

3. MEANING BEYOND THE CLAUSE: SFL PERSPECTIVES

J. R. Martin

This chapter takes note of the longstanding orientation Systemic Functional Linguistics (SFL) to discourse studies before moving to a more detailed and selective presentation of current developments in SFL with respect to discourse models, developing research methodologies, and applications to different domains. The reinterpretation of cohesion as discourse semantics (identification, negotiation, conjunction, and ideation) is reviewed with respect to metafunctions (textual, interpersonal, and ideational). This work on texture is then related to social context through the register variables tenor, field and mode alongside genre. The chapter then reviews recent SFL-inspired research that applies these models to analysis of discourse across languages, modalities of communication, and domains. Work done on school and workplace discourse has raised new questions about appropriate units of discourse structure and their relationship to register analysis. It is predicted that some of these questions may be answered by the development of improved software for discourse analyses affording greater specificity in mapping the relationships among genres.

Systemic Functional Linguistics (hereafter SFL) has a longstanding interest in discourse analysis, deriving historically from Firth's (1957) concern with meaning as function in context and Mitchell's canonical (1957) study of service encounters in the Moroccan marketplace. Halliday (1967) built a focus on discourse function into his grammar through his work on Theme/Rheme and (Given)/New structure; and his perspective on textual meaning beyond the clause (i.e., cohesion) is outlined in Halliday and Hasan (1976). In addition his model of social context (e.g., Halliday, 1978 on field, tenor, and mode) stimulated SFL register studies around the world and led to the development of genre analysis, particularly in Australia (e.g., Hasan, 1977; Martin, 1985). There are many SFL publications featuring discourse analysis, including Benson, Cummings, and Greaves, 1988; Benson and Greaves, 1985; Davies and Ravelli, 1992; Fries and Gregory, 1995; Ghadessy, 1993, 1995, 1999; Gregory and Carroll, 1978; Hasan

and Fries, 1995; Sánchez-Macarro and Carter, 1998; Stainton and Devilliers, 2001; Steiner and Veltman, 1988; Ventola, 1991, 2000; special issues of *Word* (40, 1–2, 1989), *Language Sciences* (14, 4, 1992) and *Cultural Dynamics*, (6, 1, 1993) and many issues of *Functions of Language*.

In the next section, one reading of the theory informing this work will be outlined, based on Martin (1992) and Martin and Rose, in press. Following this, some recent developments and current trends in SFL discourse analysis will be reviewed.

Modeling Discourse

Early work on cohesion was designed to move beyond the structural resources of grammar and consider discourse relations which transcend grammatical structure. Halliday (1973) treated cohesion as involving non-structural relations beyond the sentence, within what he refers to as the textual metafunction (as opposed to ideational and interpersonal meaning). In Halliday and Hasan (1976) the inventory of cohesive resources was organized as

- reference
- ellipsis
- substitution
- conjunction
- lexical cohesion

Gutwinski (1976) develops a closely related framework, including these resources (and in addition grammatical parallelism). *Reference* refers to resources for identifying a participant or circumstantial element whose identity is recoverable. In English the relevant resources include demonstratives, the definite article, pronouns, comparatives, and the phoric adverbs *here*, *there*, *now*, and *then*. *Ellipsis* refers to resources for omitting a clause, or some part of a clause or group, in contexts where it can be assumed. In English conversation, rejoinders are often made dependent through omissions of this kind: ‘Did they win?’ ‘Yes, they did.’ Some languages, including English, have in addition a set of place holders which can be used to signal the omission—e.g., *so* and *not* for clauses, *do* for verbal groups and *one* for nominal groups. This resource of place holders is referred to as substitution. *Ellipsis* and *substitution* are sometimes treated as a single resource (e.g., Halliday, 1994). From the perspective of English, *ellipsis* is substitution by zero; more generally, looking across languages, it might be better to think of substitution as ellipsis (signaled) by something. Reference, ellipsis, and substitution involve small closed classes of items or gaps, and have together been referred to as grammatical cohesion (Gutwinski, 1976; Hasan, 1968).

