

3 Systemic Functional Linguistic explorations into the longitudinal study of the advanced capacities

The case of Spanish heritage language learners

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Abstract

Systemic Functional Linguistics (SFL) (Halliday 1978, 1994; Halliday and Matthiessen, 2004; Martin and Rose, 2003; among others) is a social theory of language that provides researchers with unique constructs, tools, and insights for the study of advanced L2 capacities. In addition, SFL is particularly well suited to provide theoretical guidance in longitudinal investigations of L2 development. In this chapter, we discuss SFL principles, highlighting their relevance for the longitudinal study of advanced L2 capacities. We also illustrate these principles with data and findings from our longitudinal research program involving Spanish heritage language learners in US higher education contexts. SFL theory situates language development in its sociohistorical context linking patterns of language use to particular culturally relevant situations. In academic contexts language is used to display information using technical lexicon, with high degrees of structure and with an authoritative stance (Martin, 1993; Schleppegrell, 2004). Therefore, in this framework language development demands longitudinal measures that gauge the control users develop over time of particular lexico-grammatical patterns (e.g., grammatical metaphor, lexical density, grammatical complexity, clause combining and engagement) that index an academic context. The discussion will be fleshed out with examples from two studies in which we tracked oral and written development of Spanish in heritage speakers who are using Spanish in academic and professional contexts in the US. From this perspective, advanced language development was defined as changes that develop gradually over time in relation to academic contexts where there are institutionalized ways of using language that characterize disciplinary discourse communities.

Introduction

Systemic Functional Linguistics (SFL) is a social theory of language originally developed by Australia-based linguist Michael Halliday (1993, 1998, 2004; Halliday and Matthiessen, 1999) and expanded in the last two decades through the work of many scholars in Australia (Christie, 2002a, 2002b; Hasan and Martin, 1989; Martin, 1992; Painter, 1989), North America (Byrnes, 2006; Lemke, 1988, 1990, 1998; Mohan, 1986, 1997; Mohan and Huxur, 2001; Schleppegrell, 2004; Schleppegrell

and Colombi, 2002), Latin America (Bolívar, 1994; Ghio and Fernández, 2005; Menéndez, 1993), and Europe (Coffin, 1997; Hunston and Thompson, 2000; Kress, 1994; Kress and Van Leeuwen, 2001). The theory situates language development in its sociohistorical context, linking patterns of language use to particular, culturally relevant situations. Thus, for example, it is through language use that the child is socialized into her culture:

In the development of the child as a social being, language has the central role. Language is the main channel through which the patterns of living are transmitted to him, through which he learns to act as a member of a “society”—in and through the various social groups, the family, the neighbourhood, and so on—and to adopt its “culture”, its mode of thought and action, its beliefs and its values.

(Halliday, 1978, p. 9)

Developing language, then, means developing as a member of a cultural group (Painter, 1991, p. 44). It follows that longitudinal studies from an SFL perspective focus on language development as an intersubjective process that unfolds in particular social contexts. In the longitudinal study of first language (L1) acquisition from an SFL perspective, the focus is on how language plays a crucial role in the development of the child as a social being. In bilingual and second language (L2) development, too, the social practices individuals participate in are thought to shape the types of language they develop. Variability is also a central dimension of the framework. Since language varies according to its users’ social positioning (e.g., social status, gender, regional origin) and according to its uses in different social contexts (i.e., registers), there are individual differences in the type of linguistic resources different people develop. Accordingly, language learning is a social process not only in terms of *what* is learned but also because of *how* it is learned (Derewianka, 1995).

Because of this capacity to address what language is and how it is learned in social as well as linguistic terms, the SFL framework provides researchers with unique constructs, tools, and insights for the study of advanced L2 capacities. As a theoretical framework that offers its own specific analytical apparatus, it allows for the explanation and operationalization of a fundamental relationship between language use and context. Within the SFL perspective, advanced language abilities are inherently developed over longer periods of time; at its core, development is an expansion and/or refinement of domains of language use.

In this chapter, we first discuss SFL principles, highlighting their relevance for the longitudinal study of advanced L2 capacities. We then focus on how change and time scales are conceptualized in SFL theory, presenting particular moments of language development and the semiotic resources associated with each of them. We also offer a brief review of the studies of L1 and L2 development using an SLF framework. In the second half of the chapter, we present a more detailed description of two projects investigating Spanish heritage language development in the United States.

Language and learning in SFL theory

We begin by presenting four crucial constructs embedded in SFL understandings of language and language learning: culture, social action, meaning, and semiotic activity.

Language is part of culture. The linguistic system is constituted by culture and in turn helps to reproduce and transform culture. Language choices are determined by context, but language also affects context. Because language “means” in a social context from a SFL perspective, it is analyzed in relation to its social use and function, a focus that inherently involves variation and a certain ethnographic orientation (see Harklau, Chapter 2, this volume).

Language is a form of social action. Language use in social contexts always achieves social purposes. To attain them, language users make choices from the repertoire of possibilities available to them in the language system. Put differently, context influences the type of language used, and users further shape the type of language used in different contexts. The system constrains the possible choices and is changed by the choices speakers make. The actual language that occurs in a particular setting is therefore probabilistic; that is, in certain contexts users tend to make certain choices. SFL models language and social context as semiotic systems in a relationship of realization with one another. This realization entails that language construes, is construed by, and (over time) reconstrues social context (Martin, 1997, p. 4).

Grammar is meaning. SFL takes a semantic perspective on grammar. That implies that meaning and form are not separated, but stand in a dialectic relation to each other. Meanings do not exist before the wordings that realize them (Hasan and Martin, 1989). The three major types of meaning that organize this grammar are: ideational (grammar as a representation and logical organization of human experience), interpersonal (grammar as an enactment of interpersonal relationships), and textual (grammar as discourse). Thus, grammar as a semiotic mode of activity models the material mode while being itself a component of what it is modeling (Halliday, 1998, p. 186).

