

Communication and Coordination – Fundamental Issues in Business Processes?

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Abstract

In this paper the author introduces the concept of various viewpoints (process, practitioner, and disciplinary) and describes how theories of communication can be used to understand business processes from the point of view of communication and coordination. This paper serves the dual purpose of being an introduction to a panel of the same name, while providing an argument concerning the significance of theories of communication in 'process' orientation. In serving the second purpose, the discussion will employ literature and examples from systemic functional linguistics and social semiotics; these are used for illustrative purposes only and the reader is invited to consider their own preferred theories and approaches to these issues.

1 Introduction

Theories of communication can have a significant influence on how we come to understand 'process orientation' in three levels of application which I will refer to as *domain viewpoints*. The first of these is the *process viewpoint* and involves the mapping between the 'process' in its social contexts and one or more theories of communication, see §2. Most of us spend our time investigating this viewpoint and avoid considering two additional viewpoints that theories of communication have the potential to describe, and which in turn constrain and condition what we can say about 'process orientation'. The second domain viewpoint can be referred to as the *practitioner viewpoint* and involves the activities and workpractices of systems developers including the 'enactment of practice' conceived as the deployment of method, as well as the 'conduct of practice' primarily concerned with the ethics of development process, see §3. Even taken for granted categories like development and operation are constructions of our disciplinary knowledge and are contestable as is the concept of a 'process orientation'. Therefore, the third domain viewpoint is referred to as the *disciplinary viewpoint*, see §4. Theories of communication have the potential of revealing to us new ways of seeing organisations and the technologies associated with them, providing us with the means to unpack our practices in order for us to become reflexive practitioners, while enabling us to come to grips with the discursive construction of our discipline. These viewpoints are used to classify sets of issues that communicative approaches may be able to address, or which may prove difficult to address in any other way. Some of these issues are briefly described in §5 in the hope that they may form the basis for some further comparative research by others.

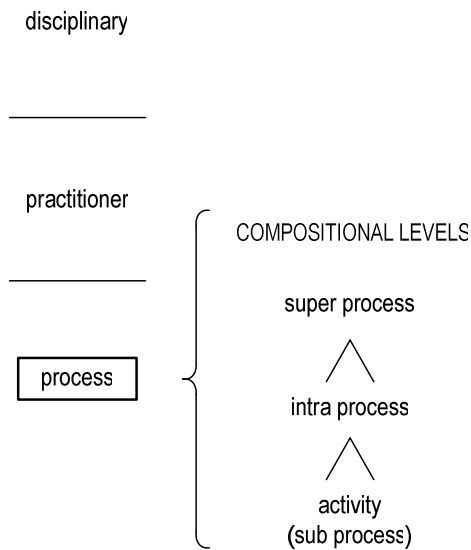


Figure 1: Domain Viewpoints

2 Process Viewpoint

Table 1 shows a number of received definitions of ‘business process’ that can be found in the information systems and management literatures. With the exception of the manufacturing oriented definition provided by James (1994), we define a business process based on an amalgum of these received definitions as characterised by (i) a sequence of related activities [2, 3, 5, 6], with (ii) identifiable preconditions and prerequisites, (iii) identifiable outcomes and (iv) a repeatable pattern of activity [4], (v) while functioning within the context of an organisation with defined functional roles and relationships [5].

There are some implications of this definition worth discussing. While it is convenient to think of these business processes in terms of a ‘goal’ I avoid using it as a defining category even in its plural form. The reason is that while a goal does contain the desirable characteristics of a terminal condition for the activity in question, and an assumed regularity of practice, it is also necessarily couched in terms of some (desirable) future state of affairs and as a consequence involves participant intentionality. In this case I choose to be conservative, knowing both that, with respect to intentions, I don’t know what is going on inside my client’s heads and also even if it were possible for me to be ‘let in’ it would most likely be an inaccessible polyphonous, idiolect. Like living in *Finnegans Wake*, this privaledged access to the internal world of a client would not afford an analyst with any special advantages. Instead I prefer to use ‘outcomes’ rather than ‘goals’. Outcomes *are* the terminal condition for the activity, and imply a chain of successive consequences which led to them. In this sense, the category of ‘outcome’ is internally consistent with our definition of a business process as the result of a sequence of related activities that form the pattern of the process. Outcomes can be observed rather than inferred.

