

24 **Written Genres in University Studies: Evidence from an Academic Corpus of Spanish in Four Disciplines**

Giovanni Parodi

INTRODUCTION¹

The past decades have witnessed a remarkable surge of attention to the research of language variation through the study of the texts employed in different scientific disciplines. This focus on diversity has begun to describe and explain the divergent construction of specialized knowledge within discourse communities. At the same time, there is a lack of research and available data, based on corpus linguistics principles, to fill the gap that exists between a general approach and a more specific one based on naturally occurring language use. This specific approach should be one that is situated, data-driven, dynamic, and pedagogical (Herrington & Moran, 2005; Thaiss & Zawacki, 2006; Beaufort, 2007; Bazerman, 2008).

Empirical research from diverse linguistic approaches has documented the relevance of analysis based on corpus as a way of describing linguistic and discourse variations in greater detail through the disciplines and through prototypical genres (Biber, 1988, 1994, 2005, 2006; Biber, Connor, & Upton, 2007; Martin & Veel, 1998; Wignell, 1998; Williams, 1998; Swales, 1990, 2004; Flowerdew, 2002; Parodi 2005, 2006, 2007a, 2007b). Based on these assumptions, this chapter describes a research project currently being carried out at the Pontificia Universidad Católica de Valparaíso, Chile. This project involves the collection, construction, and description of a corpus of written texts belonging to four disciplinary knowledge domains: Social Work, Psychology, Construction Engineering, and Industrial Chemistry. The first part of this chapter presents some theoretical background that frames the research. The second part establishes the parameters of the constitution of the academic corpus, and undertakes a general description of the nine genres that have been identified in these four disciplinary domains during the five-year university programs of study.

THEORETICAL FRAMEWORK

Our general research aims to describe the written discourse in some university settings and the corresponding professional workplaces by collecting and studying the written texts that university students read and which provide them

with knowledge particular to their chosen discipline. We examine assigned student readings in four academic degree programs and the written texts that form the core of daily communication in the professional workplaces that correspond to these four disciplines.

It is relevant to state some fundamental assumptions for this research. The approach taken towards discourse is decidedly interdisciplinary and of a psycho-sociolinguistic nature (Parodi, 2005, 2006a, 2007b). Hence, the texts chosen are linguistic units immersed in a cognitive and social context, that is, whose function is determined cognitively and contextually. From this perspective, texts are linguistic units with closed meanings in virtue of producers/speakers and readers/hearers in particular contexts and with defined purposes, with prior knowledge constructed from human cognition in specific social contexts. In other words, the texts are conceived of as meaning processes and products of cognition and context, and, at the same time, as forming supports that, in part, help people construct their world and their environment.

Specialized discourse: academic and professional genres

The notion of specialized discourse (SD) embraces the research objects of study. Academic discourse (AD) and professional discourse (PD) are analyzed as part of SD. The use of the term “specialized discourse” is currently widely accepted by the majority of language researchers. However, from its initial use, it has been employed to express a variety of meanings. Hence, SD includes a varied set of discourse genres, but each with certain prototypical features. It is precisely this idea of heterogeneity of texts and genres within a scale of gradation that Parodi (2005) applies when approaching the notion of SD. According to this notion, SD must necessarily be understood as a continuum in which texts and the corresponding genres are aligned along a diversified gradient that runs from a high degree to a low degree of specialization. Thus, SD could be conceived of as a supercategory of AD and PD.

Parodi (2005) defines SD by using a series of characterizing co-occurring linguistic features. Many researchers also agree that there are a set of lexicogrammatical co-occurring features that identify SD and many of them consider that specialized lexicon is highly important (Cabr , 1993; Burdach, 2000; Cabr , Dom nech, Morel, & Rodr guez, 2001; Ciapuscio, 2003; Cabr  & G mez, 2006). Academic and professional genres are made operational through a set of texts that can be organized along a *continuum* in which the texts are linked together, from general school discourse to university academic discourse, and to professional discourse in a workplace environment. This is presented graphically in Figure 1.

Figure 1 illustrates a conception of discourse in academic and professional

fields along a continuum that follows a process of permanent updating and multiple interactions. SD, in part, comes from AD and, in turn, is linked to and interacts with PD. This distribution of specialized knowledge organization is mainly proposed from a student's perspective, i.e., one in which the discourse continuum is traced from a learner who faces the process of instruction. In other words, this is not a researcher's or university professor's point of view because interactions would be different. For example, if research articles are considered, it is clear they overlap in academic and professional life, given they are discourse genres employed in both fields.