Learning is a language-based semiotic activity. While SFL recognizes the importance of diverse semiotic systems for human experience (e.g., gestures), it gives priority to language. That central role of language pertains not only to meaning-making in general but to learning, particularly to what is called schooled learning, a critical context for attaining advanced levels of language use. Within Halliday’s (1993) language-based theory of learning, learning of any subject matter is ultimately linguistic in nature: it is an expansion of meaning-making resources where grammar plays a central role. Accordingly, a natural language embodies in its grammar a theory of human experience (Halliday, 1998, p. 194). In our daily life, we work with a commonsense theory, what Halliday refers to as congruent semiosis, which privileges the dynamic flow of human experience; however, in more public and particularly in academic settings (the settings that we associate with advanced levels of language use), a more abstract or incongruent semiosis construes experiences in terms of objects, both real and conceptual, which allow us to reorganize and control our environment. For example, when talking about the past we tend to construct meanings in terms of the human participants involved (“George Bush started the second war between Iraq and the US”); but when we construct this event as part of the discourse of the discipline of history, it acquires a new meaning that highlights the historical forces instead of the human participants (“The war between Iraq and the US resulted from the confluence of economic and political forces”).

Change and time scales in SFL theory

Language change can be described from different time scales. According to Halliday and Matthiessen (1999), there are three major types of processes by which meanings are created, transmitted, extended, and changed. They are depicted in Figure 1.

Phylogenesis refers to long-term change in the cultural context. For example, over time the scientific community has developed more abstract ways of making meanings to construct its understanding of reality (see Halliday's [1993, 1998] analysis of the development of grammatical metaphor in scientific discourse). This type of development of the meaning-making system sets the context against which medium-term change, as represented in individual development or *ontogenesis*, takes place. Therefore, the individual learner's development is not best understood as an unfolding, pre-set program but as a sociogenetic phenomenon, in which interaction plays a decisive role (Hasan and Perrett, 1994). Culture, society, and its institutions (e.g., school) influence *what* linguistic resources learners develop and *how* they develop them. Finally, *logogenesis* comprises short-term change, such as that found in the unfolding of a text. As stated, the ability to transform concrete into abstract representations within a text (for example, via nominalizations, as in "The participants discussed (verb) the events" > "The discussion (noun) became heated") is a particularly important meaning-making resource within certain kinds of texts.

In sum, phylogenesis provides the environment for ontogenesis, which in turn provides the environment for logogenesis. In other words, the stage a culture has reached in its evolution provides the social context for the linguistic development of the individual, and the stage this development has reached in the individual provides resources for the instantiation of the texts. Conversely, logogenesis provides the material for phylogenesis. That is, texts provide the means through which individuals interact to learn the system, and it is through the heteroglossic aggregation of individual (always already social) systems that the semiotic trajectory of a culture evolves.

Ontogenetic moments and lexicogrammatical and discourse-semantic resources

SFL studies on language development (Halliday, 1993, 1998, 2004; see also Christie, 2002b, among others), have described the ontogenesis of language development from a toddler's protolanguage all the way to advanced language capacities (particularly academic language) as a movement marked by three main periods of

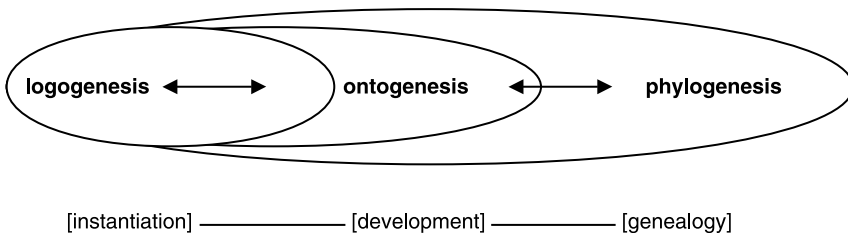


Figure 1 Semogenesis: Kinds of change (source: Martin, 1997, p. 9, by kind permission of Continuum).

language development or ontogenetic moments. They are schematically represented in Figure 2.

The first moment of development, interpersonal language, refers to early development from a protolanguage to a particular language and represents experience in mostly congruent form. The child is able to make grammatical generalizations, that is, she or he can move from the individual to the class category (e.g., dog > animal). The second moment develops during the elementary school years and characterizes the basic literacy of adolescents and young adults. It results from a progression from commonsense to abstractness and consists of the ability to express abstraction in analysis, synthesis, and argumentation through new lexicogrammatical features. Finally, a third moment results from changes from nonspecialized to technical language (Halliday and Matthiessen, 1999, p. 618; Halliday, 1998; Christie, 2002a) and is characterized by “grammatical metaphor” (GM). Referring to various grammatically and semantically incongruent choices, grammatical metaphor is among the central features of advanced language use (see e.g., Halliday 1993, 1994, 1998). Illustrations of GM are italicized in the following example:

Peor aún es la *emigración* masiva del campo a las ciudades, el *abandono* de las granjas *invadidas* por la sal de las *filtraciones* oceánicas, la *usurpación* económica de pueblos enteros por los traficantes de drogas *disfrazados* de hacendados, y la *contaminación* de la carne de las aves y los seres humanos por los plaguicidas y herbicidas tóxicos.

(T. #10)

The word class is a noun but the meaning is an action in “*emigración*,” “*usurpación*,” “*contaminación*,” or the word class is an adjective but the meaning is an action or a state in “*invadidas*,” “*disfrazados*.” Rather than nouns or adjectives, a more congruent or transparent choice would be for actions to be encoded as verbs.

