Business services as communication patterns: A work practice approach for analyzing service encounters

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In this paper, we describe an approach to business processes and services which views work practices as recurrent patterns of communication called *genres*. Although defining work practices in this way is unorthodox, it provides two major advantages. First, the communication resources employed by the parties engaging in a service transaction can be clearly described, understood, and communicated. Business processes and services can be differentiated on the basis of the structural and functional arrangement of their constituent genres. This provides a view of a business process or service that is technology-independent. Second, using this approach means that work practices are defined contextually—an important consideration when trying to understand how business processes and services will influence organizations. Because genres are represented using directed graphs, prototypes can be developed to assist during the analysis of existing services and the design of new ones. Structural and functional change of genres can be used to reveal how a specific service is evolving within an organization. This enables us to determine if business demands have changed, something that is difficult to achieve using conventional service engineering approaches.

INTRODUCTION

The science of determining canonical patterns of business processes and services (BPS) is relatively well understood. Using a taxonomy which is described in Reference 1, business patterns that describe canonical business problems can be combined with integration patterns (i.e., those used to integrate business patterns or applications and databases within a business pattern) to implement business solutions. For more complex situations with recurring combinations of business and integration patterns, composite patterns can be applied.

The engineering aspects of implementing patterns are similarly well understood. Application patterns

are used to describe the high-level logical components of the business patterns in order to implement them as computer-based solutions, with associated runtime patterns defining the requisite middleware for supporting the application patterns. BPS science and engineering practices are improved when new insights into business process and service fundamentals are made. For example, along with the traditional factoring and clustering of business processes into part-whole relations, Malone et al.[2] added two important dimensions to business process descriptions: (1) the specialization of processes into types (for example, specializing a generic "sell product" process into a "sell by mail order" or "sell in a retail store" process); and (2) coordination activities involving the management of dependencies among activities. The process handbook that resulted from their work has been applied to the redesign of business processes, the specification of new processes, and organizing and sharing knowledge about them. As repositories of process patterns, handbooks of this kind can be extremely useful in suggesting potential solutions for novel business process and service needs.

In cases where we are interested in developing reusable technical solutions, canonical approaches to BPS description and implementation similar to those just described are beneficial. They provide a vocabulary for describing processes and services for developers and other stakeholders, a strategy of reducing the complexity seen in real organizational processes and services, and tactics that can assist in the development of applications to support or automate BPS. However, these are simply models that are limited to structural and functional concerns. Despite the necessity for understanding service transactions in businesses of all kinds, surprisingly little is known about how participants actually accomplish them in organizations.

Gadrey[3] describes a services triangle in which a service provider (A) creates service relationships with a service client (B) in order to operate on or transform a service target (C) involving organizations and people, goods (products), services, and information. The service provider enters into a responsibility relationship with respect to providing the service while the service client enters into a corresponding ownership relationship. Both service providers and service clients enter into various service *interventions* with respect to the service target, for the purpose of the service, and in order to do so they must enter into service relationships with each other. From this perspective, the potential areas of service innovation are: the responsibility relationship of A, the ownership relationship of B, the service interventions (A to C, B to C), and the service relationships between A and B.[4]

Complex service systems consist of large numbers of interacting clients and providers coproducing value, and thus may possess elaborate service ownership and responsibility relations. But in fact, the difficult aspects of the service triangle are those that deal with the service enactment itself, the respective contributions of providers and clients in the form the service interventions, and in particular the dynamic interactions between provider and client that constitute the service relationships.[5] This difficulty is evident regardless of whether the service providers and clients are individuals or organizations; complex sets of service interventions and relationships evident at the organizational scope are decomposable into discrete service interactions and relationships.

Understanding how services are actually realized is obviously of interest to service researchers, but it is also of interest to both practitioners who conduct services and those who build systems to support or automate them. But what theories and methods can we use to understand service interventions and relationships? If a unified approach could be developed to understand services, interventions, and relationships this would be a significant service innovation.[6]

Salomonson[5] recounts research conducted by Echeverri[7] stating that much of the research on service encounters, wherein service providers and clients directly interact to achieve the service target, has focused on after-the-fact participant perceptions of the service using questionnaires as the research instrument of choice (similar to the idealized after-the-fact reconstructions of business processes that constitute most business process pattern books). While this kind of research approach may shed some light on the respective provider and client contributions that form service interventions in the general case, it does not provide any insights into the dynamic interactions between provider and client that comprise authentic service relationships. Therefore, to understand service relationships,

methods should be used that do not create analytical distances between the phenomena being studied, and that are suitable for representing and analyzing complex social behavior in its own terms. We therefore advocate the use of communication and language-based theories and methods as the basis of understanding processes and services. Some of the early studies of information technology using communication approaches (for example, Andersen[8]), have also argued for use of naturalistic communication theories.