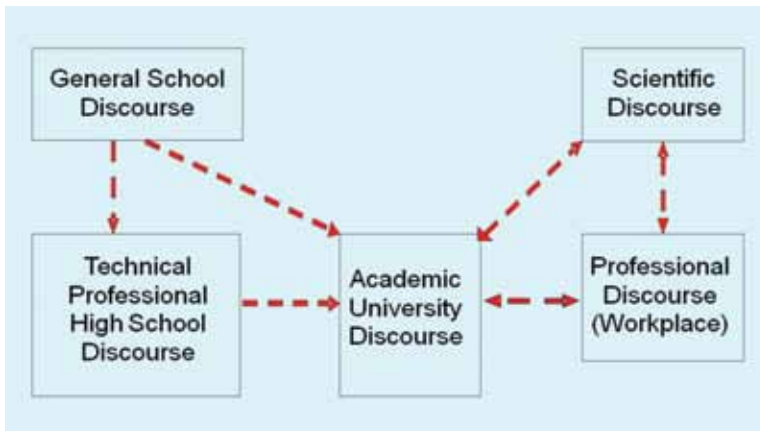


FIGURE 1: CONTINUUM OF DISCOURSES IN ACADEMIC AND PROFESSIONAL FIELDS

Academic discourse

There is no doubt that any newcomer to the study of AD will find a diversity of approaches, terminologies, and perspectives that makes an initial understanding of the field difficult. As Flowerdew (2002) suggests, there has been little systematic research into exactly what AD is. When one undertakes the study of this kind of discourse the following questions need to be addressed: (a) Are there any existing criteria that accurately define AD? If so, (b) what type of criteria are they? Below, three approaches to AD will be considered: (1) a functional communicative approach, (2) a contextual approach, and (3) a textual approach.

First, in functional communicative terms, AD is characterized by the predominance of one communicative macropurpose over another; in some varieties, more persuasive or didactic objectives are emphasized. Furthermore, AD carries with it credibility and prestige because of the writer's authority on a subject matter. Second, from the contextual criteria, AD is that which is used in academic contexts (Kennedy, 2001; Flowerdew, 2002; Dudley-Evans & St.

John, 2006). However, it is evident that academic settings are varied and not always easy to determine, which makes the criteria rather complex. This is due to the fact that AD does not have clear limits and may be confused or assimilated into other environments or nearby fields, such as technical-scientific, professional, pedagogic, or institutional ones (López, 2002; Flowerdew, 2004). Hyland (2000) argues that identifying the contexts and the participants involved in the interactions is indispensable. In other words, analyzing the texts as social practices is critical. This approach includes an analysis of the mediums in which these texts circulate and are used (Gunnarsson, 1997); so, AD is considered a manifestation of a specific community (Valle, 1997). Third, since AD is oriented towards the transmission of knowledge, generally through definitions, classifications, and explanations (Wignell, 1998), writers of AD use linguistic features that ensure clarity and conciseness. This manifests itself in an economy of words, an absence of empty adjectives, and the elimination of redundancy and repetition. It also has a more rigid and controlled syntax, and a higher proportion of nominalizations, than does non-academic discourse (Ciapuscio, 1992; Halliday, 1993; Lang, 1997; Gotti, 2003; Charaudeau, 2004; Parodi & Venegas, 2004; Cademártori, Parodi, & Venegas, 2006).

Multimodal resources frequently found in AD, such as chemical formulas, physics equations, virtual recreations, mathematical representations, and symbols, must also be play a fundamental role. In addition, items such as graphs, tables, figures, diagrams, and other graphic representations are relevant in this kind of discourse. In view of the above considerations, Lemke (1998) suggests that AD is a hybrid semiotic system, combining different kinds of verbal and non-verbal resources (Kress & van Leeuwen, 2001).

Professional discourse

Without a doubt, the problem that faces AD in its search for a strict characterization is similar to what occurs in the study of professional discourse (PD). This happens because in some cases these two terms tend to overlap, e.g., when the term PD is used in a general sense that includes AD, and vice versa. The current investigation will clearly separate these two discourses based on the environment in which the texts are collected. That is to say, PD will be that which is collected in contexts of professional use and circulation, while AD will be that which is collected in contexts of academic activities normally faced by university students. Nevertheless, there is an inevitable area of overlap or intersection between these two discourses. Therefore, our general research objectives include identifying and describing those texts that are used in both settings, and which form a nexus between the academic and professional worlds.

It is worth noting the work of Bazerman and Paradis (1991a) and their perspective on the notion of PD. These authors suggest that the structure of PD is founded on a textual dynamics that gives form to a profession. Bazerman and Paradis (1991b) review a series of related articles describing the way in which professional communities organize themselves based on their own relevant texts. PD, in this sense, is formed by those texts which bring together specific knowledge of the world, which, in turn, constitutes the purposes of the professional community (Berkenkotter, Huckin, & Ackerman, 1991; Doheny-Farina, 1991; Bathia, 1993, 2004; Christie & Martin, 1997).

Macrostructure and the superstructure have not been extensively examined by any analysis of PD. However, studies can be found that apply these categories to administrative language (MAP, 1995). López (2002) applies some rhetorical microstructures to the analysis of a text about economic policy, but there are no systematic studies with respect to how these rhetorical microstructures are distributed in each professional field. With regard to linguistic traits, the lexical level is the area that has received the greatest attention in academic studies, especially terminological analyses associated with particular professions (Ciapuscio, 2003). At the morphological level, an issue that has been extensively investigated is the role that nominalizations perform (Chafe, 1982, 1985; Biber, 1986; Ciapuscio, 1992; Halliday, 1993; Lang, 1997; Parodi & Venegas, 2004; García, Hall, & Marín, 2005; Cademártori, Parodi, & Venegas, 2006).

