Linköping, Sweden.
- SCHMID BF (1997) *The Concept of Media*.
- SCHMID BF (1999) Elektronische Märkte – Merkmale, Organisation und Potentiale. In *Handbuch Electronic Commerce*. (HERMANNNS, A and SAUTERS, M, Eds) pp. 31-48. Franz Vahlen Verlag. Universität der Bundeswehr München, Germany.
- SCHMID BF (2002) Ein Referenzmodell für Gemeinschaften. *mcm institute*.
- SCHMID BF and LINDEMANN MA (1998) Elements of a reference model for electronic markets. In Proceedings of the 31st annual Hawaii international conference on systems science (HICSS'98), Hawaii, IEEE Computer Society Press, Los Alamitos, CA, USA.
- SEARLE JR (1969) *Speech acts: An essay on the philosophy of language*. Cambridge University Press, London, UK.
- SELZ D (1999) *Value webs emerging forms of fluid and flexible organizations thinking, organizing, communicating, and delivering value on the Internet*. Diss., Universität St.Gallen, Bamberg.

SJÖSTRÖM J and GOLDKUHL G (2002) Information systems as instruments for communication - Refining the actability concept. In Proceedings of the 5th International Workshop on Organisational Semiotics, Delft, Netherlands.

SKIRBEKK G and GILJE N (2001) History of western thought: An introduction to the philosophical roots of modernity. Taylor & Francis Books Ltd, UK.

WEIGAND H and VAN DEN HEUVEL W-J (1998) Meta-patterns for electronic Commerce transactions based on FLBC. In Proceedings of the 31st annual Hawaii international conference on systems science (HICSS'98), Hawaii, IEEE Computer Society Press, Los Alamitos, CA, USA.

ZIMMERMANN H-D (1995) Auf dem Weg in die Informationsgesellschaft die Einbindung privater Haushalte in telematische Dienste und Anwendungen. PhD Thesis, Hochschule St.Gallen, St. Gallen, Switzerland.

ZIMMERMANN H-D (1997) The Model of regional electronic marketplaces – The example of the Electronic Mall Bodensee. Telematics & Informatics 14(2), 117-130.

ÅGERFALK PJ and PETERSSON J (2002) Multi Channel Interplay in Practice – Bringing actability to the local electronic marketplace. Journal of Doing Business Across Borders 1(2), 128-140.

ÖSTERLE H (1995) Business in the information age - heading for new processes. Springer Verlag, Berlin, Heidelberg, Germany.