If we are to truly understand services and processes, we need to understand how they work in relation to the organizational context in which they are developed and used. It is well understood that a business process or application placed in different organizations can have radically different effects, and so we argue that an important aspect of any emerging service science is to develop contextual theories of processes and services.[9] We also believe that it is necessary to understand services and processes in terms of the how interacting parties actually conduct and negotiate them.[10] Appropriate communication theories and methods for this purpose come from sociolinguistics, a discipline that concerns itself with the relationship between language and society. Our approach is to develop a functional, contextual, socio-semantic theory and practice in service science, management, and engineering (SSME) using a theory of communication called SFL, or Systemic Functional Linguistics[11,12] within the Anglo-Australian tradition, and use a perspective on design that emphasizes the interplay of computers, people, and work tasks that is the hallmark of the so-called Scandinavian tradition (or perhaps more accurately called the "infological" approach).[13] In the Scandinavian tradition, communication-based theories of work practices have flourished within the Action, Language Organizations and Information Systems (ALOIS) and the Language Action Perspective (LAP) communities,[14,15] as well as in their engagement with the more broadly based European Organizational Semiotics community.[16,9]

Our use of the work practices concept and its relationship to business processes and services is described in the following two sections. First, we describe how our approach enables business processes and services to be understood in a situational and broader organizational/societal context, and describe the methods that are associated with this level of description. Second, we consider in detail a number of language resources that are employed during business processes and services negotiation. In the section "Exemplifying the work practice approach," we develop a communication-based methodology using the descriptions provided in the previous two sections and applying it to the analysis of a number of authentic service transactions. Finally, we provide conclusions and suggest some future research directions.

SERVICES, BUSINESS PROCESSES, AND WORK PRACTICES: CONTEXTUAL FEATURES

One of the central claims of this paper is that our understanding of BPS in SSME can be improved if we develop a contextual theory of processes and services, and so we theorize BPS as communication patterns. Using SFL theory, all completed acts of communication (services and business processes) are inextricably embedded in a *cultural context* (or organizational context) as discussed in the following subsection, and a *situational context* as discussed in the subsequent subsection.

Genre patterns

Work practices are generally considered as relatively short, routine patterns, possessing a goal or purpose that forms the *raison d'être* for the practice, and implies a process orientation[17,18] with identifiable ordering of tasks or stages. In general, all goal-oriented work has a predictable staging. Thus, when we analyze the language accompanying this work (text), we see that it also possesses a commensurate functional staging associated with the (national or organizational) cultural context in which the completed act of communication takes place. Buying a product in an overseas marketplace will likely not be the same as buying a product in a local supermarket because the staging is different and unexpected. The staging forms an important part of the global rhetorical organization of communication and is referred to as its *genre*. A genre is an important set of conventions that assists interacting parties in understanding the kind of social situations in which they are engaged.

To characterize what is involved in buying a magazine, for example, we would need to capture a number of actual magazine-buying instances. In this case, we may also need to record, transcribe and code spoken language. For each instance, we

identify its constituent functional stages, referred to as *genre elements*. The ordered set of genre elements is referred to as the *genre sequence* of that text. An example of a genre sequence might include the following elements: selecting the item (a magazine), taking it to the checkout area, waiting in a queue for service, handing the magazine to the cashier, providing a payment, getting any change, then leaving the newsstand. Selecting the magazine and queuing for service are nonverbally realized aspects of this encounter. Alternatively, this stage could have been verbally realized by calling out to the cashier the name of the magazine, and asking where it was or whether it was sold there. Handing over the magazine to the cashier, providing the payment and receiving change, and a departing word as one exits the newsstand are all examples of distinct genre elements. To create a single genre that describes buying a magazine, we merge all relevant genre sequences together to form a single directed graph: the *genre digraph*. Genre elements are negotiated entities in that they have a conditional probability of occurrence,[19] and therefore genres can be renegotiated by interacting parties into different structural forms. However, in practice, most work-related genres are generally stable and persistent. Face-to-face service transactions conform to a type of genre called the service encounter, as do our examples in the section "Exemplifying the work practice approach."

In acquiring our knowledge of generic communication patterns, we also learn how to manage them.[20] For example, to initiate a service encounter, a newsstand employee might ask of an otherwise uncommunicative customer, "Can I help you?" While the customer is not obliged to commit to a sale or even answer, the customer is in effect being asked to initiate a service request element in a service encounter. This generic tactic is called a *probe*.

At times, genre elements are not adequately realized. For example, if a customer requests a magazine at a newsstand full of magazines, the rejoinder for the newsstand employee must be to ask whether the customer is interested in sports magazines, computer magazines, and so on. This generic tactic is called a *repair*. When we have role relationships that indicate that the server and customer are familiar with each other (we show how this is specified subsequently), it is possible for the genre to be *derailed* by casual conversation that has nothing to do with the job at hand. Here, the interacting parties learn various strategies to continue or restart the necessary element, for example, "Now, what were we doing?" or "Did I give you your change?" This generic strategy is called a *realign*.

Our familiarity with genres and the ease with which we engage in them, modify them to meet various contingencies, and renegotiate and manage them to achieve favorable outcomes is a remarkable communicative accomplishment. Completed acts of communication must also include some aspects of the immediate situation in order to make them comprehensible. This is discussed in the following subsection.

