Operationalization of genre as a categorizer of academic and professional texts: A review of construct validity in six landmark studies

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Abstract

This study reviews the application of genre theory to the classification of texts in six landmark studies, specifically in relation to the issue of construct validity. The genre theories that the studies draw upon include: North American New Rhetoric (more recently termed *Rhetorical Genre Studies*), genre theory influenced by *Systemic Functional Linguistics* and the *English for Specific Purposes* approach. The operationalization of genre in each study is examined using a framework of knowledge categories drawn from the *dual social genre/cognitive genre* model of the author (Bruce, 2005, 2008b). The findings indicate that the central genre-identifying element in the reviewed studies is some form of schematic or move structure to account for the staging of content within texts. While some studies associate the schematic structure with contextual, socially-constructed knowledge, others attempt to relate its stages to what are seen as genre-characterizing, linguistic features. However, what appears to be lacking in the three theories is a comprehensive, integrated approach to account for the socially constructed, general rhetorical and linguistic elements of genre knowledge. The findings of this study emphasize the developing nature of genre theory and research, and appear to support the need for a multi-faceted approach to genre in order to operationalize adequately so complex a phenomenon.

Introduction

The concept of genre as a categorizer of written texts, or of spoken language events in certain contexts, is used research in Applied Linguistics and also as a basis for language teaching. However, a problem that is central to genre theory is a lack of agreement on what it is that constitutes a genre. This problem has led to a multiplicity of ways in which the concept of 'genre' has been operationalized (see, for example, Hyon, 1996; Johns, 2002). For some, genre classification is largely a social phenomenon. Theorists following this approach see genre as being reflected in the socially recognized functions and conventionalized structures of language events that occur in specific contexts. These events may be shaped by complex contextual elements, participant relationships and communicative and transactional purposes. For other theorists, genre as a classifier of language entities is a more rhetorically motivated, cognitive phenomenon, often described in terms of general rhetorical categories such as: argument, explanation, recount and description. Following this approach, genre knowledge is seen in terms of elements of texts, including their internal organizational and linguistic characteristics. However, this binary characterization of does not adequately represent the complexity of the whole field of genre studies. The two approaches, in effect, tend to represent the polarities of a continuum, within which lies a wide range of classifiers, such as those presented in *Table 1*.

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Table 1: *Diversity of approaches to text classification (Bruce, 2008b, p. 7)*

Whole texts	Parts of texts
genre (Hasan, 1989; Swales, 1990; Bhatia, 1993; Fowler, 1982) *text genre* (Pilegaard & Frandsen, 1996; Werlich, 1976) *macro-genres* (Martin, 1994, 1995, 1997) *discourse types* (Virtanen, 1992)	*genre* (Swales, 1990) *elemental genre* (Feez, 2002) *text type* (Biber, 1989; Pilegaard & Frandsen, 1996; Werlich, 1976; Virtanen, 1992) *rhetorical functions* (Lackstrom, Selinker & Trimble, 1973; Jordan 1997) *rhetorical modes* (Silva, 1990) *macro-functions* (Council of Europe, 2001) *macro-genres* (Grabe, 2002) *séquences* (Adam, 1985, 1992) *discourse patterns* (Hoey, 1979, 1983, 1995, 2002) *macrostructures* (Van Dijk, 1980) *generic values* (Bhatia, 2002, 2004) *language styles* (Bloor, 1998)

Therefore, it may be concluded that genre theory is characterized by a multiplicity of theoretical approaches and competing terminologies that often relate to the same or similar underlying constructs. However, as yet, there appears to be no general agreement among theorists concerning what it is that constitutes genres and how they may be operationalized. Given this current state of genre theory, it is now appropriate to reflect on the issue of what it is that constitutes a genre and how genre may be operationalized for the purposes of both research and language pedagogy. Therefore, against this background of the diverse field of text classification, the study reported here examines the issue of construct validity in the operationalization of genre knowledge in six well-known studies.