The development of advanced language capacities, then, is conceptualized in ontogenesis as a movement from congruent, oral, interpersonal registers towards incongruent, written academic registers. This movement can be tracked by charting the lexico-grammatical and discourse-semantic features of the texts a language user produces over time, among them grammatical metaphor, grammatical intricacy, lexical density, clause-combining resources, and metadiscourse choices denoting interpersonal stance, such as attitude, engagement, modality, and graduation (appraisal). In other words, SFL adds to the typical discussion of an oral–literate continuum an elaborate theoretical context, an elaborate set of concepts, and, by extension, an elaborate set of analytical tools. Figure 3 provides a summary of this development within the oral–written continuum.

As Figure 3 makes clear, in the SFL framework (Halliday, 1994; Martin, 1985, 1992) academic language is viewed as substantively differing from interactional

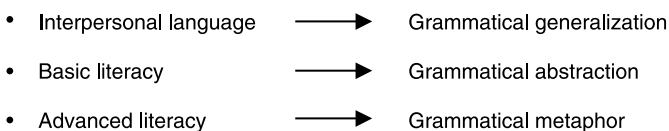


Figure 2 Ontogenetic moments of language development (adapted from Halliday, 1993, and Christie, 2002b).

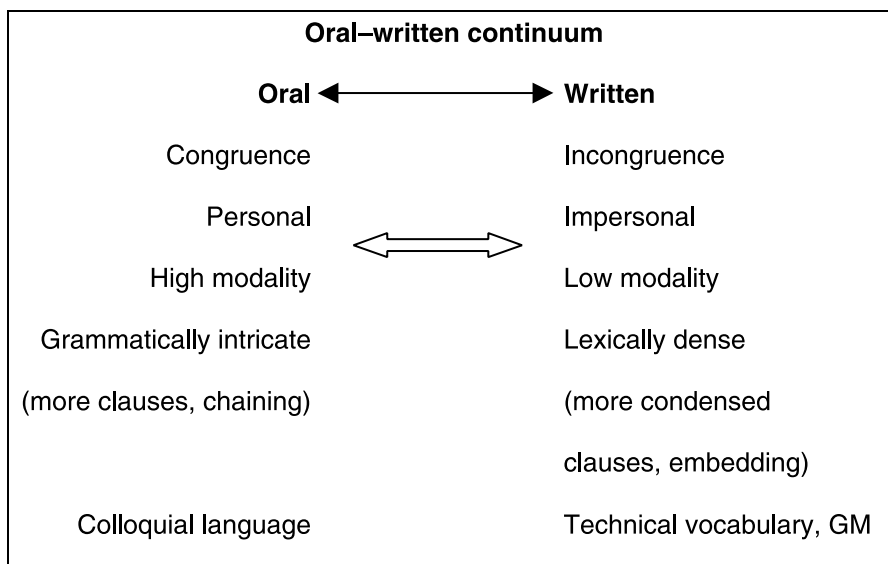


Figure 3 Some key lexicogrammatical and discourse-semantic features along the oral-written semiosis continuum (adapted from Halliday, 1985).

registers, both in terms of its grammar and in terms of its discourse structure (Ravelli and Ellis, 2004; Schleppegrell, 2004; Schleppegrell and Colombi, 2002; Valdés and Geoffrion-Vinci, 1998; Ventola and Mauranen, 1996). Halliday (1994, p. 352) describes the “written language as more complex by being lexically dense: it packs a large number of lexical items into each clause [crystalline]; whereas spoken language becomes complex by being grammatically intricate: it builds up elaborate clause complexes out of parataxis and hypotaxis [choreographic]” (see also Halliday, 1985).

In addition, because in learning a language we learn to become members of particular social groups, a growing area of interest within SFL is the exploration of discourse-semantic resources as a way of indicating emerging and, ultimately, full membership in a group.

Longitudinal SFL Studies of First and Second Language Development

Consistent with the theoretical framework presented in the previous sections, SFL studies of language development favor analyses that relate text and grammar to the examination of meaning. Such studies combine qualitative and quantitative methods with descriptive analysis in two major areas: L1 learning of children and L1 and L2 development in educational contexts. While the latter are of particular interest here, longitudinal studies of young children, usually case studies, can also inform the work of L2 researchers: they strongly emphasize the importance of interpersonal meanings in the emergence of language and learners’ active roles in the process of language development. Table 1 outlines four of these studies.

Within educational contexts with both L1 and L2 students, SFL work has been

Table 1 Four SFL longitudinal case studies of first language development at various ages

	<i>Participant</i>	<i>Age</i>	<i>Length of study</i>	<i>Focus</i>
Halliday (1973)	Researcher's son acquiring L1 English	9 months to 19 months	10 months	Functions of language, socialization
Painter (1999)	One child learning English as L1	2;6 to 5;0 years	Two and a half years	Language as tool for learning about the world
Torr (1997)	Researcher's daughter learning L1 English	2;6 to 4;3 years	21 months	Replication of Halliday (1973), modality
Derewianka (1995)	Researcher's son learning to write in L1 English	Childhood through adolescence	Several years	Grammatical metaphor

motivated by the recognition that schooling involves a process whereby students develop control over the types of texts (spoken and written) that are relevant to their educational and professional needs, especially those texts that are considered powerful in society. Thus, SFL research has sought to make explicit the ways in which language is used in these “powerful contexts” and to enhance the opportunity of learners, most particularly disadvantaged learners, to interact and act in society by extending their linguistic repertoire (Christie, 2002a; Coffin, 1997; Hasan and Williams, 1996; Martin 1985, 1992; Rothery, 1996; Unsworth, 2000) toward the “language of schooling” (Schleppegrell, 2004). When students learn different subject areas, they learn particular ways of using language to construct knowledge. These ways have evolved in line with the interests of a particular scholarly community and go beyond the technical vocabulary that we typically associate with academic disciplines. They also involve ways of constructing different social roles (e.g., experts vs. novices) and types of participation (e.g., full participation vs. peripheral participation) within these communities. Table 2 synthesizes some of the longitudinal SFL studies that focus on first and second language development in the educational context.