Register patterns

SFL recognizes three aspects of the immediate situational context. These collectively form the *register* of the text and are called its *field, tenor*, and *mode*. The field of a situation describes the social activities and actions that are taking place, what Eggins[21,22] describes as "the topic or focus of the activity." What is happening is derived mainly from lexical items or words, specifically nouns and noun groups that are used. However, since most words have many usages, it is necessary to identify the so-called *indexical lexical items* that characterize the activities for given stakeholder groups in particular social situations. Experience gathered by analyzing multiple texts of the same type of work will yield a number of indexical lexical items that can be represented in a system network similar to the one used in ***Figure 1***.

The social role relationships played by interacting parties can be described by their tenor.[12] Examples of interacting parties include dyads like student and lecturer, customer and salesperson, or friend and friend. Three continua are used to determine the tenor of a text. The "power" continuum is used to classify situations according to whether the roles being played are those in which the parties have equal or unequal power. The "contact" continuum is used to classify situations by whether the roles being played bring the parties into frequent or occasional contact. The "affective involvement" continuum is used to classify situations according to

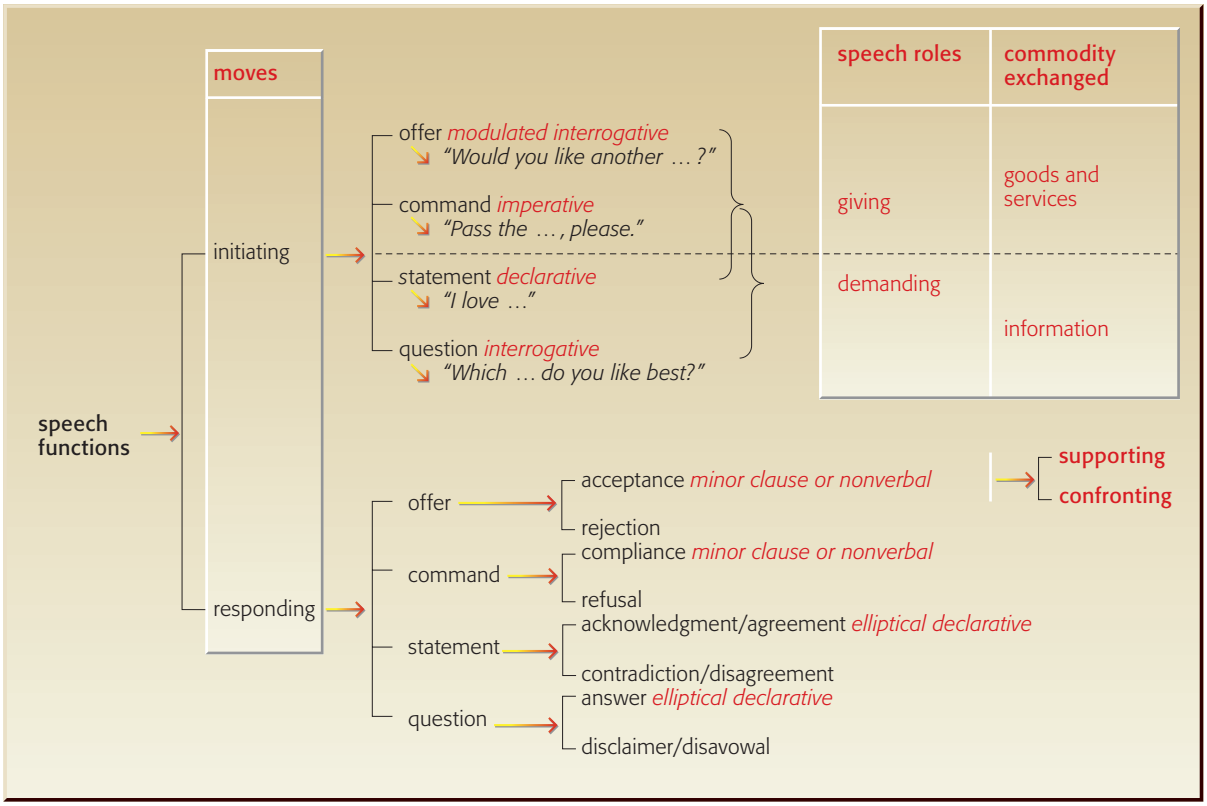

Figure 1
System network showing aspects of functional-semantic account of dialogic structure[12,22]

whether the roles being played bring the parties into high or low levels of emotional involvement.

The mode of an interaction describes the way language itself plays a part in a given social occasion. Two continua are used to describe it. The "spatial/interpersonal distance" continuum is based on the possibilities of immediate feedback between interacting parties. At one extreme, the parties can have casual conversations, like those between friends. This is a situation where visual and aural contact and feedback are immediate. At the other extreme is a situation where there is no visual and aural contact between parties, no possibility of immediate feedback, and little or no possibility of any feedback. The "experiential distance" continuum categorizes situations according to the distance between language and the social process. At one extreme, for example, moving a bed up a staircase, language accompanies the social process and is viewed as a kind of action. At the other extreme is reading a book, where language constitutes the social process. This is a view of language as reflection.