The issue: Genre theory and construct validity

Genre, in effect, is a theoretical tool used to classify existing written texts or spoken language events. The synthesis of knowledge elements that gives rise to these texts or language events forms the underlying construct. In research, the construct validity of a classificatory tool, such as genre, relates to its effectiveness in being able to identify and mirror (or operationalize) all of the characteristics of the underlying construct that it claims to represent. Cohen, Manion and Morrison (2007) say that "in this sort of validity, agreement is sought on the operationalized forms of the construct . . . . Is the researcher's understanding similar to what is generally accepted to be the construct? " (p. 138). Thus, construct validity would also seem to require agreement by those working in a particular research field about the characteristics of the operationalized form of any construct.

Therefore, because genres aim to describe and classify language entities that are operational wholes (Widdowson, 1983), it is important to consider the nature of the underlying constructs of what is being classified, including those of both text and discourse, and their constituent elements. In distinguishing text and discourse, Widdowson says that text is" the overt linguistic trace of a discourse process. As such, it is available for analysis. But interpretation is a matter of deriving a discourse from the text, and this inevitably brings context and pretext into play" (2004, p. 169). Text, therefore, is the written record on the page (such as a written document or the written transcription of a dialogue), while discourse includes the written record as well as the

social and cognitive operations that surround it, both in its creation and processing. Corpus software can examine linguistic elements of text, but for the most part it cannot examine discourse. Thus, as the result of a detailed corpus study, Biber (1989) proposes a typology of eight text types identified in terms of general communicative purposes, and characterized in terms of linguistic features. Furthermore, in reporting his study, Biber does not support the idea of characterizing genre in terms of linguistic features. His conclusion was "genres are defined and distinguished on the basis of systematic non-linguistic criteria, and they are valid in those terms" (p. 39). Therefore, Biber's study and conclusions appear to prefigure a dual classificatory approach that distinguishes the analysis and classification of text (in terms of text types) from genres, which I suggest involve the analysis and classification of discourse.

Theories of genre

Despite Biber's proposal, however, approaches to genre research in Applied Linguistics have tended to focus on textual rather than discoursal elements. These include:

- the approach of genre theorists influenced by *Systemic Functional Linguistics* (hereafter SF);
- the *English for Specific Purposes* (hereafter ESP) approach to genre, such as articulated by Swales (1990); and,
- the North American *New Rhetoric* approach (Rhetorical Genre Studies, Artemeva, 2008)

In identifying categories of texts as genres, the first two approaches involve identifying a recurrent pattern regularly used to organize the content of a genre (category of texts). In SF-influenced approach, this is called a *schematic* or *generic structure*, and in the ESP approach it is described in terms of *moves and steps*. In both approaches, the stages of this content-organizing pattern are related to specific linguistic features. In the SF-influenced approach, linguistic features are identified through the variables of register and related to SF grammar (see Eggins, 2004). In the ESP approach, specific linguistic features may be associated with a particular move or step (sub-move). However, operationalizing genre in this way does not accord with Biber's distinction between text type (a linguistically defined entity) and genre (an entity that is identified mainly in terms of non-linguistic features).

In apparent support of Biber's position, a number of European text linguists also draw a distinction between text types, which tend to relate to segments of text (Pilegaard & Frandsen, 1996; Werlich, 1976; Virtanen, 1992) and text genres, (Pilegaard & Frandsen, 1996; Werlich, 1976) or discourse type (Virtanen, 1992), which relate to whole texts. Also, in relation to the teaching of academic writing, Paltridge (2002) argues that courses need a focus on both genre and text type knowledge. Similarly, Bhatia (2004) proposes that genre knowledge needs to be investigated from two perspectives: an ethnographic perspective and a textual perspective (p. 163). In further developing this dual approach to genre knowledge, I have attempted to account for these two areas of knowledge by proposing a model of social genre and cognitive genre.