Collectively, these studies point to a clear line of development from a more congruent to more incongruent forms and more concrete to more abstract forms of meaning-making, marked by the development of particular linguistic resources (e.g. grammatical metaphor, grammatical intricacy, lexical density, technical vocabulary). While these features in and of themselves are not new in the discussion of advanced language abilities, the particular contributions that SFL makes are unique. SFL offers a clear way of modeling the relation of language and context with a strong meaning focus, a well-theorized and coherent way of addressing variation, change, and development, and an elaborate and nuanced conceptual apparatus that is able to capture development as an expansion of resources that allow choices within particular contexts of language use. Of interest in this context is the fact that this framework enables a particularly fruitful investigation of the ontogenic progression towards advancedness in academic language and written registers.

In the remainder of the chapter, we turn to two applications of SFL theory with a learner group that has been of particular interest to us—namely, college-age heritage

Table 2 Longitudinal SFL studies of L1 and L2 language development in educational contexts

	<i>Participants</i>	<i>Age/context</i>	<i>Length of study</i>	<i>Focus</i>
Christie (2002a, 2002b)	Middle and high school students	Adolescents/L1 (English) academic development, Australia	Several years (in progress)	Generalizations, abstractions, argument and reflection
Dubcovsky (2003)	Twenty-seven 4th and 5th grade students	9- to 11-year-old/bilingual program Spanish and English, US	Two academic years	Incipient academic writing development, focusing on the frequent use of “decir” and “cuando”
Go (2003)	Six 5th and 6th grade students	10- to 12-year-old Chinese and Vietnamese students learning English in the US	One academic year	Logical organization, complexity, genre, writing
Oteiza (2005)	Thirty college students	Heritage Spanish students in the US	One semester	Logical organization, writing
Woodward-Kron (2002)	Six undergraduate college students	Young adults, Australia	First- and third-year texts	Lexical density and technicality, abstraction, grammatical metaphor, projection, logical organization of written texts

Spanish speakers who not only need to expand their control over a range of oral and written academic registers but, just as importantly, need to negotiate, construct, and index new identities as members of the academic community.

The challenge of meaning in academic contexts for heritage speakers of Spanish and second language learners

Heritage speakers of Spanish in the US constitute an important student population with linguistic and educational needs (Colombi, 2002, 2006). They also present interesting challenges for the field of applied linguistics (Valdés, 2005), and provide an example of learners who exemplify issues of advancedness and the development of academic language capacities and identities.

These speakers’ use of Spanish is usually limited to the home or familiar domains, although it should be noted that this situation has recently begun to change in the United States with the increase in the Spanish-speaking population and the economic advance of Spanish-speaking communities. As a result, they have developed language in informal contexts (that is, in restricted domains of use), and, by and

large, have not used Spanish in situations where language is utilized to construct knowledge or negotiate the ways of being a member of a professional community. This, in turn, translates to not having the linguistic resources to respond appropriately to the demands of academic contexts. It is in this sense that heritage learners are similar to advanced L2 learners, since they both lack experience in the use of language in an academic context and have to expand their meaning-making resources to incorporate ways of using language in more specialized and abstract forms.

In the sections that follow, we describe our own longitudinal work within the SFL framework with heritage speakers who are using Spanish in academic and professional contexts in the US. The first study tracks the development of academic registers in oral and written language. The second investigates the development of academic identities.

The development of academic registers: Colombi's project with Latino college students in California

In 1999–2000 I started a longitudinal study in the Program of Spanish for Native Speakers at my home institution in order to examine the extent to which Latino college students develop full control of literate academic language. Over a nine-month period (three academic quarters) I collected all the written texts of thirty students. During the academic year of 2003–2004, in a second phase, I collected both oral and written texts of students.¹ The SFL language-based analysis of these texts was intended not only to describe academic language development in Spanish but to contribute to a visible pedagogy, that is, an explicit way of teaching the key features of language use in order to contribute to curriculum development for Spanish as a heritage language.

The program from which the data are drawn uses a theme-based curriculum and process-oriented writing methodology (multiple version assignments, peer editing, tutors). The Latino participants in the study were born in the US or immigrated, principally from Mexico, as small children. Two-thirds are Mexican American, the others come from Central America (El Salvador, Guatemala and Nicaragua) and South America, especially from Colombia, thus reflecting the make-up of the Latino population in California.

Analytical framework

Previous research on academic writing in English as a second language and in Spanish as a native language has demonstrated how second language writers of English and native speakers learning to write in academic Spanish often draw on informal, oral-like registers (e.g., Valdés and Geoffrion-Vinci, 1998). Therefore, I based the analysis of the texts on two theoretical concepts: **lexical density** and **grammatical complexity**. They are fundamental to the distinction between spoken and written texts (Halliday 1985, 1994, 2004). **Lexical density** of texts was calculated by the number of content carrying words or “lexical items” (nouns, adjectives, adverbs, and verbs) as a proportion of the total number of words in the text. According to Halliday (1985), we can establish a continuum between the lexis

(content words) and the grammar (non-content words) of English (and Spanish), with the first being made up of open systems of words and the second of closed ones. High-frequency lexical items such as *gente, cosas, ser, estar* were not counted as content words, as they fall more towards the oral end of the continuum. **Grammatical intricacy** was calculated by counting the number of clauses (main, paratactic, hypotactic) as a proportion of clause complexes. Spoken language becomes more complex by building more elaborate clause complexes out of parataxis and hypotaxis. Thus, Halliday's distinction between paratactic clauses (coordinated and juxtaposed clauses), hypotactic clauses (nonrestrictive relative clauses, adverbial subordination, noun clauses subordinated to perception and saying verbs), and embedded clauses (restrictive relative clauses and noun clauses) is crucial to understanding the difference between spoken and written language. In SFL theory, embedded clauses (but not hypotactic clauses) are thought to be part of a larger constituent at the discourse level and, therefore, help to make language more dense at the level of the noun group, while paratactic and hypotactic clauses help to make the discourse more dynamic and complex.