Table 1: Some Definitions of Business Process

1	“A Business Process is the pathway by which a raw resource is turned into the final product.” (James 1994)
2	“A Business Process is a sequence of activities that fulfils the needs of an internal or external customer.” (Harrison and Pratt 1993, 7)
3	“A business process is best defined as an activity in the organisation fundamental to operating the business that serves an internal or external customer and has a well-defined outcome or series of outcomes.” (Schnitt 1993,18)
4	“Key business processes are logically grouped related tasks, independent of the organisation structure, which utilise the resources of the organisation to produce specific results. They possess: measurable inputs; measurable outputs; added value; and repeatable activity.” (Jones 1994 p27)
5	“a set of one or more linked procedures or activities that collectively realize a business objective or policy goal, normally within the context of an organizational structure defining functional roles and relationships.” (Workflow Management Coalition 1995)
6	“Definitions of a ‘business process’ vary, but in essence run along the lines of ‘a series of related activities that cut across functional boundaries in the delivery of an output’. The concept is usually typified as a horizontal stream of work acting at 90 degrees to the ‘conventional’ vertical and functional depictions of an organisation. A somewhat tighter definition demands that the sequence starts with the definition of customer requirements and ends with the fulfilment of those requirements.” (Thomas 1994, 28)

In order to apply communication theories to the analysis and representation (modelling) of business processes we must first establish correspondences between the series of activities that constitute a business processes on the one hand, and the relevant, applicable and convenient language features in our respective theories on the other hand. These correspondences can be established across three different scales. The first scale involves the sub-process or activity level, the second scale involves the process itself, and the third scale involves thinking about how these processes are related to each other to form complete systems. The choice of theories affects the final result. For example using systemic functional linguistics, the closest correspondence to an activity would be a genre element which in turn can be either grammatically defined in terms of speech functions (see Halliday 1985), or for various methodological reasons qualitatively defined (see Clarke 2000). The second scale involves that of the business process itself and the corresponding unit in systemics is the genre. The third scale involves describing entire systems in as collections of genre, but here we exceed the limits of Systemic Functional Linguistic theory and enter into the related realm of Social Semiotics (see §2 and §3.2 in Clarke 2005a *this volume*).

Communication theories can also be used to examine the mechanisms of coordination *at and between* the level of business processes. Language features associated with work coordination and cooperation have long been a subject of interest in applied linguistics (see Drew and Heritage 1992). Identified features include those associated with (i) establishing and maintaining the specific arrangement of activities/processes, including work allocation or assignment of activities to workers and work distribution or dividing activities or processes between several workers, and (ii) language features associated with altering the arrangement

of activities/processes, including work coordination on the same activity, and changing the sequencing or priority of activities (Holmqvist and Anderson 1987). When we look at the communication associated with operational level business processes that repeatedly utilise the same groups or teams of workers, we see that the associated workplace language often involves reproducing social relationships, improving solidarity, and reinforcing group knowledge (Holmqvist and Anderson 1987). This language-in-work does not refer to the actual work in which it is embedded, but its topic may still refer to events and circumstances in the workplace. In other words, the language associated with this work resembles casual conversation. We expect the use of OBSERVATION/COMMENT, OPINION and GOSSIP generic patterns; members of the Casual Conversation genre group identified by Eggins and Slade (1997). Communication of this type is a kind of investment by the group in better future process enactment, cooperation and coordination. However, when we explore the communication associated with operational systems and between workers and external clients or customers, then we see an entirely different picture. When one of the interactants is an external client, the associated language features will dramatically alter to language accompanying the social process- reflecting the interactant's specific register or situational language as well as utilising different generic structures forming distinct workpractices (the SERVICE ENCOUNTER genre and various members of the factual genre group including PROCEDURES and REPORTS), see Clarke (2005a).