> Social genre – refers to socially recognized constructs according to which whole texts (or conventionally recognized sections of texts, such as Methods sections in research articles) are classified in terms of their overall social purpose . . . . Purpose here is taken to mean the intention to consciously communicate a body of knowledge related to a certain context to a certain target audience
> Cognitive genre – refers to the overall cognitive orientation and internal organization of a segment of writing that realizes a single, more general rhetorical purpose [such as] to recount sequenced events, to explain a process, to argue a point of view (Bruce, 2008a, p. 39)

Social genres and cognitive genres are not mutually exclusive approaches to examining a genre but, in effect, two complementary approaches that involve examining a piece of text and its discoursal interpretations. The social and cognitive genre model that I propose involves a framework of knowledge elements that provide a basis for performing ethnographic and textual analysis, a summary of which is presented in *Table 2*.

Table 2: *Genre knowledge: Constituent elements (Bruce, 2005, p. 14)*

Social genre elements (relating to discourse)
• context
• epistemology
• writer stance (metadiscourse)
• content schemata
Cognitive genre elements (*relating to text)*
• gestalt patterns of ideas
• general textual patterns
• relations between propositions

Social genre knowledge

The first element of social genre knowledge is that of context. Widdowson (2004) characterizes context in terms of schematic knowledge that involves both "intralinguistic and extralinguistic factors" (p. 54). It is suggested that, in relation to academic or professional genres: extralinguistic factors involve the specialist, technical knowledge of the field to which the text belongs; and, intralinguistic factors include the forms of communication and technical vocabulary used in the particular field. The second element of social genre knowledge is epistemology – how experts working in a particular field perceive, validate (prove) and use knowledge. However, to understand how subject experts view knowledge, a necessary co-condition is to understand how they create knowledge. In any particular discipline, the knowledge-creating paradigms used (such as its research methods) strongly influence its knowledge-communicating forms, such as its written and spoken genres. In conjunction with this, the third element of social genre knowledge is that of the stance or standpoint of a writer in relation to his/her audience. The Russian formalist, Bakhtin (1986), proposes that writing, like speaking, is *dialogic* - a dialogue between the writer and the reader and, as a consequence, writing is constructed with the expectations and knowledge of the reader in mind. In developing Bakhtin's idea of diologism, Hyland (2005, p. 39) identifies a set of language devices that are used to connect the writer with the reader, language devices which he groups together under the term of *metadiscourse* and can be used to address dialogism in texts. The fourth

element of social genre knowledge relates to regularly-occurring patterns used in the organization of content within a genre. In most pedagogic approaches to genre, such patterns have been regarded as a central, defining element. As mentioned previously, the SF-influenced approach describes content patterns as schematic structures, and the ESP approach describes them as moves and steps.

Cognitive genre knowledge

According to the earlier definition, a cognitive genre is a segment of writing that aims to achieve one particular, general rhetorical purpose, such as argue, explain or recount. They are sometimes described as text types. The four cognitive genres of the model are based on the four *text types* that Biber (1989), in his corpus study, found to occur most frequently in academic English prose. However, in terms of their structure and internal organization, in the proposed model (Bruce, 2005, 2006, 2007, 2008a, 2008b, 2009, 2010), they are conceptualized in terms of cognitive structures rather than linguistic and stylistic features.

The cognitive genre model (see *Appendix A*) draws on a two key principles from cognitive science - the first is that any category (such as a category of text) is formed in response to purpose or intentionality. Thus, the four types of cognitive genre relate to general rhetorical aims to communicate certain types of knowledge within a text. The second principle from cognitive science is that complex knowledge is hierarchically organized - higher level general to lower level specific structures. Thus, the cognitive genres have a top-down, general-specific internal structure that involves:

- *gestalts* called *image schemata* (Johnson, 1987) - gestalt structure reflects the higher-level organization of ideas
- *discourse patterns* (Hoey, 1976, 1984, 1996, 2001) - discourse patterns account for the organization of the actual written text.
- interpropositional relations (Crombie, 1985) - these account for a more specific level of organization of a text.

Because cognitive genres are prototypical tendencies rather than fixed immutable forms, they may be realized in ways that closely or less closely mirror the features of the model. In relation to the overall social/cognitive genre model, cognitive genres are abstract organizational building blocks that are used in socially-driven ways to create texts from which discourses are derived.