Also included as grammatical cohesion is the typically much larger inventory of connectors which link clauses in discourse, referred to as *conjunction*. For Halliday and Hasan (1976), this resource comprises linkers which connect sentences to each other, but excludes paratactic and hypotactic (coordinating and subordinating) linkers within sentences, which are considered structural by Halliday. Gutwinski, however, includes all connectors, whether or not they link clauses within or between sentences.

The complement of grammatical cohesion involves open system items, and so is referred to as lexical cohesion. Here the repetition of lexical items, synonymy or near synonymy (including hyponymy), and collocation are included. Collocation was Firth's term for expectancy relations between lexical items (e.g., the mutual predictability of *strong* and *tea*, but not *powerful* and *tea*).

The relationship between a cohesive item and the item it presupposed in a text is referred to as a cohesive tie. Gutwinski (1976) contrasts the different kinds of cohesive ties that predominate in writing by Hemingway and James, with Hemingway depending more on lexical cohesion than does James. Halliday and Hasan (1976) provide a detailed coding scheme for analyzing cohesive ties, which takes into account the distance between a cohesive item and the item presupposed.

Later work concentrated on the semantics of these cohesive resources and their relation to discourse structure. Martin (1992) worked on reformulating the notion of cohesive ties as discourse semantic structure, inspired by the text-oriented conception of semantics of the Hartford stratificationists (Gleason, 1968; Gutwinski, 1976) with whom he studied in Toronto. In his stratified account, cohesion was reformulated as a set of discourse semantic systems at a more abstract level than lexicogrammar, with their own metafunctional organization. Halliday's nonstructural textual resources were thus reworked as semantic systems concerned with discourse structure, comprising

- identification
- negotiation
- conjunction
- ideation

Identification is concerned with resources for tracking participants in discourse. This system subsumes earlier work on referential cohesion in a framework which considers both the ways in which participants are introduced into a text and kept track of once introduced. In addition, the ways in which phoric items depend on preceding or succeeding co-text, on assumed understandings, or on other relevant phenomena (images, activity, sound etc.) are considered. For definitions of 'phora' terms (e.g., *anaphora*, *cataphora*, *endophora*, *exophora*, *homophora*), see Martin (1992).

Negotiation is concerned with resources for exchanging information and goods and services in dialogue. This system subsumes some of the earlier work on ellipsis and substitution in a framework which considers the ways in which interlocutors initiate and respond in adjacency pairs. Drawing on earlier work at Birmingham (Sinclair & Coulthard, 1975) and Nottingham (Berry, 1981), a framework for exchanges consisting of up to five moves was developed, alongside provision for additional tracking and challenging side-sequences (Ventola, 1987). This work is closely related to studies in conversation analysis (CA) but with a stronger grammatical orientation (such as that canvassed in Ochs, Schegloff, & Thompson, 1996). Egins and Slade (1997) introduce ongoing SFL research in this area in relation to wider questions of discourse structure and social context; Coulthard (1992) updates the Birmingham-based work.

Conjunction is concerned with resources for connecting messages, via addition, comparison, temporality, and causality. This system subsumes earlier work on linking between clauses in a framework which considers, in addition, the ways in which connections can be realized inside a clause through verbs, prepositions, and nouns (e.g., *result in*, *because of*, *reason*). Drawing on Gleason (1968), a framework for analyzing internal¹ (pragmatic/rhetorical) and external (semantic/propositional) conjunctive relations was proposed, including the possibility of connections realized simply by the contiguity of messages (i.e., links unmarked by an explicit connector).

Ideation is concerned with the semantics of lexical relations deployed to construe institutional activity. I use ‘construe’ to emphasize the role texts play in making meaning—that is, knowledge—and thus constructing social context—that is, reality; cf. Halliday and Matthiesen, 1999. This system subsumes earlier work on lexical cohesion in a framework which considers how activity sequences and taxonomic relations (of classification and composition) organize the field of discourse (Benson & Greaves, 1992). Drawing on Hasan (1985), a model for a more detailed account of lexical relations including repetition, synonymy, hyponymy, and meronymy was proposed; in addition, collocation was factored out into various kinds of ‘nuclear’ relations, involving elaboration, extension, and enhancement (as developed by Halliday, 1994, for the clause complex).