Employing SFL theory, we have described the contextual features of work practices moving (in a top-down manner) from the cultural and situational context to the completed act of communication or text that comprises a service transaction. In the next section, we move in a bottom-up manner to consider the dynamic interplay of language resources that interacting parties routinely employ when enacting and negotiating service transactions. Together, these two sections provide a novel work practice approach for SSME.

WORK PRACTICES AS COMMUNICATION PATTERNS: SOME LANGUAGE FEATURES

We have previously seen that when customers and servers enter into service transactions, they are engaged in realizing a communication pattern or genre. In this section, we describe some language resources and features of Halliday's[11,23] functional-semantic account of dialog. This account is used to

describe the resources that we use to realize certain kinds of meaning during the enactment of service encounters. Later, we describe relationships between these resources, and complete our description by returning to the service transaction contexts. Contextual patterns and language resources establish the connection between BPS and our work practice approach.

Speech roles and speech functions

The functional-semantic account enables dialogic structure to be represented explicitly, as well as interpreting it in terms of interpersonal relations. For Halliday,[23] dialog is a "process of exchange" involving two cross-classifications: the speech roles associated with exchange relations (giving or demanding), and the commodity exchanged (information or goods and services). Adopting a speech role of giving or demanding positions the other interacting parties into a complementary speech role.[22] The cross-classification of speech roles with commodity exchanged produces four basic speech functions that can be used to initiate a dialog of any kind: providing an offer, issuing a command, making a statement, or asking a question.

If one adopts the speech role of giving goods and services, one is making an offer. An offer is realized grammatically by using a modulated interrogative, for example, "Would you like another . . .?" However, if one is giving information, one makes a statement, and typically this would be realized using a declarative. Alternatively, if one adopts the speech role of demanding goods and services, the command speech function is realized grammatically by means of an imperative, or (if demanding information) an interrogative (to realize the "question speech" function). In the typical case (the so-called "unmarked" case), we know what speech functions are associated with speech roles, and we can, with a high degree of certainty, determine that we are dealing with a particular speech function because there will be an unmarked grammatical realization that we can use to confirm this.

We have already described speech functions associated with an interactant who initiates dialog, but whenever a party uses language to interact, the party is (among other things) establishing a relationship between the person speaking now and the one likely to speak next. Not surprisingly, there are corresponding speech functions that are utilized by interacting parties to respond to these initiating speech functions by either accepting or declining an offer; complying with or refusing a command; acknowledging, agreeing, or disagreeing with a statement; or answering or disavowing a question. Note that most responses to initiating moves are in the form of minor clauses or are nonverbally or para-linguistically realized (by the wave of a hand or a shrug, for example). Minor clauses are very brief and often formulaic, for example, "Don't mention it," "See you," and so on. They do not consist of the structures found in typical clause types like those associated with initiating speech functions.

We can diagram this information (based on Reference 22) using a system network, as shown in Figure 1. Reading from right to left, in effect from the most general to the most specific category, this systems network forms a super-ordinal taxonomy. Ancillary information is shown in red and includes speech roles, the commodity exchanged, as well as moves. The systems network classifies speech functions. For the subsystem of initiating moves, the speech function name is supplied with the grammatical structure (red italics) that can be used to realize it. For example, demanding information is made by using the grammatical structure of the interrogative, while goods and services demands are made by means of an imperative. The subsystem of responding moves (in the lower half of the figure) shows corresponding supporting and confronting options for each initiating move (in the upper half of the figure).

Moves and exchange structure

In a complete representation of the speech function (not attempted here), speech functions describe how participants choose functions to sustain or terminate exchanges. These changes in who should speak next and when they should take control of the interaction are effected by locating the moves or points of possible turn transfer. This should be done with care, to prevent the current holder of the turn considering the attempt to gain the turn as a rude interruption. However, as Eggins[21] points out, moves only relate to the local management of the exchange process. There is also a need for a global perspective. Sequences of speech functions constitute larger patterns called *exchange structures*. A simple exchange structure might consist of a question and an answer, but exchange structures

are often more complex than that. Genre elements generally consist of one or more exchange structures. In the case of a service encounter, the exchange structure will often be in the form of an offer and an acceptance.

We have considered how language is structured to express a range of meanings through dialog; these language features underpin register and genre patterns as well. We now extend this theory to BPS by applying it to authentic workplace communication.

EXEMPLIFYING THE WORK PRACTICE APPROACH

Using information provided in the previous two sections, we develop a partial communicative methodology emphasizing preparatory stages and the types of results or deliverables we expect after conducting this type of analysis. We then illustrate the contextual and linguistic features of our approach in a series of short examples selected to show the features and benefits of this approach to studying BPS.

Partial methodology

In order to apply naturalistic communication methodology to work practices, authentic instances of work need to be gathered, if they are in the written form, or recorded and transcribed if they involve spoken language (as is the case with service encounters we describe later). It is crucial to represent spoken language in a form that can be coded to support the analysis being undertaken and that conforms to a standard that supports the exchange of research results. We use the CHAT (Codes for Human Analysis of Transcripts) standard, as it is a well-known, standardized, and extensible way of representing spoken language.[24] An example of a CHAT-compliant transcript is provided in ***Figure 2***.