We often assume that business process *coordination* is located at the superprocessual level as coordination between or at the level of processes, however communication theories can also be applied to examining coordination *below* the process level. In this case coordination occurs between participants in communication using a range of linguistic resources to negotiate the completion of activities that constitute business processes. A small example discussed in Martin (1992) from a study originally published in Ventola (1987), provides an example of how various systemic language resources are used to organise meaningful discourse- the extract is from SERVICE ENCOUNTER:

Can you tell me your name?
- Yes, all right, John Smith

The MOOD system provides the basic grammatical resources for NEGOTIATION in systemic functional linguistics. The possible options can be interpreted semantically as *giving* (declarative) or *demanding* (interrogative) either *goods and services* or *information*; respectively an Offer, Command, Statement, or a Question. Because the opener for this SERVICE ENCOUNTER involves a demand, the grammatical resource employed will be an *interrogative* and, in so far as it is information being requested rather than goods and services, a Question is used ('Can you...'). From the concept of an *adjacency pair* (from Schegoff and Sacks 1973), we can reasonable expect a response and the SPEECH FUNCTIONS associated with the question and response are respectively (tell me... all right). The response itself is providing information; a responding Statement to the Question. The coordination of the responses made by each interactant is described using the system of EXCHANGE STRUCTURE. In this case it is very simple (your name... John Smith), although work done by Berry (1981) within the systemic tradition has produced a sophisticated theory of exchange structure to replace the notion of adjacency *pairs*. See Martin (1992, 31-59) for more details on these language features and systems (indicated by small capitals). This small example serves the dual role of providing an example of how different language systems, described by this theory, are woven together in dialogue by social subjects undertaking work, as well as

revealing how language is itself a form of coordination not just at the super and intraprocess level but also within the level of subprocesses or activities.

3 Practitioner Viewpoint

Systemic Semiotics is one way of understanding business processes from the perspective of communication in social contexts. Many useful aspects can be explored including the immediate situation and the culture of the organisational in which work is conducted, as well as the coordination, enactment, structure, and function of business processes and activities. But theories of communication can also be employed at the viewpoint of the practitioner, where they are sorely needed. Unfortunately, traditional information systems approaches use a particular kind of event-oriented world view that is often presented as a way of thinking about systems development and the role of systems analysts- as a problem solving approach; see Figure 2 (after Sturman 2000, 10). Organisations are not problems to be solved but social settings in which communication takes place. There is no guarantee that these 'problems' will yield to our system solutions- the 'results' of our practices, or indeed that if a decision making process is occurring during systems development that it is in fact rational.

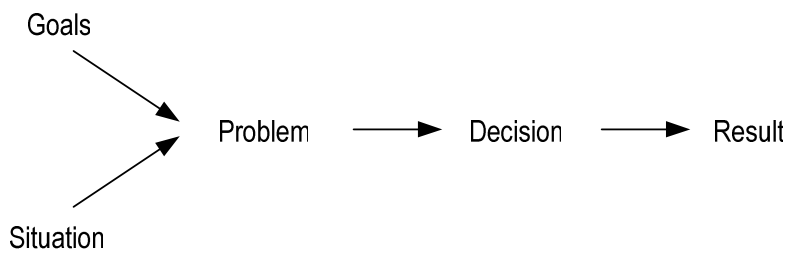


Figure 2: A particular kind of event-oriented world view (Sturman 2000, 10)

We proceed from the starting point that business process *development activities* can also be theorised as workpractices and therefore also exhibit generic features. In this case we are dealing with *canonical genres*, the features of which can be used by analysts *inter alia*, to elicit information about workpractice sequencing, identify the names of stages in workpractices, to recover the expected competencies and behaviours of interactants when enacting a workpractice, to evaluate the work from the point of view of the participants involved, and also to explore the work experiences of participants engaged in the workpractice (see Clarke 2005b). One class of fixed or formulaic expressions closely bound to a special function or circumstance are referred to variously as *conversational routines* (Coulmas 1981; Aijmer 1996), discursal expressions (Alexander 1984), bound utterances (Fóragy 1982), and situation formulas (Yorio 1980). These are a useful starting point for examining amongst other things conversational gambits to open up conversation, or which function to request, offer, and organise different aspects of a topic at hand. Appropriate conversational routines could be used together with relevant canonical genres in order to develop novel elicitation practices. As with other kinds of workpractices, those of developers are highly conventional.