The result of these reformulations is a semantic stratum of text-oriented resources dedicated to the analysis of cohesive relations as discourse structure. Once stratified with respect to lexicogrammar, these resources can be aligned with metafunctions in the following proportions:

- | | | |
|---|----------------|------------------------------|
| • | identification | textual meaning |
| • | negotiation | interpersonal meaning |
| • | conjunction | logical ² meaning |
| • | ideation | experiential meaning |

This brings us the question of modeling social context in a functional theory which looks at what cohesion is realizing alongside the ways in which it is realized. In SFL, social context is modeled through register and genre theory. Following Halliday (1978) a natural relation is posited between the organization of language and the organization of social context, built up around the notion of kinds of meaning (Mattheissen, 1993). Interpersonal meaning is related to the enactment of social relations (social reality), or tenor; ideational meaning is related to the construction of institutional activity ('naturalized reality'), or field; and textual meaning is related to information flow across media (semiotic reality), or mode. A summary of these relationships between types of meaning and register variables is outlined in Table 1.

Table 1: Types of meaning in relation to social context

	'Reality construal'	Contextual variable
Interpersonal	social reality	tenor
Ideation	(logical, experiential)	'natural' reality field
Textual	semiotic reality	mode

Following Martin (1992), field is concerned with systems of activity, including descriptions of the participants, process and circumstances these activities involve. For illustrative work, see Halliday and Martin (1993) and Martin and Veel (1998). Tenor is concerned with social relations as these are enacted through the dimensions of power and solidarity. For foundational work on tenor see Poynton (1985). Mode is concerned with semiotic distance, as this is affected by the various channels of communication through which we undertake activity (field) and simultaneously enact social relations (tenor). For exemplary work on differences between speech and writing, see Halliday (1985).

In Martin (1992), an additional level of context, above and beyond tenor, field, and mode, referred to as genre, has been deployed. This level is concerned with systems of social processes, where the principles for relating social processes to each other have to do with texture, that is, the ways in which field, mode and tenor variables are phased together in a text. In Australian educational linguistics, genres have been defined as staged, goal-oriented social processes (Martin, 1999), a definition which flags the way in which most genres take more than a single phase to unfold, the sense of frustration or incompleteness that is felt when phases don't unfold as expected or planned, and the fact that genres are addressed (i.e. formulated with readers and listeners in mind), whether or not the intended audience is immediately present to respond. In these terms, as a level of context, genre represents the system of staged goal-oriented social processes through which

social subjects in a given culture live their lives. An overview of this stratified model of context is presented in Figure 1; this image includes Lemke's (1995) notion of metaredundancy, whereby more abstract levels are interpreted as patterns of less abstract ones. Thus register is a pattern of linguistic choices, and genre a pattern of register choices (i.e., a pattern of a pattern of texture). For further discussion, see Christie and Martin (1997), Eggins (1994), Eggins and Martin (1997), Martin (1992, 2001a), and Ventola (1987).