Rosa's and Roberto's nine-month development of grammatical intricacy and lexical density

In Colombi (2000, 2002, 2006) I focused on the text analysis of written texts, and I charted writers' movement in the direction of incorporating more formal written register features into their texts. Taking the notion of a developmental path from a more oral to a more written style as the point of departure (see Figure 3), I documented how two college-level bilingual students, Rosa and Roberto, both enrolled in the theme-based curriculum, moved along this path in terms of grammatical intricacy and lexical density, together with the nominal group complexity of their essays. Although there is much inter-learner variability, the results of the text analysis summarized in Table 3 show a common trajectory toward lexically more dense (a feature that is typical of the written end of the continuum) and grammatically less intricate (a feature that characterizes the oral end of the continuum) language.

These quantitative findings converge with those reported in studies of first and second language development analysis that have been conducted from non-SFL perspectives (e.g., Conrad and Biber, 2001; Reynolds, 2005; among others). However, beyond such purely quantitative results, usually measured in terms of grammatical

Table 3 Rosa's and Roberto's grammatical development

	<i>Lexical density</i>	<i>Grammatical complexity</i>
Rosa		
#1	43.2% (297/688)	2.45 (49/20)
#3	50.8% (387/762)	1.48 (52/35)
Roberto		
#1	44.9% (222/494)	2.10 (42/20)
#3	45.9% (350/762)	1.81 (60/33)

complexity (see Ortega, 2003; Wolfe-Quintero, Inagaki, and Kim, 1998), SFL can provide insights about discourse semantics and the development of the text. It does so by bringing a theoretically coherent perspective to the concepts of unit of analysis, clause types, and lexical density, which enables a deeper understanding of how a movement away from chaining of coordinated clauses and toward condensation of information in the clause is functional for the development of academic registers over time.

Lucía's nine-month development from clause-combining strategies to grammatical metaphor

In Colombi (2002; see also Schleppegrell and Colombi, 1997)² I focused on clause-combining strategies to show how paratactic and hypotactic combinations are more typical of oral language and how students' texts become more lexically dense over time, not by using a greater number of content words but by using fewer clauses and condensing the information in the noun group; that is, by processes of nominalization and grammatical metaphor (Halliday, 1985, 1993, 1994, 1998). The critical question, then, pertains to what discourse-organizational advantages students gain by choosing strategies of clause combining and lexical density (for an extensive discussion of this from the perspective of coherence and cohesion, see Ryshina-Pankova, 2006).

Excerpt 1 presents the introductory paragraph to Lucía's first essay.³ Here, Lucía begins her discussion about the importance of diversity with a rhetorical question that is answered by a clause complex consisting of six clauses in which she chains her ideas and elaborates about the advantage of having a diverse culture.

As the detailed clause analysis in Table 4 indicates, she connects her ideas through a convoluted sequence of paratactic and hypotactic clauses that chain one idea to the other as if she were dialoging with herself.

The logic-semantic conjunctions used are characteristic of oral registers: adding information with the connector *y* ("and", expansion) and reasoning in favor of diversity through a causal relation with *porque* ("because"). She argues her thesis by connecting it with the previous clause complex with another connector of causality *por eso* ("for that reason"), a congruent (transparent) form of expressing causality that is present and visible. In other words, logico-semantic relationships are expressed through grammatical complexity at the clause complex level, that is, through grammatical intricacy. For example, the first clause complex (*Primero . . .*)

Excerpt 1 Lucía's first essay (introduction/first essay—first version)

Necesidades universales

¿Como sería el mundo si no existiera la diversidad? Primero que nada todas las personas serian iguales y crecerian con la misma ideología, lo cual causaria la extincion de la misma cultura porque las personas no tendrian una alternativa para pensar o encontrar soluciones a sus problemas. Por esta razon, es importante conservar la diversidad, lo cual solamente puede lograrse con la existencia de varias culturas. Carlos Fuentes, el autor de "La hispanidad norteamericana," afirma que: "las culturas solo florecen en contacto con las demas, y perecen en el aislamiento" (378). Al igual que Fuentes, estoy de acuerdo que las culturas florecen cuando se comparten con otros pero esto solo se puede lograr a traves de la inmigracion.

Table 4 Clause analysis of Lucía's introduction in first essay

Clause	Type
¿Como seria el mundo si no existiera la diversidad?	Main
Primero que nada todas las personas serian iguales y crecerian con la misma ideologia lo cual causaria la extincion de la misma cultura porque las personas no tendrian una alternativa para pensar o encontrar soluciones a sus problemas.	Main Paratactic Hypotactic Hypotactic Hypotactic
Por esta razon, es importante conservar la diversidad lo cual solamente puede lograrse con la existencia de varias culturas.	Main Hypotactic
Carlos Fuentes, el autor de "La hispanidad norteamericana," afirma que "las culturas solo florecen en contacto con las demas, y perecen en el aislamiento" (378).	Main Paratactic
Al igual que Fuentes, estoy de acuerdo que las culturas florecen [cuando se comparten con otros] pero esto solo se puede lograr a traves de la inmigracion.	Main Hypotactic Embedded Paratactic
Lexical density = 3.5 (42/120) Grammatical intricacy = 2.8 (14/5)	

Excerpt 2 Lucía's last essay (introduction/12th essay—nine months apart—first version)

Evolucion de la mujer durante y posteriormente la Revolucion Mexicana

La Revolucion Mexicana fue una lucha hacia la prosperidad del pais. Los revolucionarios esperaban obtener democracia, estabilidad economica y social, y principalmente la liberacion de un gobierno establecido por mas de tres decadas. Esta revolucion no fue en vano, puesto que trajo a la vida de muchos campesinos recursos para sobresalir tal como tierras que fueron repartidas despues de la disminucion de los latifundios. Sin embargo, algo inesperado fue el cambio en el rol de la mujer no solo durante la revolucion sino tambien despues la revolucion. A pesar de que la continua violencia y muertes de la revolucion afectaron la vida de los mexicanos, incluyendo a la mujer, fue esta negatividad que impulso un cambio social y psicologico en la mujer.

in Table 4 consists of six clauses (four hypotactic, one paratactic, and a main clause).