4 Disciplinary Viewpoint

So far we have described how systemic functional linguistic theory can be used to provide a communicative approach to processes description in general and also to the workpractices of practitioners. We can now also utilise ideas from Social Semiotic theory to develop a better understanding of the discipline. The Call for Papers for this workshop identifies the

significance of process orientation for the Information Systems discipline while at the same time pointing out the faddish nature of some approaches that have used it. We don't have the opportunity to examine the discursive configuration of the discipline here- it would exceed the physical bounds of this volume. Also the nature of *geneologies* of this kind (see Foucault 1984) is they take a considerable time to write. The term *genealogy* was coined by Nietzsche and subsequently developed by Foucault to designate an approach which seeks to break away from the usual representation of history within *disciplinarity* as having a false unity and totality. Genealogies attempt to recognise the multiple contested histories of disciplines.

We can identify two mechanisms by which a process-orientation is continually put at risk within Information Systems. The first is the almost continual rebadging of what are in effect very similar ideas. What are the detailed differences between the ideas informing workflow automation, total quality management, reengineering, Six Sigma, straight-through processing and a great many others (suggested by business process management guru's like Keen 2004)? The second mechanism involves the fact that the Information System and related Management disciplines also frequently forget and/or rewrite their histories of ideas. Advocates of process fads often indulge in this strange view of history. In order to obfuscate the faddishness that pervades Business Process Reengineering (BPR) some of its apologists have gone so far as to engage in a kind of historical reengineering. Strassman (1995) imperialises 'the methods and procedures analysis' developed within Frederick Taylor's theory of management by representing it as the earliest form of BPR. This kind of false teleology is productive. It enables BPR advocates to distance themselves from the early 1990s 'slash and burn' excesses evangelised by Hammer and Champy (2003)- which can now be reconstructed as the second wave of BPR rather than the first! This strategy enables the BPR school itself to indulge in a kind of linear and progressive narrative of disciplinary self-improvement which can lead to a third wave (perhaps in Hammer 1996) which of course logically leads to a forth wave of BPR and so. We can see from the previous discussion that the use of communication based approaches to business processes has (i) the potential to transform the notion of what counts as a business process, (ii) in recognising that as developers we are engaged in business processes ourselves, and also (iii) that we can gain some idea of diciplinary issues that surround 'process orientation'.

5 Relevant Sets of Issues classified by Viewpoint

Viewpoints have been introduced as a tactic to help us organising our thinking concerning communication and coordination as it applies to business processes in particular and process orientation in general. Here are some researchable issues for the Communication and Coordination Community organised according to the process, practioner and disciplinary viewpoints:

Table 2: Some Researchable Issues at different Viewpoints

	Pro	Pra	Dis
1. Communicative Processes			
what counts as relevant theories of communication in organisational contexts (1.1)	✓	✓	
methods for communication: developer-developer; client-developer; client-client (1.2)	✓	✓	
communicative approaches to negotiation, decision-making, rhetorical structure, and/or comm. patterns in work (1.3)	✓	✓	

2. Communications Issues			
ambiguity, miscommunication, and polysemy (2.1)	✓	✓	
shared/ partial understanding, perspectives, viewpoints (2.2)	✓	✓	
positionality, agency, subjectivity (2.3)	✓	✓	
audiences, ideologies, voices, and discourses (2.4)	✓	✓	✓
3. Learning, Representation and Knowledge			
communicability of methods (3.1)	✓	✓	
representational practices, power, ethics (3.2)	✓	✓	
methods, learning and knowledge management (3.3)	✓	✓	
representing user domain knowledge (3.4)	✓	✓	
ontologies and organisational communities (3.5)	✓	✓	
4. Testing, Evaluation, Modelling and Meta-modelling			
metrics and measurement for communication (4.1)		✓	
static and dynamic method testing, evaluation, mapping, and deployment (4.2)		✓	
method modelling/ metamodelling of methods in isolation and in combination (4.3)		✓	

6 Conclusions

In recognising the existence of various disciplinary viewpoints, we can see that the Communication and Coordination community has something novel and useful to say about process orientation in general. To reiterate the point made earlier, theories of communication have the potential of revealing to us new ways of seeing organisations and the technologies associated with them, providing us with the means to unpack our practices in order for us to become reflexive practitioners, while enabling us to come to grips with the discursive construction of our discipline. To reject orthodox approaches and select a theory of communication as the basis of our own practices and to strive to understand what this means for process, practioner and disciplinary viewpoints is ultimately a political act.

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