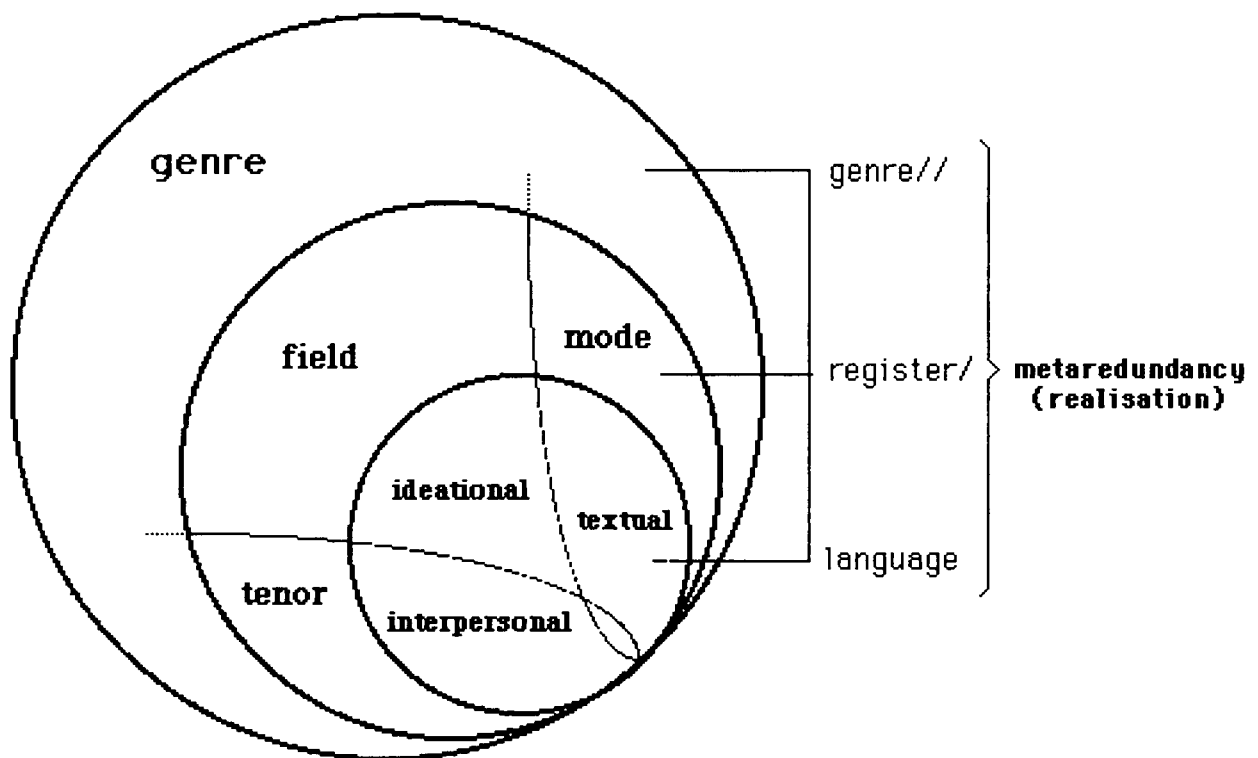


Figure 1: Metafunctions in relation to register and genre.

Recent Developments

Throughout the 1990s, SFL discourse analysis developed along several parameters, including relevant aspects of phonology and grammar. Higher levels of phonological analysis, pushing well beyond the tone group as far as rhythm is concerned, are pursued in van Leeuwen (1991), Martinec (2000a), and Watt (2001). In grammar, research expanded across languages and language families, including relevant work on textual meaning. Caffarel, Martin, and Matthiessen (in press) includes chapters on French, German, Telegu, Chinese, Japanese, Vietnamese, Tagalog, and Pitjantjatjara, each with an emphasis on showing how the various grammars operate in discourse. The papers in Steiner and Yallop (2000) explore the implications of functional descriptions of this kind for translation and multilingual text production.

For English, one significant trend has been the development of computer assisted analysis programs which facilitate the coding of large quantities of text for SFL grammar and discourse features. These programs include O'Halloran and Judd (2001); Matthiessen and Wu's SysAm (<http://minerva.ling.mq.edu.au/Resources/AnalysisTools/Tools.htm>); O'Donnell's Systemic Coder (O'Donnell, 1995; <http://www.wagsoft.com/Coder/index.html>); and Webster's Functional Grammar Processor (e.g. Webster, 1995; Webster & Kit, 1995). These tools are making it possible to undertake large scale semantic analyses with a view to quantitative interpretation and have given new impetus to longstanding SFL interests in corpus based research (Halliday, 1991, 1992, 1993; Halliday & James, 1993; Matthiessen, 1999, in press; Nesbitt & Plum, 1988; Plum & Cowling, 1987). This work on automated discourse analysis is complemented by work on synthesis, in, for example, the text generation research introduced in Bateman (2001), Bateman, Matthiessen, and Licheng (1999), Bateman and Rondhuis (1997), Matthiessen and Bateman (1991), and Teich (1999).