Thus, the areas of knowledge included in the social genre/cognitive genre model (see Table 2) are employed in this study as a basis for examining the different types of constituent knowledge that may relate to both genre and text types (as an attempt to account for elements of discourse and text). It aims to achieve what the psycho-linguists De Jong and Verhoeven (1992) say that "a model is for, i.e., to explain reality by a simplification" (p. 5). The knowledge categories of the social genre/cognitive genre model as a "simplification of reality" are, therefore, used as a basis for examining the operationalization of genre in six genre studies under review.

Methodology

The six landmark genre studies

Table 3 shows the six studies in which operationalization of genre is analysed using the social genre/cognitive knowledge categories. Four are ESP studies, one is SF-

related and one is new rhetoric (NR), more recently termed rhetorical genre studies (RGS).

Table 3: *The six genre studies*

Study	**Genre**	**Genre Theory**
Swales, J. (1981). Aspects of article introductions. Birmingham, UK: Aston University, The Language Studies Unit	research article introduction	ESP
Ventola, E. (1984). Orientation to social semiotics in foreign language teaching. *Applied Linguistics, 5*(3), 275-285	service encounter	SFL
Schryer, C. (1993). Records as genre. *Written Communication, 10*(2), 200-234	medical record	NR/RGS
Bhatia, V. K. (1993). *Analysing Genre – Language Use in Professional Settings*. London: Longman	legal case	ESP
Connor, U., & Mauranen, A. (1999). Linguistic analysis of grant proposals: European Union research grants. *English for Specific Purposes, 18*(1), 47-62.	grant proposal	ESP
Yakhontova, T. (2002). 'Selling' or 'Telling'? The issue of cultural variation in research genres. In J. Flowerdew (Ed.), *Academic Discourse* (pp. 216-232). Edinburgh: Pearson.	conference abstract	ESP

Method of Analysis

The social genre and cognitive genre model is used as a background framework against the types of knowledge identified in each study as genre-defining are examined. Each study is examined in terms of its focus on each of the areas of genre knowledge from the model outlined in *Table 4*

Table 4: *Social genre and cognitive genre models*

Social Genre Elements (relating to social purposes to communicate specific information to a particular audience)				**Cognitive Genre Elements (relating to particular general rhetorical purposes)**		
Context	Epistemology	Addressing Audience (metadiscourse)	Content staging (such as moves and steps or schematic structure)	Gestalt Structure (local ideas organization)	Textual Pattern (e.g. Preview Details; Problem Solution)	Cohesion and coherence/ linguistic features

Findings

Table 5 summarizes the findings of the analysis of the knowledge elements proposed as genre-identifying in the six studies.

Table 5: *Genre knowledge in the six studies*

	Sample	**Social Genre Elements**				**Cognitive Genre Elements**		
The Study		*Context*	*Epistemology*	*Addressing Audience (metadiscourse)*	*Content staging*	*Local Ideas structure*	*Textual Pattern*	*Cohesion and coherence/ linguistic features*
Swales 1981 (RA introduction) (*instruction in research writing*)	48 article introductions (physics, bio-medical, social sciences)				4 moves *1 establishing the field* *2 summarizing previous research* *3 preparing for present research* *4 introducing present research*			linguistic features that signal functions of moves, e.g.: Move 1 lexis of openings, position of references, reporting verbs, tense Move 2 topic prominence, references, reporting verbs, tense Move 3 markers of contrast, negative (nominal, verbal, lexical) Move 4 self mention or reference to paper as a subject
Ventola (1984) Sales encounter (*relating SFL to FL teaching*)	two illustrative sales encounter dialogues	General commercial contexts, such as a post office, travel agency	language as a social semiotic		Schematic structure: - *service bid* - *service* - *goods handover* - *pay* - *closing*			functional phrases for realizing the schematic structure e.g. Service Bid: *Can I help you?* Service: *Could you show me….?* Goods:
Schryer, 1993 (veterinary medical records) (*research perceived writing deficits in a certain group of students*)	academic practices surrounding two sample texts of POVMR genre	communicative practices that surround the use of one genre in veterinary science between veterinary professors (as assessors), veterinarians as professional peers	diagnosis as coordinated social action		- *data base* - *problem list* - *initial plan* - *progress notes*			
Bhatia 1993 (legal case) (*professional writing instruction*)	three versions of a legal case (from published case books)	professional functions of the genre of legal cases	material legal facts as procedural knowledge		4 moves - *identifying the case* -*establishing the facts of the case* - *arguing the case* (1)stating the history of the case (2)presenting arguments (3)deriving ratio dicendi - *pronouncing judgment*			Move 1 Citation practices for titles and sub-titles *Move 4* Pronouncing judgment traditionally begins with “Held . . .”