By contrast, Excerpt 2, written nine months later, shows a movement similar to that of Rosa and Roberto in their later essays.

Namely, as Table 5 shows, grammatical intricacy has diminished from 2.8 to 1.6, and the clause complexes consist mostly of one clause or two clauses. By contrast, density of information is now realized at the level of the noun group through the use of GM.

Table 6 presents the ideational (experiential and logical) grammatical metaphors Lucía uses in her introduction to the last essay.

At the functional level, the GMs, predominantly nominalizations, present the information in a more incongruent way, by removing the agents of the actions.

Table 5 Clause analysis of Lucia's introduction to last essay

<i>Clause</i>	<i>Type</i>
La Revolucion Mexicana fue una lucha hacia la prosperidad del pais.	Main
Los revolucionarios esperaban obtener democracia, estabilidad economica y social, y principalmente la liberacion de un gobierno establecido por mas de tres decadas.	Main
Esta revolucion no fue en vano puesto que trajo a la vida de muchos campesinos recursos para sobresalir tal como tierras [que fueron repartidas despues de la disminucion de los latifundios.]	Main Paratactic Hypotactic Embedded
Sin embargo, algo inesperado fue el cambio en el rol de la mujer no solo durante la revolucion sino tambien despues la revolucion.	Main
A pesar de que la continua violencia y muertes de la revolucion afectaron la vida de los mexicanos, incluyendo a la mujer, fue esta negatividad [que impulso un cambio social y psicologico en la mujer.]	Hypotactic Main Embedded
Lexical density = 4.3 (58/132)	
Grammatical intricacy = 1.6 (8/5)	

Table 6 Ideational Grammatical Metaphors presented in the introduction to Lucia's last essay

<i>Ideational Grammatical Metaphors</i>	<i>Semantic juncture</i>
Evolucion de la mujer durante y posteriormente la Revolucion Mexicana	Grammatical category = noun Semantic function = verb
una lucha hacia la prosperidad del pais	Grammatical category = noun Semantic function = verb
obtener democracia, estabilidad economica y social	Grammatical category = noun Semantic function = verb
la liberacion de un gobierno . . .	Grammatical category = noun Semantic function = verb
. . . establecido por mas de tres decadas	Grammatical category = adjective Semantic function = verb
despues de la disminucion de los latifundios	Grammatical category = noun Semantic function = verb
el cambio en el rol de la mujer	Grammatical category = noun Semantic function = verb
la continua violencia y muertes de la revolucion	Grammatical category = adjective Semantic function = verb
esta negatividad que impulso . . .	Grammatical category = noun Semantic function = verb
. . . un cambio social y psicologico en la mujer	Grammatical category = noun Semantic function = verb

Abstraction and objectification are achieved by reconstruing actions as objects through nouns, that is, in a semantic link where the process (verbs) simultaneously maintains the meaning of an action and of a noun. This nominalization of processes permits their being modified through prepositional phrases and embedded clauses, a possibility that packs information at the level of the noun group. For example in *la liberación de un gobierno establecido por más de tres décadas*, *liberación* maintains the idea of the process *liberar* and functions as a noun *liberación* at the same time, allowing for elaboration and modification through the prepositional phrase *de un gobierno establecido por más de tres décadas*, which in turn includes another GM in the adjectification of the process *establecido*, which has been classified by another prepositional phrase, *por más de tres décadas*. Functionally this GM is presenting the event *liberación* . . . in a more abstract way by not identifying the agents that cause the “liberation” or the time when it occurred. In the same way, *establecido* condensed more information by doing the same thing; that is, by obscuring the agents of the *gobierno*. In sum, in this last essay Lucía expresses her ideas in a more abstract and objective way that is typical of the written form, through the use of GM (see Colombi, 2006, for a detailed analysis of this feature in bilingual students’ texts).

The development and indexing of academic identities: Achugar’s study of bilingual speakers in the southwest of the United States

As already stated, SFL theory views development and language expertise in terms of practices that emerge in a particular social context. Individuals develop specialized ways of using language through active participation and engagement in a community; in turn this process enables them to participate in and become members of the community, by aligning themselves with the identities shaped by the community. Advancedness in this case is conceptualized as being affiliated and recognized as a full member of the academic community. Thus, the SFL framework can be applied to study not only the development of academic language, but also the forging of academic identities as indexed in expanding language choices. This can be done by centering analysis on the lexico-grammatical and discourse-semantic choices used for constructing and indexing this expert or authoritative identity through interpersonal meanings.

In an ongoing longitudinal study, I am currently exploring just this phenomenon in a bilingual creative writing graduate program in Southwest Texas. Following Butt (2004), I focused on two forms of change: change in the “profile of an acculturated community member” and change in “the meaning potential available to a community” (p. 229). Grammatical features, as meaning-making practices (Williams, 2004), are being tracked in order to understand how language is used in this academic setting to signal membership in this professional community. In addition, I am following the academic community over a three-year time period in order to establish benchmarks and language assessment procedures grounded in community-based norms and to capture the possibilities and values attached to certain ways of using language in the community.

Begun in 2004, the research includes a cohort of nine students who entered the Master of Fine Arts (MFA) program at that time and who are enrolled in the

bilingual creative writing program. The group includes heritage learners of Spanish from the local community, English L2 learners from Latin America, and Spanish L2 learners from other areas of the US. Individual tracking of change and development over time is done through interviews every fall semester and will encompass their three-year stay in the program. The group was interviewed three times throughout their stay in the program. The data presented here are drawn from transcripts of in-depth interviews of members of the community, including professors and students, which were carried out by me in the spring of 2004, fall of 2004, and fall of 2005. Data from interviews are complemented by classroom observations, and video and written text samples of students.