At the level of discourse semantics, some of the most important developments have to do with interpersonal meaning. Eggins and Slade (1997) present a rich model of speech function, especially designed for analyzing initiating moves and responses in casual conversation. Recently this has been insightfully applied to human/bonobo interaction (Benson, Fries, Gredves, Iwamoto, Savage-Rumbaugh, & Tagliatela, in press). Hasan and her colleagues (Hasan, 1996) have developed a finely tuned set of semantic networks designed for the study of adult-child interaction in home and school. These have been instrumental in exploring Bernstein's theories of language and socialization (Bernstein, 1996), especially in relation to gender and social class, and represent the most important linguistically informed body of research into semantic styles and their implications for education (see especially Cloran, 1989, 1999a, b; Hasan, 1990, 1991, 1992, 2001; Hasan & Cloran, 1990; Williams, 1995, 1996, 1999, 2001). Hasan (1995a) and Halliday (1995) insightfully review the implications of close textual analysis for Bernstein's work, and deal incisively with populist misunderstandings; Cloran (2000) provides an accessible introduction to semantic networks and their deployment in the study of sociosemantic variation.

Another major development in interpersonal discourse semantics has been the emergence of appraisal theory (see Martin, 2000a, and the website designed by Peter White at <http://www.grammatics.com/appraisal/index.html>). Appraisal complements negotiation from the perspective of resources for evaluation, including systems of attitude, engagement, and graduation. Attitude focuses on resources for construing affect, judgment, and appreciation (roughly the lexically realized realms of emotion, ethics, and aesthetics); engagement is concerned with the sourcing of attitude and acknowledgment of alternative voices (heteroglossia); and graduation covers force (intensification of inherently gradable meanings) and focus ('fuzzification' of inherently nongradable categories). Work on this

dimension of intersubjective meaning has refocused attention on prosodic realization (across ideational boundaries) in various registers, such as history (Coffin, 1997); narrative and literary criticism (Rothery & Stenglin 1997, 2000); news stories (White, 1997); casual conversation, including humor and gossip and their implications for generation, ethnicity, and gender (Eggins & Slade, 1997); and popular science (Fuller, 1998).

Ideational semantics is elaborated in Halliday and Matthiessen (1999), who are particularly concerned with establishing a semiotic perspective on what is generally viewed as cognition. Their project includes work on what they call sequences which is relevant to conjunction. Van Leeuwen (1996) develops a complementary perspective on agency which has been influential in critical discourse analysis. Matthiessen (in press) explores Rhetorical Structure Theory (RST) from the perspective of this research, continuing a dialogue between SFL conjunction analysis and RST (Mann, Matthiessen, & Thompson, 1992), which began in the 1980s (Martin, 1992). For relevant work on causation in Dutch, see Degand (2001). From the perspective of discourse analysis, what has been slow to emerge is an understanding of different kinds of expectancy relations linking clauses across registers. Temporal sequencing and causal reasoning tend to be foregrounded over tropes of other kinds, such as description, classification, composition, comparison, critique, review, stirring, coaxing, serving, and so on; research is urgently required in these areas.

As far as participant identification is concerned, the main developments have come from language typology through consideration of the ways in which nominal group resources interact with Theme, and in some languages with conjunction (the so-called subject-switching systems found in Papua and Australia). These issues are explored in Caffarel et al. (in press) in relation to Martin (1983). Textual meaning has also been investigated in relation to information flow in general across languages (Downing & Lavid, 1998; Hasan & Fries, 1995; Lavid, 1997) and in relation to layers of Theme and New in English discourse (Ghadessy, 1995; Halliday & Martin, 1993). Martin (1992, 1993, 1995a) explores the ways in which texts use higher level Themes to predict information flow and higher level News to retrospectively distill the point of preceding discourse, thus following up suggestions by Pike and Halliday about 'hierarchy of periodicity' as a form of textual organization (Fries, 1981). Halliday's work on grammatical metaphor as a resource for packaging meaning has been instrumental in this area of inquiry (Halliday, 1998; Halliday & Matthiessen, 1999; Simon-Vandenbergen, Taverniers, & Ravelli, in press).