THE PRESENT RESEARCH: DESCRIBING THE ACADEMIC CORPUS PUCV-2006

This chapter will carry out a descriptive-comparative study of the genres identified in the academic domains of Basic Sciences and Engineering, as well as the Social Sciences and Humanities. This will be accomplished by collecting and examining an academic corpus following a methodology based on corpus linguistics principles (Sinclair, 1991; Leech, 1991; Stubbs, 1996, 2006; Tognini-Bonelli, 2001; Teubert, 2005; Parodi, 2006b, 2007a, 2007c). The academic corpus will be collected in a university setting, that correspond to the four university degree programs. The texts that comprise the corpus are collected following criteria that are highly representative and that accurately reflect the academic environment. Accordingly, the academic field will be defined by four degree programs offered by Pontificia Universidad Católica de Valparaíso, Chile: Industrial Chemistry, Construction Engineering, Social Work and Psychology.

This chapter will specifically describe the corpus collection processes as well as a quantitative and qualitative analysis of only the Academic Corpus PUCV-

2006. Special attention will be paid to the genre identifications emerging from the data collected in four university career programs in academic settings. Professional genres will not be described and analyzed in this study (see Parodi, 2008).

Constitution of the Academic Corpus PUCV-2006

As stated above, the aim is to collect as much required reading and reference material for the respective university degree programs as possible. The specific methodology of research is divided into different stages according to the status and focus of each corpus. Table 1 summarizes the general steps followed to collect and process the corpus.

Nine steps followed to collect and process the Academic Corpus PUCV 2006
Step 1: Construction of a database with the complete curricula of the four degree programs (including the syllabi of all required courses)
Step 2: Construction of a database with obligatory bibliographic references of all required courses
Step 3: Collection of complementary materials that all professors provide through prepared note files and photocopied materials
Step 4: Preparing a survey for all the professors of each of the four degree programs, which included a request for the complementary materials mentioned above
Step 5: Searching the internet to find those titles already available in digital format, thus minimizing time spent on digitalization
Step 6: Collecting the texts from the corresponding libraries and professors
Step 7: Photocopying each text in order to maintain a database in paper format
Step 8: Training a team of people to scan and compile all texts
Step 9: Processing all plain texts (*.txt) through tagger and parser El Grial and uploading all texts in the web site http://www.elgrial.cl

TABLE 1: STEPS USED TO CONDUCT THE CORPUS COLLECTION AND COMPUTER PROCESSING

By following these nine steps we were ensured the creation of a database that accurately reflects the written texts to which subjects were exposed to during their university programs. The steps outlined in Table 1 correspond to general procedural activities that help construct an online tagged corpus available at www.elgrial.cl. The corpus will be analyzed and described in detail in the following section of the chapter; also, from these texts the final discourse genre classification will emerge.

RESULTS AND DISCUSSION

In this section, we will define the Academic Corpus PUCV-2006 in quantitative terms as distributed among the academic disciplines and the four university degree programs. Also, a first genre classification that comprises the total Academic Corpus PUCV-2006 is given. This description identifies nine genres.

In Table 2, the figure 491 represents the total number of texts of the Academic Corpus PUCV-2006.

Scientific Field	University program	Number of texts
Basic Sciences and Engineering	Construction Engineering	69
	Industrial Chemistry	53
Social Sciences and Humanities	Social Work	142
	Psychology	227
Total of texts		491

TABLE 2: CONSTITUTION OF THE ACADEMIC CORPUS PUCV-2006: NUMBER OF TEXTS

Table 2 shows the high degree of diversity in the number of texts collected in each discipline. Moreover, there is a progressive increase in and a substantial difference between the quantity of texts in the fields of Basic Sciences and Engineering and Social Sciences and Humanities, as well as a considerable difference between the specific degree programs themselves. A preliminary interpretation might lead to believe that students in the Social Sciences and Humanities have to read much more than students in Basic Sciences and Engineering. Psychology students read up to four times the number of texts that Industrial Chemistry students read. However, an actual word count decreases

the disparity, even though Psychology students still read more than twice the number of words as Industrial Chemistry students, as revealed by Table 3.

	Number of Texts	%	Number of Words	%
Psychology	227	46	22,163,379	39
Social Work	142	29	16,343,175	30
Construction Engineering	69	14	8,813,663	15
Industrial Chemistry	53	11	9,304,407	16
Total	491	100	56,624,624	100

TABLE 3: ACADEMIC CORPUS PUCV-2006: NUMBER OF WORDS AND PERCENTAGES

Table 3 reveals students in Psychology and Social Work (39% and 30%) would read (in terms of number of words) more than two times as much as students in Industrial Chemistry and Construction Engineering (16% and 15%). This same comparison in terms of books is doubled, that is, it is almost four times. Therefore, as already pointed out by Parodi (2007d), there is a growing and progressive tendency based on the number of texts and the number of words, the university program, and the disciplinary domain to which they belong.