Analytical framework

The students' responses have been analyzed by identifying changes in the use of interpersonal resources, such as attitude, engagement, modality, and graduation in terms of lexico-grammatical (e.g., modality, vocabulary) as well as discourse-semantic features (e.g., concession, projection). In SFL these interpersonal features of academic registers are part of the appraisal system (Martin and White, 2005), "an approach to exploring, describing and explaining the way language is used to evaluate, to adopt stances, to construct textual personas and to manage interpersonal positionings and relationships" (White, 2006). They have also been described in the literature in terms of evaluation, metadiscourse, and stance (e.g., Hyland, 2002, 2004).

This system is realized through interpersonal meaning choices at the lexico-grammatical and discourse-semantic level. *Attitudes* refer to positionings in which language users assess either positively or negatively people, places, things, and happenings realized mostly through vocabulary selection. *Engagement* is the positioning in relation to others; it implies an interaction with other communities, speakers, or responses to prior utterances realized through projection (heteroglossia), polarity (negation), and the logical organization of ideas (concession). The last type of positioning considered in appraisal is the intertextual: the endorsement or rejection of others' positions or prior utterances realized through *modality*, *graduation*, and *projection*. These discursive and lexico-grammatical features serve to project the persona of the language user as an authorized voice in the community, establishing his or her orientation towards the content/field signaling their attitudes and positions. Members of an academic community use language in particular ways to represent themselves and their work in the particular ways sanctioned by their discipline or "guild."

The appraisal system of experts and novices in this academic community

The analysis of the community's sociosemiotic potential has so far resulted in a detailed discourse analysis of professors and students' responses to similar interview questions. Comparison has revealed considerable variation in terms of the resources apprentices and experts in the community use to signal their identity as members of the academy by engaging other voices to support theirs through heteroglossia;

showing levels of certainty and probability of their representations through modality; and by evaluating other members of their community through evaluations that connote social value and appropriateness.

The following discussion draws on a comparison of two excerpts from interviews conducted during the first year with Professor Carlos Salinas and MFA student Marcelo, both answering the question, “What does it mean that the program is bilingual?” Excerpt 3, taken from the professor’s response, comes after he mentions that, for him, the fact that the program is bilingual refers mostly to the possibility of being exposed to two or more literary traditions and worldviews. The underlined parts of the text signal the appraisal resources used by the professor.

Salinas uses certain linguistic resources, among them concession (conjunctions and continuatives like *pero* [“but”] *entonces* [“then”]) to establish a dialogue with his professional community and positions himself and his voice as a writer as the product of influences from other writers (García Márquez, Neruda, Faulkner, Hemingway, etc.). At the same time, he hedges his positioning through the use of modality, constructing a sense of the probability and necessity of this affiliation. For example, words like *siempre* (“always”) convey degrees of importance and frequency of the affiliation with this “not so well-known writer.” As a result, Salinas presents himself as a member of the professional community who is part of a validated and recognized literary tradition but, within that community, established his individuality by highlighting his connection to the “less well-known writer.” Comparative structures and polarity raise the force of the affiliation to more avant-garde members in the profession, *no tan famoso como* (“not as famous as”). This grading of the positioning is established semantically through graduation, providing force through the use of intensifiers, *muy difícil* (“very difficult”), and attitudinal lexis, *por estos lados* (“around these parts of the world”). These resources represent more indirect ways of taking a stance or positioning oneself,⁵ thus signaling a wide repertoire of linguistic resources to construct an authoritative identity.

Excerpt 4, by contrast, illustrates the range of resources one of the students in this cohort, Marcelo, showed during the first year in the program, based on the first and second interview data. This response comes after he has described his decision to come to this program and his subsequent experiences in it.

Like the professor, Marcelo, too, makes particular linguistic choices that denote attitudes, point to sources, and give a certain graduation to the information. He constructs affect attitudes by presenting direct representations of his feelings towards

Excerpt 3 Professor Salinas on interview question, “What does it mean that the program is bilingual?”

“[. . .] *como escritor las voces que me formaron a mí fueron voces europeas, norteamericanas y latinoamericanas* / . . . *entonces mi escritor, dos de mis escritores favoritos son García Márquez umm y Neruda* / *pero también otro escritor muy difícil* (. . .) *que es un escritor no tan famoso como los otros por este lado, pero siempre yo he escuchado su voz y me ha formado como escritor, como Faulkner y Hemingway y Whitman* . . .” [As a writer the voices that shaped me were European, Northamerican and Latin American / . . . then my writer, two of my favorite writers are García Márquez umm and Neruda, / but also another writer, very difficult (. . .) who is a not so famous one around here, not as the other ones, but I have always heard his voice and he has shaped me as a writer, as much as Faulkner and Hemingway and Whitman . . .] (Professor Carlos Salinas, Heritage Speaker of Spanish)⁴

Excerpt 4 Marcelo on year-1 interview question “What does it mean that the program is bilingual?”

“[. . .] y el hecho de que se manejen los dos idiomas sin distinción completamente, a mi me impresiona, me encanta. O sea, si estás hablando en clase dices algo en español y alguien da la respuesta en inglés. De repente lees un texto de alguien en inglés y luego lo lees en español después o incluso las mezclas que hacen, del spanglish que en el mismo texto hay frases en inglés con frases en español, eso es bien interesante y se me hace bien padre que se puede manejar así, que lo acepten así que lo hagan así. . .” (Marcelo, student from El Paso-Juárez area, Fall 2004)

Excerpt 5 Marcelo on year 2 interview question “How would you define the meaning of bilingualism in the program?”