CHAT transcripts have compulsory `@Begin` and `@End` constant headers. Constant headers provide information that remains constant throughout the transcript. Participant roles and identifying codes for interacting parties are defined using the `@Participants` constant header, and once this header is defined, additional constant headers specifying ancillary details such as a speaker's age and gender can be provided. In the body of the transcript, lines that begin with an asterisk and a three letter participant code are referred to as *mainlines* and record the utterances made by participants. Sometimes responses are nonverbally realized, and when this occurs, a zero is placed on the mainline. Lines starting with a percent sign are so-called *dependent tiers*. These are used for recording additional coding information relevant to the mainline. Common dependent tiers include `%act` for referring to an action, `%com` for general commenting, and `%sit` for providing situational information. The type of dependent tier and the information provided by it refer only to the mainline above it. There is no need to provide line numbers in a CHAT transcript; an associated toolkit called CLAN or (Computerized Language Analysis) has a transcript auto-numbering tool.[25]

We also superimpose clause boundaries at the top of the transcript for clarity. They would normally be encoded in the transcript as a dependent tier. Identifying clause boundaries is important because each represents a single message. Unlike the sentence, the clause is independent of spoken or written language and is therefore the basic unit of grammatical analysis in SFL. We indicate clauses in Figure 2 with a vertical red line. If we have more than one clause in a turn (as in turn 6), we expect more than one speech function. In terms of deliverables, speech functions are important to use as a standard language deliverable because they subsume speech roles with respect to the commodity being exchanged (goods, services, information) as shown in Figure 1. They also contribute to the exchange structure that participants jointly negotiate as they enact the work practice.

Knowing the genre elements and the order in which they occur for a given transcript gives the genre sequence, and this in turn contributes to the genre digraph that provides the functional organization of the work practice itself. All the genre-based contextual features shown in ***Figure 3*** are required analysis deliverables, as are the register-based contextual features. Additional graphical information can include a system network depiction that shows the super-ordinal relationships between field terms used in related transcripts. This provides a detailed picture of the semantic organization of a field like "magazine sales" that is similar to an ontology. Additional textual deliverables might include a list of the probes, repairs, and realigns associated with a particular genre.

A	B	C	D	E
	@Begin @Participants: NEW Newsagency Employee, CUS Customer @Age of NEW: 22 @Sex of NEW: female @Sex of CUS: male			
1	*CUS Hi, how are you today? %act CUS brings a magazine over to the counter	initiating question *interrogative*	*E1*	*G*
2	*NEW I'm good thanks. How are you? %sit NEW and CUS are at the counter	responding answer *elliptical declarative*; initiating question *interrogative*	*E2*	
3	*CUS Good [#] Umm [/]	responding answer *elliptical declarative*; *paralinguistic*		
	%com CUS is holding a **magazine** fetched from the rack	*nonverbal* (as command)	*E3*	*SR*
4	*NEW Just the magazine?	follow up question *interrogative*;	*E4*	
5	*CUS Yeah just this one thanks	responding answer *declarative;*		
6	*NEW Yup [#] Seven ninety-five [#] Did you want a bag for that one?	*discourse marker;* statement *declarative*; offer *modulated interrogative*	*E5 E6*	
7	*CUS Umm, no I'm alright thanks	responding offer rejection *minor clause*		
8	*NEW Ok	*discourse marker*		*P*
9	*CUS There you go %act CUS hand over payment	initiating statement *declarative*	*E7*	
10	*NEW Thank you [#] Five cents change	responding statement acknowledgement *minor clause*; initiating statement	*E8*	
11	*CUS Thanks for that	responding statement acknowledgement *minor clause*		
12	*NEW No worries	phatic *minor clause*		
13	*CUS Allright	phatic *minor clause*		*F*
14	*NEW Bye	phatic *minor clause*		
15	*CUS See you	phatic *minor clause*		
	@End			

Exchange Structure
E1 = question + answer
E2 = question + answer
E3 = command (nonverbal) + compliance (nonverbal)
E4 = question + answer
E5 = statement + agreement (nonverbal)
E6 = offer + rejection
E7 = statement + agreement
E8 = statement + agreement

F Genre Digraph

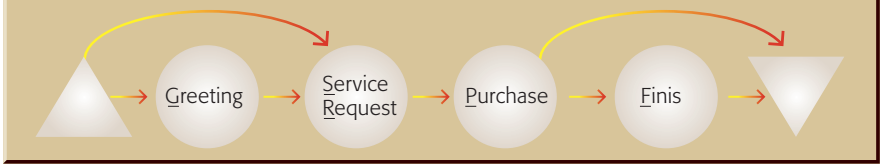

Figure 2
Sample CHAT-formatted transcript of transaction and genre digraph

Joining the dots: Language and context in buying a magazine

This first simple example is used to demonstrate the relationship between contextual and language features previously described. A single instance of a "buying a magazine" service transaction is provided in Figure 2 that shows, among other things, a typical analysis deliverable, including the results of the preparatory stages, the selected language features, and the genre sequence. Moving from left to right in Figure 2, column (A) provides the turn numbers indicating when a change in the speaker occurs, column (B) is the CHAT-standard-compliant transcript of the completed work, column (C) shows the speech functions and their associated grammatical realization that forms the dialogic structure in this instance, and based on selections from the system network in Figure 1, column (D) shows the exchange structure codes with the actual exchange structures provided in a separate key. The last column (E) consists of the genre element codes associated with one or more exchanges, and these

codes are spelled out in section (F). A complete genre and register analysis for the transcript and a commentary on the associated language features are provided in subsequent subsections.