Table 5 (cont.): *Genre knowledge in the six studies*

	Sample	**Social Genre Elements**				**Cognitive Genre Elements**		
Connor & Mauranen (1999) EU Grant Applications (*service writing of researchers*)	11 EU grant proposals	General context of EU grants applications (The Specific disciplinary contexts of the 11 texts were not addressed)		Research grant awarding agencies	11 moves : - *territory* - *gap* - *goal* - *means* - *previous research* - *achievements* - *benefits* - *competence claim* - *importance claim* - *benefits claim* - *compliance claim*			
Yakhontova (2002)	45 conference abstracts, written by Ukrainians or Russians - 10 in Ukrainian, 5 Russian, 15 English (By U & R writers), 15 English (NS writers)	International and Ukrainian Applied Linguistics conferences		Reviewing panels and conference attenders	5 moves - *outlining the research field* - *justifying a particular study* - *introducing the paper* - *summarizing the paper* - *highlighting its results*			Use of pronouns & evaluative words,

The central genre-defining element in all six studies is a conventionalized pattern for the staging of content described as a schematic structure or a move structure. In the case of three of the ESP studies, those of Bhatia (1993), Swales, (1981) and Yakhontova (2002), individual moves of the content staging are linked to what are seen as move-characterizing linguistic elements. Similarly, in the case of the SF study by Ventola (1984), stages of the schematic structure of the sales encounter genre are linked to suggested formulaic phrases that could be used in their realization. A focus on knowledge elements that relate to the type of context in which the genre occurs is provided in five of the studies, but only two undertake a detailed description of the contextual elements and the function of the genre within that context (Bhatia, 1993; Schryer, 1993). Of the sample, the same two studies (Bhatia, 1993; Schryer, 1993) also include a focus on knowledge elements that relate to disciplinary epistemology, which were material legal facts as procedural knowledge in cases (Bhatia, 1993) and an heuristic for interactional diagnosis in veterinary science (Schryer, 1993). None of the six studies examines elements that relate to writer stance and addressing audience. Similarly, aspects of text type (cognitive genre), such as textual organization, cohesion and coherence, receive no attention in the operationalization of genres in those of the six studies that relate to more extended written texts.

Discussion

In relation to the application of genre theories to the categorization of texts and the achievement of construct validity, two important issues need to be considered. The first is the extent to which proposals for genre as a classificatory tool adequately operationalize the underlying construct, which is the concatenation of textual and discoursal elements that converge in extended written texts or spoken language events. The second issue relating to construct validity (referred to in the introduction)

is that of the degree of consensus within a research community of agreed understandings about the operationalization of the underlying construct.

In relation to the first issue, it seems that the approaches to genre exemplified in the reviewed studies operationalize genre in terms of a relatively limited number of knowledge elements that relate to the underlying constructs. As an obligatory element, all of the studies include a pattern for content staging, such as a schematic or move structure. However, while it is likely that this element of genre knowledge may be salient to the analysis of smaller, relatively formulaic categories of text, such as abstracts, research article introductions and shopping transactions, it may be less feasible to establish a content structure (such as schematic structure or moves and steps) for larger, less formulaic texts. For example, in a recent study of the genre of the extended university essay in two contrasting fields (English literature and sociology) using texts from the British Academic Written English corpus (Bruce, in press), it was only possible to establish move structures in relation to the introductions of the essays. This was the only section of the essays that were found to be sufficiently formulaic or conventionalized in their organization to be amenable to this type of analysis.