There is no other report of a written academic corpus available in the Spanish language of such dimension that is so representative and so thematically focused. A corpus of such size, close to 60 million words, in digital format, morphosyntactically tagged and parsed, organized by subject matter and genres, becomes a fundamental tool for cutting edge research in corpus linguistics and psycholinguistics in Spanish. Adding the Academic Corpus PUCV-2006 to those pre-existing corpora at www.elgrial.cl increases the amount of available diversified material for corpus research (more than 120,000 million words) (Parodi, 2007c).

A first attempt at a more in-depth analysis of the written material collected and a classification as to the genre types follows, using the communicative-functional and textual-discursive linguistic taxonomy, as proposed by Parodi, Venegas, Ibáñez & Gutiérrez (2008). Below, in Table 4, nine genres are identified

along with their frequency of text occurrence.

Corpus Genres in the Academic Corpus PUCV-2006	Number of texts
Lecture	2
Didactic Guideline	40
Dictionary	2
Disciplinary Text	270
Regulation	13
Report	13
Research Article	23
Test	2
Textbook	126
Total	491

TABLE 4: DISTRIBUTION BY GENRE TYPES

The organization of the information in Table 4 follows the alphabetical order for the names applied to each genre. Simple, everyday names in Spanish were selected; names of rather easy accessibility and transparency in their usage for native academic speakers of Spanish. Definitions for each of the nine genres are presented in Table 5. Some of the variables involved in these definitions are macropurpose, participants, contents, organization discourse mode, and formats.

Genre	Definition
Lecture	Discourse genre whose macropurpose is to communicate a theoretical or empirical study, presented orally by a specialist (usually scholars of some standing) on a specific disciplinary topic or field; sometimes it is previously written. For the presentation, audio-visual resources may be employed.

Didactic Guideline	Discourse genre whose macropurpose is to instruct, produced by a teacher to help students to understand a specific topic on a subject matter under study. Normally it contains explanations and specifications, supported by didactic aids such as examples or evaluative activities in a paper or digital format.
Dictionary	Discourse genre whose macropurpose is to define concepts or procedures in a particular domain of knowledge of subject matter, written generally by a group of specialists. Its organization follows alphabetical or thematic principles and some of the definitions may include examples or images. Paper and digital formats are available.
Disciplinary Text	Discourse genre whose macropurpose is to present, to a specialized audience, one or more topics on a particular subject matter belonging to a field of study. Its main focus is argumentative. In some disciplines, few multimodal resources are employed. Paper and digital formats are available.
Regulation	Discourse genre whose macropurpose is to regulate behaviours or procedures. Normally it is written by an authority or a person in a higher rank position on a specialized subject matter. The content is organized as a list of prescriptions in a hierarchical order.
Report	Discourse genre whose macropurpose is to report about a situation, problem, or case. The main focus is on descriptions and the specification of variable relations that help support comments and conclusions. As for format, reports range from a simpler structure with headings to indicate topics, to more complex ones including charts, tables, hyperlinks, and references.
Research Article	Discourse genre whose macropurpose is to communicate a theoretical or empirical study, written by one or more specialists in a particular domain of knowledge. Normally it is published in a specialized journal in paper or digital format.

Test	Discourse genre whose macropurpose is to assess, by a specialist, the performance, knowledge or skills of a subject, procedure or material. The assessment is based on quantitative and qualitative criteria. Paper and digital formats are available.
Textbook	Discourse genre with a didactic macropurpose, written by one or more specialists in order to introduce or guide the access to newcomers or novices into a domain of knowledge. Normally, its macroorganization privileges explanations and descriptions about concepts or procedures. It is a teaching instrument with particular instructional aids including exercises, problem-solving activities, and multimodal resources.

TABLE 5: NINE ACADEMIC GENRES IN THE PUCV-2006 ACADEMIC CORPUS OF SPANISH

As it can be observed in Table 4, a quite heterogeneous panorama with clear concentrations emerges from the data presented. Two genres are by far the most frequent: Disciplinary Text (DT), with 270, and Textbook (TB), with 126. This provides an overall initial situation that combines, on the one hand, disciplinary knowledge as presented in subject matter books concentrating high thematic specialized knowledge in each domain (DT), sometimes with a high degree of discourse complexity; and, on the other hand, Textbooks, which, although oriented towards disciplinary knowledge, have a didactic and more disseminating character. TB generally uses more educational resources, such as graphs, tables, diagrams, etc., in a more systematic manner and incorporates exercises and other practical applications in order for readers to access, develop and test their knowledge.