Figure 2 also shows the completed genre structure for buying a magazine, something that a single transcript cannot provide. The genre elements represent the range of functions that this work practice (i.e., buying a magazine) was observed to have, while the genre digraph in Figure 2(F) is the summary of many magazine purchase texts that have been processed using these methods. This particular transcript has a full complement of genre elements; other transcripts may have omitted the "greetings" or "finis" elements which are phatic (i.e., designed to smooth the social interaction) and may therefore be bypassed, as indicated by the relevant arcs in the digraph.

Genre and register patterns

In order to perform a contextual analysis for a service transaction like buying a magazine, each collected transcript is analyzed for register and genre patterns. To identify the social actions and activities, the transcript is parsed for indexical lexical items that signal the text field for each item. The only indexical lexical item in our example is "magazine," which appears in bolded type in the transcript.

In terms of tenor, the social relationship between the participants is a simple dyad of customer and salesperson. In general, the situation is a formal one rather than an informal one and this has an effect on the language being used. Politeness markers are used and reciprocated, and there is little slang being used. The contact is occasional, and this influences the affective involvement, leading to a friendly tone being adopted by the interacting parties, as is particularly evident at the end of the transcript. The power relationship is fairly unequal, as customers generally have greater latitude in their behavior. In terms of mode, there is a low spatial and interpersonal distance because the interacting parties have visual and aural contact, and feedback is immediate. Language plays a less important role here because the transaction could be completed without speaking a word. The service inquiry is nonverbally realized by the customer's browsing and selecting an item from a rack. The service request in our example is actually nonverbally realized as the

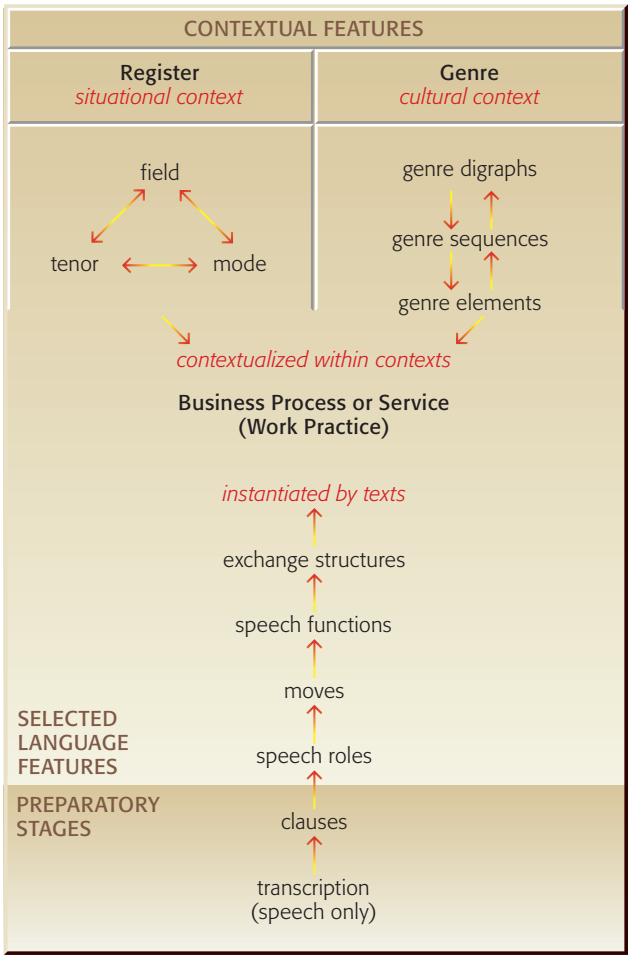

Figure 3
Partial communication methodology for BPS using selected language and contextual resources from SFL

customer walks up to the counter holding the magazine. The experiential distance involves language accompanying the social process, typical of face-to-face service transactions.