This raises the question of higher-level units in discourse, which has been explored in various ways. One useful tool has been Hasan's cohesive harmony (Cloran, 1999b; Hasan 1984, 1985; Parsons, 1991). In cohesive harmony analysis, we are asking how ideation and identification interact as far as

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experiential grammar is concerned, based on the degree to which cohesively related items enter into the same kind of experiential relationship with other cohesively related items. Breaks in the pattern of interaction are associated with discourse boundaries of one kind or another and so relevant to the recognition of higher-level units. This style of analysis is not unrelated to the work of Gregory and his colleagues on phasal analysis (Gregory, 1995, 2001; Stainton & Devilliers, 2001), which, however, takes into account a full metafunctional spectrum of meaning (ideational, interpersonal, and textual) in order to determine phases and transitions in discourse.

Cloran's work on rhetorical units (RU), on the other hand, is more selective in its parameters, having been designed to focus on the register variable mode (Cloran, 1994, 1995, 1999a, b, 2000). She looks in particular at the context dependency of the participant functioning as subject in a clause and at the tense of that clause's verb (the 'deixis' of the clause, in other words) and on this basis sets up classes of RU ranging from those positioning language as ancillary to the task at hand to those in which language constitutes the social activity. The interdependencies among RUs are explored through her concept of embedding, and used to investigate parent-child interaction in the home as part of Hasan's language and socialization project outlined above.

The relation of all three of these perspectives on units of discourse to work on genre structure is an important issue which has not been resolved. Certainly the conversational data that Gregory and his colleagues and Cloran are investigating is not the kind that has generally attracted genre analysts (see, however, Eggins & Slade, 1997), presumably because of the difficulty in recognizing clear stages of the kind found in the analysis of narrative, exposition, service encounters, appointment making, or classroom discourse. As a result, the issue of generalizing discourse units across registers remains a pressing one in SFL-informed discourse analysis (cf. Taboada, 2000, in press).

As far as register analysis is concerned, there has been significant work in tenor, mode, and field. The main tenor initiative draws on appraisal analysis to explore solidarity, as exemplified in Eggins and Slade (1997) and White (2000) who analyze the face work done through casual conversations involving family members, friends, and coworkers. The outstanding mode initiative is multi-modal discourse analysis, inspired by the work of O'Toole (1994) and Kress and van Leeuwen (1996) on images (see also van Leeuwen & Jewitt, 2001). Martinec (1998, 2000b, c, 2001) extends this work to the modality of action, and van Leeuwen (1999) to the modality of music and sound. These tools have encouraged SFL discourse analysts to consider the ways in which language negotiates meaning in cooperation with other semiotic systems (Baldry, 1999; Eggins & Iedema, 1997; Iedema, 2001; Kress & van Leeuwen, 2001; O'Halloran, 1999a) and to focus on

some of the new kinds of discourse evolving in the print and electronic media (Lemke, 1998; Veel, 1998).

Research into field has explored several kinds of school and workplace discourse. Work on institutionalized learning includes mathematics (O'Halloran, 1999a, b, 2000; Veel, 1999), science (Halliday & Martin, 1993; Kress, Jewitt, Ogborn, & Tsatsarelis, 2001; Martin & Veel, 1998; Unsworth, 1998), geography (Martin, 2001b; van Leeuwen & Humphrey, 1996; Wignell, Martin, & Eggins, 1990), history (Coffin, 1997; Martin, 2001c; Martin & Wodak, in press; Veel & Coffin, 1996) English (Martin, 1996a; Rothery & Stenglin, 1997, 2000), and English for academic purposes (Lewin, Fine, & Young, 2001; Ravelli & Ellis, in press; Ventola, 1998; 1999, Ventola & Mauranen, 1995). Work on workplace communication includes administration (Iedema, 1997a, 1998, 2000; Iedema & Degeling, 2001; Iedema & Scheeres, in press), science and technology (Rose, 1997, 1998; White, 1998), speech disorders (Armstrong, 1987, 1992; Fine, 1994, 1995; Fine, Bartolucci, & Szatmari, 1989; Oram, Fine, Okamoto, & Tannock, 1999; Ovadia & Fine, 1995), medicine (Jordens, Little, Paul, & Sayers, 2001), law (Gibbons, in press; Iedema, 1993, 1995), and museums and galleries (Ferguson, MacLulich, & Ravelli, 1995; Ravelli, 1996, 1998).