Other genres are less common. For example, Didactic Guidelines (DG), although they are the third largest genre numerically, appear only at about a fifth the rate of the two largest. Perhaps even more surprising is the low representation of Research Articles (RA), which appear only about an eighth the rate of the Textbooks and the Disciplinary Texts. It is important to note that this discourse genre of transmitting specialized knowledge would have been expected to occupy a more prominent position, particularly in Basic Sciences and Engineering. So, the occurrence of only 23 RAs out of a total of 490 texts in the corpus indicates that it is not a common genre in undergraduate training. The genres identified in this corpus appear to be clearly concentrated in TB and DT. These findings reveal the two points of the continuum of genres, from general to specialized, as mentioned earlier. They do not, however, represent two extreme

points. Both the TB and the DT are oriented towards greater specialization, but with a clear tendency towards mainstream dissemination of information. DG, which represents the extreme point of the generalized-specialized continuum, does not appear in sufficient number to be significant in the overall corpus.

As expected, the Textbook, irrespective of the discipline it is associated with, serves a clear common didactic purpose across academic settings. These kinds of texts disseminate discipline-based knowledge and are seen, in Hyland's words (2000), as "repositories of codified knowledge," which through some rhetorical structures may grant access to the most specialized professional communication. At the same time, these two text types interact with the audience in a writer-reader relationship that is appropriate to the educational and disseminating context; i.e., the writer acts as the specialist and the reader as the non-initiated student approaching a new knowledge and trying to become part of the discourse community.

Figure 2 compares the frequency of occurrence of each genre in the Social Sciences and Humanities. The resulting figure reveals a more in-depth analysis of the findings displayed in Table 4.

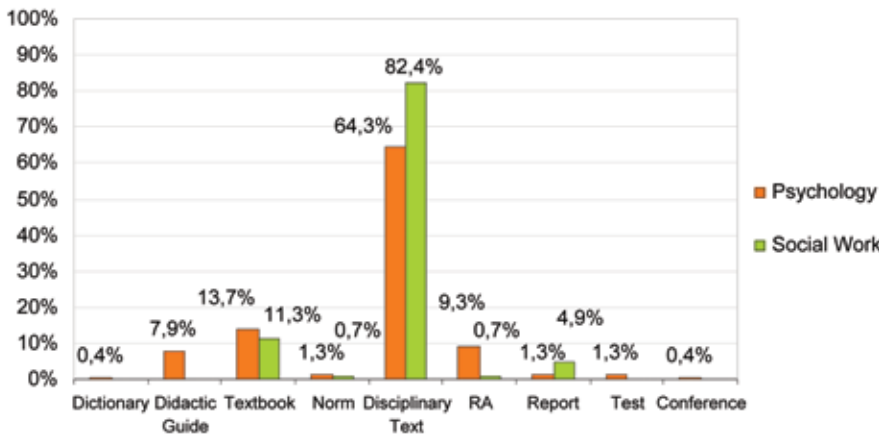


FIGURE 2: GENRES IN SOCIAL SCIENCES & HUMANITIES (PUCV-2006 ACADEMIC CORPUS)

As is obvious from these figures, only five common genres are detected in both university programs. It is indeed noteworthy that the area with the most genre types is Psychology (9), not only in Social Sciences and Humanities, but in the total corpus including Basic Sciences and Engineering (see Figure 3). Social Work presented only five of these genres (with an important concentration in two of them). DT and TB were the highest frequency genre types detected in both university areas of study, revealing themselves as the most common in-

struments of reading material students use while attending five-year academic programs. This distribution clearly reflects the kind of written texts through which students access discipline-specific knowledge. These texts are those which help students acquire professional expertise and become part of the academic community to which they will eventually belong. In the case of Psychology, seven genres show relatively low occurrence: Research Article (9.3%), Regulation (1.3%), Lecture (0.4%), Didactic Guideline (7.9%), Report (1.3%), Test (1.3%), and Dictionary (0.4%). Although they are part of the kind of readings students engage in during university life, they contribute in only a minor way to the students' discourse and knowledge training.

Similarly, we now compare the percentages of occurrence of genres in Basic Sciences and Engineering. Figure 3 shows the findings expressed in percentages.

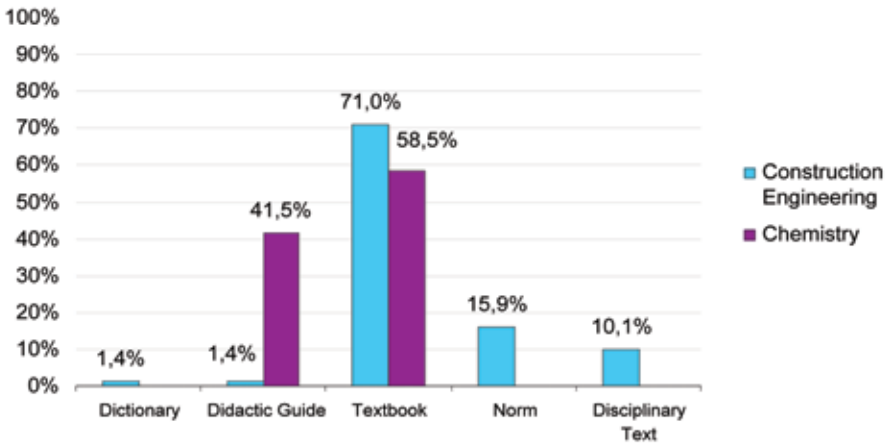


FIGURE 3: GENRES IN BASIC SCIENCES & ENGINEERING (PUCV-2006 ACADEMIC CORPUS)

This quantitative analysis reveals interesting differences of internal genre variability not found when comparing Social Sciences and Humanities. Not only are there fewer genres in Industrial Chemistry and Construction Engineering (as shown in Table 2), but there is less genre diversity, as seen in Figure 3.