“[. . .] este. . . yo creo . . . que es . . . la . . . como la capacidad . . . la posibilidad de . . . agarrar lo mejor de los dos mundos y hacer algo interesante. Hubo una **chava** que leyó . . . no me acuerdo cómo se llamaba ni cómo se llamaba lo que escribió pero . . . que leyó el otro día en el café . . . durante la presentación de Rio Grande Review está en la publicación en el último . . . que habla de **eso** del bilingüismo . . .” (Marcelo, student from El Paso-Juárez area, Fall 2005)

the way bilingualism is instantiated in the community, *me impresiona* (“it impresses me”), *me encanta* (“I love it”). Some distance is expressed by presenting information as mere “facts” through the use of nominalizations and objectifying constructions, which hides the source of these interpretations. For example, expressions such as *el hecho de que se manejen los dos idiomas . . .* (“the fact that both languages are used”) allow the author to present interpretations as given and then to intensify the force of the evaluation, *sin distinción completamente* (“totally indiscriminately”). Also, he reports events without citing the source and without modalization, which privileges only one interpretation: the author disappears and the source of the interpretation is left impersonal, using projections within the clause complex, *si estás hablando en clase dices algo en español . . .* (“if you are talking in class you say something in Spanish . . .”). At the same time, the student avoids making explicit references to others through the use of impersonal object pronouns that nominalize expressions such as *que lo acepten así que lo hagan así . . .* (“that they do it like that, that they accept it like that”). These impersonal references point to a heteroglossic text but one that, in contrast with Excerpt 3, which had explicitly positioned the author in relation to clear referents in the community, avoids signaling the other voice. Not surprisingly, Excerpt 4 defines bilingualism in local terms, as a concrete experience. By contrast, the professor’s response had chosen a wider context of reference and situated his particular experience and meaning of bilingualism in the program in relation to the larger professional community.

***Tracking change in the appraisal system resources over time:
Marcelo’s interview a year later***

A year later, after Marcelo had participated in the community for some time, he was asked to define once more what the bilingualism of the program then meant to him. Part of his answer is shown in Excerpt 5.

Marcelo now uses an interpersonal grammatical metaphor, an incongruent

linguistic choice, through which the opinion of the speaker is introduced via a clause complex instead of through the more congruent modalization, to begin his discussion of what bilingualism means in this context, *yo creo que . . .* (“I believe that . . .”). Through the use of a mental projection that evaluates the information that follows, he positions himself and presents a subjective evaluation as an authorized speaker. The next clause is another projection, but this time an attempt to cite another “published author” as a recognized voice and source in order to support his position. It is not completely successful because he neither remembers what this person actually said nor his name. By using indefinite nouns and lexical choices that have a colloquial connotation to refer to the source, he lowers the force of the evaluation: *chava* (“girl”), *eso* (“that”). Even so, this move signals an awareness of the resources available to present oneself as an authority and to be recognized as a member of this professional community. Another way to accomplish that goal is by making reference to practices that are typical of the profession (i.e., readings and publications).

Conclusion: SFL contributions to the longitudinal study of L2 capacities

In this chapter we have outlined and exemplified with research data the principles of SFL and the predictions it makes about longitudinal development toward the full range of meaning-making capacities that a language system affords its users. We conclude here with some reflections on the particular strengths that SFL as a framework offers to researchers interested in investigating the development of advanced language capacities and, most particularly, the capacities for meaning-making in academic contexts needed by heritage Spanish speakers and other language minority populations as they gain access and navigate higher education.

SFL identifies particular lexico-grammatical and discourse-semantic resources that serve as indices of language development over time (e.g., grammatical metaphor, grammatical intricacy, lexical density, modality, clause-combining resources). Language development can be seen from different but interrelated time scales: phylogenetic, ontogenetic, and logogenetic. From the ontogenetic perspective, there is a movement from subjective and congruent ways of making meaning to more objective and incongruent forms of semiosis. The ontogenic progression towards advancedness has been fruitfully investigated in academic language and written registers, both in terms of major moments that signal more academic language and also in terms of inter-learner variability. Indeed, variability is expected and theorized in SFL because the framework acknowledges that learning takes different paths depending on the different opportunities and particular experiences individuals have with language.

Inasmuch as SFL views language and context as co-constituted it enables a consideration of language development in the context of a particular culture. “Context” is understood on the level of the context of the situation where language is produced and also on the level of the larger cultural context that creates the conditions for what it is possible to do with language within a particular group (Butt, 2004).

Finally, in their desire to understand the development of individual learners, particularly toward advanced levels of ability, researchers should be able to benefit not only from the clear integration of language and context in the SFL framework,

but also from its ability to index changes towards an expansion of the meaning-making resources of individuals. SFL findings of a longitudinal progression towards advancedness can be expected to offer clear analytical tools and detailed analyses that connect grammar and meanings. But because grammatical features are seen in relation to meaning-making practices in SFL (Williams, 2004), they allow researchers to go well beyond the study of linguistic development. Language development can be measured and described in terms of an expansion of the individual's meaning-making potential. It can also be described and measured in terms of an evolving membership in a particular social group. Thus, within this framework advancedness is the ability to make meanings valued and associated with a particular social group, not a neutral and context-free type of linguistic competence. In educational settings, in particular, it also means being affiliated and recognized as a full member of an academic or professional community.

Notes

1. I want to acknowledge the cooperation of my colleague, Francisco X. Alarcón, Director of Spanish for Native Speakers at UCD, in allowing me to visit and collect the texts from the Program of Spanish for Native Speakers during the year 1999–2000 and 2003–2004.
2. For a further explanation on the clause classification according to their semantic discourse properties, see Schleppegrell and Colombi (1997).
3. All students' names are pseudonyms. The students' essays correspond to the first version of a three multiple version assignments and have been copied without any alteration.
4. All the names are pseudonyms.
5. These are less common ways of establishing authority than the ones commonly studied in the literature—projecting clauses and citations used to support one's argument and validate one's position.

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