As the findings show, the context-related function of each category of text is addressed to some extent, but only two of the studies focus on epistemological influences, now seen by some researchers, such as those in the academic literacies movement (see Lea & Street, 1998) as an important influence in accounting for disciplinary differences in writing. Also among the six studies the issue of writer stance and audience receive no attention as a genre-defining element. Given that the concept of effect or effect on the language user is identified as a key element of discourse competence in the models of communicative competence offered by Canale (1983) and Bachman (1990), lack of a focus on this area would seem to be an important omission. Similarly, the element of embedded text types (cognitive genres) is not acknowledged in any of the reviewed genre studies whose object of analysis is a category of extended written texts. Therefore, on the basis of this review, it seems that the knowledge areas that receive little attention in operationalization of genre in the reviewed studies are those of epistemology, writer stance (including the use of metadiscourse) and matters of cohesion and coherence that relate to text types (cognitive genres).

In relation to researcher agreement on the operationalization of the underlying construct, the analysis of the selected genre studies shows that there is limited agreement in terms of the ways in which the researchers operationalize genre and the types of knowledge that they include and the terminologies that they employ. The reason for this is that the approaches employed in the studies draw upon the three different approaches to genre, and also that their implementation in some cases is eclectic in terms of the selection of the theory-related genre elements chosen to characterize texts as belong to a particular genre.

In relation to the ongoing discussion and development of genre theory, the findings suggest that in any approach to genre as a classifier of texts or other language events, the concept (of genre) needs to be operationalized comprehensively and systematically in terms of a range of knowledge features that account for elements of both discourse and text. Clearly in the operationalization of genre, one size does not

fit all, and that elements that are highly salient to the analysis of categories of smaller or relatively formulaic texts (such as move structures) may be less relevant to the analysis of categories of extended written texts, where author purpose may be realized in a number of ways that still lie within the accepted parameters of a genre recognized by a discourse community. Therefore, the findings of this study suggest that it is important that theorists and researchers maintain an ongoing discussion about genre and its operationalization, and that such a discussion considers the range of knowledge types that are salient to any categorization of texts. It may eventually be the case that the range of knowledge types accepted as potentially genre-categorizing prove to be broader than those employed in the reviewed studies.

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Appendix

Summary of the Cognitive Genre Model	
Report: static descriptive presentation	
Rhetorical focus	The presentation of data that is essentially non-sequential
Gestalt structure	WHOLE PART structure of which PART has an UP DOWN structure
Discourse pattern	Preview-details
Interpropositional relations	Amplification; reason-result, grounds-conclusion; simple contrast, comparative similarity, concession-contraexpectation, condition-consequence
Explanation: means-focused presentation	
Rhetorical focus	The presentation of information with the orientation on means
Gestalt structure	SOURCE PATH GOAL schema; LINK schema
Discourse pattern	Preview—details
Interpropositional relations	Means-purpose, means-result, amplification, concession-contraexpectation
Discussion: choice/outcome-focused presentation	
Rhetorical focus	The organization of data in relation to (possible) outcomes/ conclusions/choices
Gestalt structure	CONTAINER schemata (more than one)
Discourse pattern	Generalization—examples and matching
Interpropositional relations	Grounds-conclusion, reason-result, means-purpose, means-result, concession-contraexpectation
Recount rhetorical type: sequential presentation	
Rhetorical focus	The presentation of data or information that is essentially sequential or chronological
Gestalt structure	SOURCE PATH GOAL schema
Discourse pattern	General—particular, problem solution
Interpropositional relations	Means-purpose, means-result, amplification, chronological sequence, grounds-conclusion, reason-result

(Bruce, 2005, p. 14)