Identifying the genre elements in Figure 2(E) that characterize the specific staging of the work practice requires that we have previously conducted genre analyses on a number of other transactions. Each collected text becomes a test of the adequacy of the emerging genre digraph. In this case, the transcript is completely indicative of the genre diagraph in Figure 2(F), the result of analyzing many transcripts at this business and others in a larger study of retail service transactions. The resulting genre sequence identified involved a greetings stage (turns 1–3), a service request stage (turns 4 and 5), a purchase

1616-46

*STU: *Sorry, miss,* can you tell me if this subject is available here?
*STA: *Which subjects?*
*STU: Management 203
*STA: Do you want a photocopy?
*STU: No

1615-45

*STU: *Excuse me, miss*
%act: returns previously borrowed item
*STA: Thank you
*STU: Taa
*STA: There you go
%act: returns student id card left as assurance of return
*STU: Thank you
%acts: waits
*STU: Ah, *can I borrow 321*
*STA: Which one?
*STU: 321
*STA: Textbook?
*STU: Yeah

1613-44

*STA: *Are you right?*
*STU: Can I borrow these textbooks, and can I put them...?
*STA: Yeah

1427-33

*STA: *What would you like?*
*STU: Hi, I was wondering whether I could borrow Accounting book for Accounting 1 and 2.
*STA: This one?
*STU: No, the one below that, the shelf below that...
*STA: Yeah that's the one

Figure 4
Book borrowing service examples

stage (turns 6–10), and a finis (turns 11–15). A genre element may take one of more turns to complete. For example, the greeting element in Figure 2 is three turns in length, whereas the service request element covers the next two turns. The greetings and finis elements are phatic, and as nonfunctional elements of a spoken language situation, by convention they can be bypassed.

Language features

The transcript opens with an initiating move from the customer (turn 1) with an answer and reciprocating question from the newsstand employee (turn 2) and a corresponding answer from the customer (turn 3). It is likely that customer initiated the opening move to attract the attention of the newsstand employee, who may have been performing other work, and that the employee reciprocated in order to regain the turn and propel the customer into the service encounter after politely answering the employee's question. In any case, these are relatively ritualized question and answer preliminaries to the main service requesting and purchasing. The customer has understood, at the end of turn 3, that he or she is now expected to begin a service encounter genre, has chosen a magazine from the rack, indicated by the pause code (#) in the transcript, and is presenting it at the counter (para-linguistically realized as "umm"). The newsstand employee provides an offering speech function, but this is handled in an interesting fashion: "Just the magazine?" is a complex offer meaning, "Would you like that magazine?" and simultaneously, "Would you like anything else?" The customer's response (turn 5) answers both implied offers, an acceptance for the magazine and a decline speech function for anything else. A further offer by the employee for a bag (turn 6) is declined in turn 7. Turns 7 through 10 complete the payment element. The remaining turns (11–15) consist solely of extensive politeness markers.

Practical service knowledge: Probes, repairs and realigns in book borrowing

A characteristic of genre is that participants learn a range of textual strategies for initiating, fixing, and reorienting (probing, repairing, and realigning) the other participant in a service encounter and in this way achieve the joint construction and, it is hoped, realization of the work practice. These textual strategies are an important means by which participants shape their service interventions in order to realize their respective goals. They also help to jointly initiate the correct type of work, maintaining and reorienting their communication with each other in order to cocreate a satisfactory service relationship. This aspect of work is simply not recognized if more conventional approaches to BPS are used, and these textual strategies represent an enormously valuable resource of practical service knowledge.

Figure 4 shows a set of short transcripts of book borrowing in a library with the associated textual strategies. No realigns were available in this corpus, implying that the students ("STU" in the figure) were versed in the performance of these service

A

	@Begin @Participants: IT1 Trainee, IT2 Trainer, STA Staff	
1	*STA: Hi, could I return this?	G RC
2	*IT1: Yeah	
3	*STA: Thanks, I'm a **staff member** so it will be on the system...despite the fact that I look like a student	
4	*IT1: **Staff...number**? %act: selects return from main menu	
5	*STA: I don't know my staff number. If it's **keyboard entry** you can search for the name	
6	*IT1: 0 %exp: types in a number but the machine does not recognise the code %act: reboots machine	
7	*STA: www %exp: reboot it!	
8	*IT1: Staff number? %act: starts ALABS, selects **staff return**	
9	*STA: ...Don't know it >	
10	*IT1: < Don't know	
11	*STA: No?	
12	*IT1: Oh	
13	*STA: I know my name though, so...	
14	*IT1: Can you put it in through here?	
15	*STA: Ah well try typing the name in %exp: spells out surname	MI :
16	*IT1: How many numbers on a **staff card**? %exp: still trying numbers	
17	*STA: Ah, type in something like 22222	
18	*IT1: www %exp: indication of frustration %act: enters this number but the system rejects it, brings up a list of staff loans, states staff members correct name	
19	*STA: That's it >	
20	*IT1: 0 %act: tries to bring up individual loan record	
21	*STA: < That's me, ok Return it, oh ... I don't know ...(how to return item)... Have you just listed what I owe, what I've got?	
22	*IT1: Yeah... Louie, how do I return this?	PA
23	*IT2: Just put it on the shelf [laughs]	
24	*STA: Oh yeah right, thank you [ironic]	
25	*IT1: That's the guy	
26	*IT2: Yeah we know that... Yeah, right type in the **barcode**	I1
27	*IT1: < At this point	
28	*IT2: Yeah after you find him... return	
29	*IT1: 0 %act: types R for return	I2
30	*IT2: Staff	
31	*IT1: Staff number? %act: types S for staff	
32	*STA: C %exp: lists all staff with loans whose surname starts with 'C'	
33	*IT1: C	
34	*STA: 3 %exp: number of particular staff members name on list	
35	*IT2: 3	
36	*IT1: Here I go, right %exp: system requests barcode	: MI
37	*IT2: He likes, he likes to have everything in his office	
38	*STA: Yeah, Yeah	
39	*IT2: Right, type in the barcode	I3
40	*IT1: 0 %act: types in the Barcode	
41	*IT2: Q, yeah that's it	
42	*STA: q..u..i..t	
43	*IT2: Some of them [options] accept q others quit	
44	*STA: Ok, thanks	F
	@end	