Only five genres were identified in Construction Engineering, with TB dominating the distribution. There are four other genres that are part of the collected corpus: two are more closely related to the professional workplace (Regulation and DT), and two more typical of academic environments (DG and Dictionary). It is worth noting that in Industrial Chemistry only two genres were collected: DG and TB. This was unanticipated. There is a clear reader-oriented focus, recognizing the dialogic dimension of disciplinary instruction and directing readers to some action and understanding of the truths and facts under study.

These two genres represent important academic tools that open pathways to knowledge to novice students.

This variety of reading materials depicts the most common academic writings that students must encounter in their daily university discourse activities. The primary genre identified in this research is one oriented to disseminating knowledge. While this genre uses a disciplinary prose, it also combines instructional devices such as examples, diagrams, and problem solving exercises. TB is highly employed in Construction Engineering and Industrial Chemistry (71% and 58.5%), while DT appears most frequently in Social Work and Psychology (83% and 64.3%). This distinction between disciplinary domains in university settings is most revealing and constitutes a major finding of this research. There is an important difference in discourse interactions considering genre types in Social Sciences and Humanities and Basic Sciences and Engineering (for a detailed analysis of rhetorical and move analysis organization of TB and DT in both domains, see Parodi, 2008).

Figures 2 and 3 illustrate that the comparisons favored genres that disseminate knowledge (TB and DG), as well as more highly specialized genres (DT). Taken together, these figures reveal an important pattern of situating and distributing academic genres in these four university fields of study. This provides evidence that the social, cognitive and discourse interactions of members of these academic communities help shape their knowledge constructions and disciplinary representations, through this kind of written material. It also yields information about the way a university organizes its academic curricula.

FINAL REMARKS AND PROJECTIONS

In this chapter, we have described a corpus of 491 texts collected from four academic disciplines of study from two science branches. In addition, the emerging genre identification showed a distribution of nine types. The general results show some expected cross-discipline similarities, but most interesting are the inter-disciplinary variations, where, for example, Industrial Chemistry and Psychology are at the extreme poles of the continuum not only in the number of texts and words, but also in the variety of genres. In general, more disseminating reader-oriented genres were found in the fields of Basic Sciences and Engineering, with a particularly high frequency of DG and TB (especially in Industrial Chemistry). Social Sciences and Humanities showed a richer variety of genres, but with a major concentration in disciplinary-specific perspectives with less emphasis on didactic resources (important occurrence of DT).

With regard to the quantitative and qualitative analysis of the academic corpus PUCV-2006, the data presented in the areas of the Social Sciences and Humanities and in the Basic Sciences and Engineering reveal differences both in

the number and variety of written genres identified. It is evident that Psychology and Social Work tend to employ a greater quantity of texts with a relatively more extensive range (at least in the number of words) during the course of their degree programs when compared to Industrial Chemistry and Construction Engineering, which use a smaller number of texts and more limited range of texts in terms of the number of words.

The current study identified an interesting heterogeneity of genres, which would confirm the validity of the idea of a continuum of genres between poles of higher discipline-specific complexity on one end and a focus on more teaching resources on the other.

We believe the corpus data collected is reliable in sketching a first approach to the study of genres across academic disciplines, in order to report and describe the actual genres that are read by students at four university programs. All of this has followed ecological and situated principles in particular contexts and in one particular tertiary institution in Chile.

From the findings presented in this chapter, we see that through corpus linguistics it is possible to provide rich, accurate descriptions of language use in institutionalized contexts; also, the findings have helped gain insights into the ways discourse practices vary across disciplines. Thus, we are beginning to realize and understand that the texts employed as reading material in one academic field (*hard sciences*) are not the same as in others (*soft sciences*). The data obtained from corpus-based research of written specialized discourse can provide valuable contributions in the areas of disciplinary reading and writing processes at university level and in specialized material development. The use of corpora allows researchers to explore complex issues related to disciplinary genres from ecological perspectives including large amounts of texts, and all this collected information can contribute to the knowledge-base used to shape better access and paths to disciplinary discourse communities and to help university readers engage in specific genres as part of their academic and professional lives.