The range of this research has had a number of implications for genre analysis, including analysis of generic structures and intertextual relations with one another. Work on administrative directives (Iedema, 1997a; Martin, 1998) and print media news stories (Iedema, 1997b; White, 1997), for example, revealed genres that are best characterized as having a nucleus/satellite structure (as opposed to a more traditional part/whole beginning, middle, and end organization), a kind of orbital structure with an obligatory core stage and optional elaborating stages that are not strictly sequenced. Martin (1995b, 1996b) follows up the implications of this for experiential structures in general, analogizing from genre structure back to grammar. Across fields, the problem of longer texts arose and attempts were made to model these as series of smaller genres drawing on Halliday's 1994 categories of expansion (elaboration, extension, and enhancement). This serial perspective on macro-genres as genre complexes is introduced in Martin 2001b (see also Iedema, 2000; Jordens et al., 2001) and further developed in Christie (1999, in press) for classroom discourse.

Another important dimension of genre analysis across fields has to do with mapping relationships among genres from both typological and topological perspectives. Using paradigms and system networks to model *valeur*, narrative and factual genres are explored typologically in Martin (2001a) and Martin and Plum (1997); this kind of analysis depends on categorical distinctions. The notion of genres as more gradient semantic regions is explored topologically in Martin (2001b, c), Rose (1997, 1998), and Veel (1997) for a range of factual genres from science, geography, and history. The relation of work on macro-genres and genre

topology to the question of 'genre mixing' is discussed in Martin (2001b). For SFL work on genre in relation to other approaches, see Hyon (1996) and Hyland (this volume).

Connections

Obviously in a survey of this kind I have had to be selective. One of the most obvious extensions would be to the work of present and past staff and students at the University of Birmingham. Fortunately, this work is ably surveyed in Coulthard (1992, 1994) and Caldas-Coulthard and Coulthard (1996). Of these colleagues, special mention should be made of Michael Hoey, who has developed the Hatfield Polytechnic strain of discourse analysis inspired by Eugene Winter (Hoey 1991, 2001; Scott & Thompson, 2000). In America, the clearest links are with west coast functionalism, especially Fox (1987), because she brings several discourse semantic regions (CA, RST, and participant identification) to bear on the 'grammar' of text development. Some further connections are explored in Martin and Rose (in press).

The strength of SFL work on discourse probably lies in its relatively well developed descriptions of genre and functional grammar, and the adaptability of SFL modeling across modalities (to image, music, and action, for example). This grounds research firmly in the materiality of both global and local perspectives on meaning. The challenge for future work lies in filling in the middle ground between text and clause through intensive corpus-based work on discourse semantics and register. The success of this enterprise depends on the development of relevant software to both enhance and supplant manual analysis. I expect this technology to affect our conception of language and attendant semiotic systems as radically as the invention of writing and the tape recorder have shaped our discipline in the past, since for the first time we'll be able to manage large-scale sociosemantic analyses of data.

Notes

1. The terms *internal* and *external* are from Halliday and Hasan (1976); van Dijk (1977) opposes pragmatic to semantic relations. The contrast is between *He came, because I just saw him* (internal = 'why I'm saying he came') and *He came because I saw him and told him to* (external = 'why he came').
2. In SFL the ideational metafunction includes two subcomponents, the experiential and the logical; experiential meaning is associated with orbital structure (mononuclear), and logical meaning with serial structure (multinuclear; Martin 1996b).

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Martin (1992) outlines the reading of SFL discourse analysis assumed here. Martin and Rose (in press) provide an accessible introduction to this work, focussing on writing and incorporating recent developments; Eggins and Slade (1997) complement this with a focus on spoken discourse. Halliday and Martin (1993), Christie and Martin (1997), and Martin and Veel (1998) illustrate this kind of analysis across a range of fields. Unsworth (2000) is designed for prospective researchers who want to take up these tools. Hasan (1996) surveys her pioneering work on cohesion, genre, semantic networks, and the relation of language to social context.

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