www=untranscribed material

B

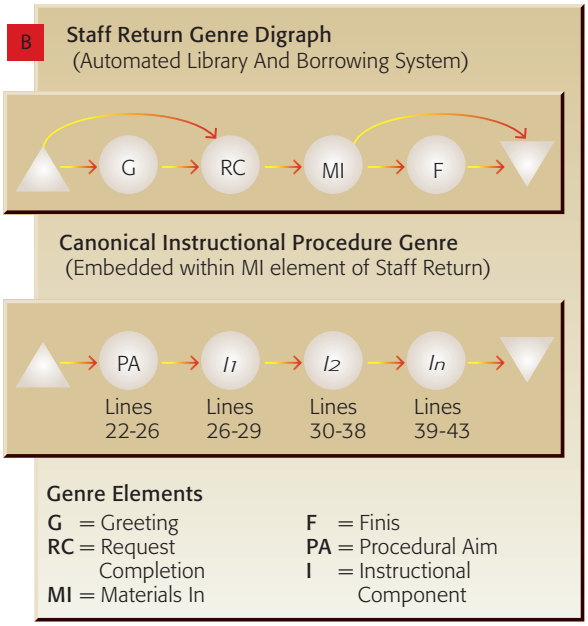

Figure 5
Transcript of ALABS "staff return" work practice

encounters, which were conducted at a student resources center. The probes are italicized with a single underline and the repair is italicized with a double underline. Analysis of the language features has been omitted for the sake of brevity.

Joint renegotiation of work roles in a staff software return

Our final example involves a loan of software to an academic staff member of a university. It is an example of a service encounter conducted using an

administrative information system called the Automated Library and Borrowing System (ALABS).[19]

An unusual aspect of this transcript is that the new trainee staff member lacked experience with the system, and a supervisor and the client (who was familiar with the system) jointly renegotiated the work practice so that staff member would become familiar with the actions expected at each stage in the work. This was done by embedding an instructional procedure (at lines 26 to 43), a so-called *canonical genre* available to us as part of our cultural literacy, within the "materials in" element in the staff return genre, where the trainee was having difficulties registering the return on the system. This was assisted by an appropriate shift in the field (from staff return to training) and tenor (the supervisor and staff member become trainers for the trainee, with a corresponding reduction in social distance), as shown in ***Figure 5***.

In Figure 5(A), turn numbers are indicated on the left and genre elements to the right of the CHAT transcript. Indexical lexical items are shown in boldface. In Figure 5(B), the genre digraph is shown, as determined from the analysis of multiple transcripts; this transcript conforms to the staging, but the participants jointly renegotiate the MI ("materials in") stage as an embedded instructional procedure.

CONCLUSIONS

Progress in BPS science and engineering practice will occur when new insights into business processes and services are made. Rather than attempting to address SSME from the point of view of structures and functions, we have presented an attempt to understand the nature of BPS from a semiotic (meaning-based) perspective. We provided an approach to understanding work practices from a communicative perspective using a semiotic model of communication called SFL and described a partial methodology to support its use.

We applied SFL to three short examples that illustrate key points in the approach. First, we demonstrated how it can be used to provide a detailed, micro-level analysis that relates the service work practice to the situational and cultural contexts in which it is enacted, and demonstrated how language and context are connected in this view of work practices. Second, we showed that textual resources associated with genre constitute both valuable practical social knowledge and resources for creating more effective service interventions. Third, we demonstrated how interacting parties can jointly renegotiate the work practice to achieve their anticipated social ends and also dynamically achieve additional, parallel goals, like facilitating training through the deployment of language resources at the point of service and thereby cocreating better service relationships.

We have not exhausted the usefulness of SFL theory and methods. It is a complete theory of language, and its methods can be used in understanding communication as we find it in organizations. Without the use of communication theories of this sophistication, we tend to think of organizational communication and therefore work in terms of what we think it might be, or worse still, how we think it should be. In our experience, this leads to a very impoverished view of this human achievement. Communication is a way of understanding BPS—one that should be listened to and explored more fully.

ACKNOWLEDGMENTS

This research was conducted under the auspices of the Centre for Applied Systems Research (CASR), Faculty of Commerce at the University of Wollongong. The authors acknowledge Anders Helle for providing the first of our transcripts from the ongoing Comparative Retail Work Practice Survey.

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Accepted for publication August 15, 2007.
Published online February 8, 2008.

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