NOTES

¹ Funded by Research Project FONDECYT N° 1060440

REFERENCES

- Bazerman, C. (Ed.). (2008). *Handbook of research on writing: History, society, school, individual, text*. Mahwah, New Jersey: Erlbaum.
- Bazerman, C., & Paradis, J. (1991a). Introduction. In C. Bazerman & J. Paradis (Eds.), *Textual dynamics of the professions* (pp. 3-12). Madison: The University of Wisconsin Press.
- Bazerman, C., & Paradis, J. (1991b). *Textual dynamics of the professions*. Madison:

- The University of Wisconsin Press.
- Beaufort, A. (2007). *College writing and beyond*. Logan: Utah State University Press.
- Berkenkotter, C., Huckin, T., & Ackerman, J. (1991). Social context and socially constructed texts: The initiation of a graduate student into a writing research community. In C. Bazerman & J. Paradis (Eds.), *Textual dynamics of the professions* (pp. 191-215). Madison: The University of Wisconsin Press.
- Bhatia, V. (1993). *Analysing genre: Language use in professional settings*. London: Longman.
- Bhatia, V. (2004). *Worlds of written discourse: A genre-based view*. London: Continuum.
- Biber, D. (1986). Spoken and written textual dimensions in English: Resolving the contradictory findings. *Language*, 63, 384-414.
- Biber, D. (1988). *Variation across speech and writing*. Cambridge: Cambridge University Press.
- Biber, D. (1994). Using register-diversified corpora for general language studies. In S. Armstrong (Ed.), *Using large corpora* (pp. 180-201). Cambridge: MIT Press.
- Biber, D. (2005). Paquetes léxicos en textos de estudio universitario: Variación entre disciplinas académicas. *Revista Signos. Estudios de Lingüística*, 38, 19-30.
- Biber, D. (2006). *University language: A corpus-based of spoken and written registers*. Amsterdam: John Benjamins.
- Biber, D., Connor, U., & Upton, T. (2007). *Discourse on the move: Using corpus analysis to describe discourse structure*. Amsterdam: John Benjamins.
- Burdach, A. (2000). El léxico científico técnico: Un recurso publicitario persuasivo. *Onomazein*, 6, 189-208.
- Cabré, M., Doménech, M., Morel, J., & Rodríguez, C. (2001). Las características del conocimiento especializado y la relación con el conocimiento general. In M. Cabré & J. Feliú (Eds.), *La terminología técnica y científica* (pp. 173-186). Barcelona: Instituto Universitario de Lingüística Aplicada.
- Cabré, T. (1993). *La terminología: Teoría, metodología, aplicaciones*. Barcelona: Antártica/Empuréis.
- Cabré, T., & Gómez, J. (2006). *La enseñanza de los lenguajes de especialidad: La simulación global*. Madrid: Gredos.
- Cademártori, Y., Parodi, G., & Venegas, R. (2006). El discurso escrito y especializado: Caracterización y funciones de las nominalizaciones en los manuales técnicos. *Literatura y Lingüística*, 10, 243-265.
- Chafe, W. (1982). Integration and involvement in speaking, writing and oral literature. In D. Tannen (Ed.), *Spoken and written language: Exploring orality and literacy* (pp. 35-53). Norwood, New Jersey: Ablex.

- Chafe, W. (1985). Linguistic differences produced by differences between speaking and writing. In D. Olson, N. Torrence, & A. Hidiyard (Eds.), *Literature, language and learning: The nature and consequences of reading and writing*. Cambridge: Cambridge University Press.
- Charaudeau, P. (2004). La problemática de los géneros: De la situación a la construcción textual. *Revista Signos. Estudios de Lingüística*, 37, 23-39.
- Christie, F., & Martin, J. (Eds.). (1997). *Genre and institutions: Social processes in the workplace and the school*. London: Continuum.
- Ciapuscio, G. (1992). Impersonalidad y desagentivación en la divulgación científica. *Lingüística Española Actual*, 14, 183-205.
- Ciapuscio, G. (2003). *Textos especializados y terminología*. Barcelona: Instituto Universitario de Lingüística Aplicada.
- Doheny-Farina, S. (1991). Creating a text/creating a company: The role of a text in the rise and decline of a new organization. In C. Bazerman & J. Paradis (Eds.), *Textual dynamics of the professions* (pp. 306-335). Madison: The University of Wisconsin Press.
- Dudley-Evans, T., & St. John, M. (2006). *Developments in English for academic purposes: A multidisciplinary approach*. Cambridge: Cambridge University Press.
- Flowerdew, J. (Ed.). (2002). *Academic discourse*. Cambridge: Cambridge University Press.
- Flowerdew, L. (2004). The argument for using English specialized corpora to understand academic and professional language. In U. Connor & T. Upton (Eds.), *Discourse in the professions: Perspectives from corpus linguistics* (pp. 11-33). Amsterdam: John Benjamins.
- García, M., Hall, B., & Marín, M. (2005). Ambigüedad, abstracción y polifonía del discurso académico: Interpretación de las nominalizaciones. *Revista Signos. Estudios de Lingüística*, 38, 49-60.
- Gotti, M. (2003). *Specialized discourse: Linguistic features and changing conventions*. Berne, Switzerland: Lang.
- Gunnarsson, B. (1997). On the sociohistorical construction of scientific discourse. In B. Gunnarsson, P. Linell, & B. Nordberg (Eds.), *The construction of professional discourse* (pp. 99-126). Essex: Longman.
- Halliday, M. (1993). On language and physical science. In M. Halliday & J. Martin (Eds.), *Writing science: Literacy and discursive power* (pp. 54-68). Pittsburgh: University of Pittsburgh Press.
- Herrington, A., & Moran, C. (2005). *Genre across the curriculum*. Logan: Utah State University Press.
- Hyland, K. (2000). *Disciplinary discourses: Social interactions in academic writing*. London: Longman.
- Kennedy, J. (2001). Language use, language planning and EAP. In J. Flowerdew

- & I. Peackoc (Eds.), *Research perspectives on English for academic purposes* (pp. 67-92). Cambridge: Cambridge University Press.
- Kress, G., & van Leeuwen, T. (2001). *Multimodal discourse*. London: Arnold.
- Lang, M. (1997). *Formación de palabras en español*. Madrid: Cátedra.
- Leech, G. (1991). The state of the art in corpus linguistics. In K. Aijmer & B. Altenberg (Eds.), *English corpus linguistics: Studies in honor of Jan Svartvik* (pp. 8-29). London: Longman.
- Lemke, J. (1998). Multiplying meaning: Visual and verbal semiotics in scientific text. In J. Martin & R. Veel (Eds.), *Reading science: Critical and functional perspectives on discourses of science* (pp. 132-149). London: Routledge.
- López, C. (2002). Aproximación al análisis de los discursos profesionales. *Revista Signos*, 35, 195-215.
- Martin, J., & Veel, R. (Eds.). (1998). *Reading science: Critical and functional perspectives on discourses of science*. London: Routledge.
- Ministerio de Administraciones Públicas (MAP). (1995). *Manual de documentos administrativos*. Madrid: MAP.
- Parodi, G. (Ed.). (2005). *Discurso especializado e instituciones formadoras*. Valparaíso, Valparaíso, Chile: EUV.
- Parodi, G. (2006a). Reading-writing connections: Discourse-oriented research. *Reading & Writing Interdisciplinary Journal*, 20, 225-250.
- Parodi, G. (2006b). Discurso especializado y lengua escrita: Foco y variación. *Estudios Filológicos*, 52, 165-204.
- Parodi, G. (2007a). *Lingüística de corpus*. Buenos Aires: EUDEBA.
- Parodi, G. (Ed.). (2007b). *Working with Spanish corpora*. London: Continuum.
- Parodi, G. (2007c). El grial: Interfaz computacional para anotación e interrogación de corpus en español. In G. Parodi (Ed.), *Lingüística de corpus y discursos especializados: Puntos de mira* (pp. 31-52). Valparaíso, Valparaíso, Chile: EUV.
- Parodi, G. (2007d). El discurso especializado escrito en el ámbito universitario y profesional: Constitución de un corpus de estudio. *Revista Signos. Estudios de Lingüística*, 63, 147-178.
- Parodi, G. (Ed.) (2008). *Géneros académicos y géneros profesionales: Accesos discursivos para saber y hacer* (pp. 43-59). Valparaíso: EUV.
- Parodi, G., & Venegas, R. (2004). BUCÓLICO: Aplicación computacional para el análisis de textos. Hacia un análisis de rasgos de la informatividad. *Lingüística y Literatura*, 26, 223-251.
- Parodi, G., Venegas, R., Ibáñez, R. & Gutiérrez, R. (2008). Los géneros del discurso en el Corpus PUCV-2006: Criterios, definiciones y ejemplos. In G. Parodi (Ed.), *Géneros académicos y géneros profesionales: Accesos discursivos para saber y hacer* (pp. 43-59). Valparaíso: EUV.
- Sinclair, J. (1991). *Corpus, concordance, collocation*. Oxford: Oxford University

Press.

- Stubbs, M. (1996). *Text and corpus analysis*. Oxford: Blackwell.
- Stubbs, M. (2006). Corpus analysis: The state of the art and three types of unanswered questions. In S. Hunston & G. Thompson (Eds.), *System and corpus: Exploring connections* (pp. 15-36). London: Equinox.
- Swales, J. (1990). *Genre analysis: English in academic and research settings*. Cambridge: Cambridge University Press.
- Swales, J. (2004). *Research genres: Explorations and applications*. Cambridge: Cambridge University Press.
- Teubert, W. (2005). My version of corpus linguistics. *International Journal of Corpus Linguistics*, 10, 1-13.
- Thaiss, C., & Zawacki, T. (2006). *Engaged writers, dynamic disciplines*. Portsmouth, New Hampshire: Boyton/Cook.
- Tognini-Bonelli, E. (2001). *Corpus linguistics at work*. Amsterdam: John Benjamins.
- Valle, E. (1997). A scientific community and its texts: A historical discourse study. In B. Gunnarsson, P. Linell, & B. Nordberg (Eds.), *The construction of professional discourse* (pp. 76-98). Essex: Longman.
- Wignell, P. (1998). Technicality and abstraction in social science. In J. Martin & R. Veel (Eds.), *Reading science: Critical and functional perspectives on discourses of science* (pp. 297-326). London: Routledge.
- Williams, I. (1998). Collocational networks: Interlocking patterns of lexis in a corpus of plant biology research articles. *International Journal of Corpus Linguistics*, 3, 151-171.