Knowledge construction in discussions of research articles in two disciplines in Spanish: The role of resources of APPRAISAL[☆,☆☆]

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A R T I C L E   I N F O

A B S T R A C T

In his study of "forms of discourse", Bernstein (1999) differentiates what he refers to as horizontal discourse (everyday, commonsense knowledge) and vertical discourse (uncommonsense knowledge). He further distinguishes in vertical discourse two distinct modalities: "hierarchical knowledge structures" and "horizontal knowledge structures". The first of these corresponds to what Maton (2014) calls "scientific culture", and the second to "humanistic culture". Bernstein proposes that knowledge in the sciences is constructed by the integration of meanings, while in social sciences and the humanities by the segmented accumulation of different "languages". In a tradition of dialogue between systemic functional linguistics and Bernstein's sociology of knowledge, and later with its further development in Legitimation Code Theory (Maton, 2014; Christie and Martin, 2007; Hood, 2010; Christie and Maton, 2011), this paper explores how the kind of knowledge structures underlying different disciplines is revealed in differences in specific discourse semantic features of comparable texts written in Spanish. The features explored in the texts of the corpus are options of the system of APPRAISAL (Martin and White, 2005; Hood and Martin, 2005). This system provides resources to negotiate feelings, values and different voices in discourse. Analyses apply the tools of the discourse system of APPRAISAL to explore the ways in which knowledge claims are negotiated in a set of eight discussion sections from research articles in two disciplines, Microbiology and Sociology. The findings reveal interesting disciplinary differences that haven't been explored before in the frame of the dialogue of the two theories mentioned above on texts in Spanish. These findings can inform programs of support for academic Spanish across disciplines.

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1. Introduction

The teaching of academic literacy across disciplines requires an understanding of particular characteristics of their different discourses. These differences are likely to be especially significant where those disciplines constitute different

kinds of knowledge structures in Bernstein's terms (Bernstein, 1996, 1999). Effective academic literacy support requires an understanding of the ways in which such disciplines structure, build and negotiate knowledge and how this is evident in the language of key texts. This paper aims to contribute to this field by exploring how meanings are construed differently in discussion sections from a set of eight research articles written in Spanish, four from journals in Microbiology and four from journals in Sociology. The focus is on how the authors engage with other contributions to knowledge in these sections.

The study is framed with two theoretical bases: Bernstein's later work (1996; 1999) on the sociology of knowledge and systemic functional linguistics (hereafter SFL). Both theories have a fruitful history of dialogue over several decades. Most recently this has included dialogue with developments from Bernstein's work in Maton's Legitimation Code Theory (2014) as documented in Christie and Martin (2007), Hood (2010) and Christie and Maton (2011). From SFL theory, the study draws in particular on the discourse system of APPRAISAL (Martin and White, 2005; Hood and Martin, 2005) to explore ways in which the discourses reveal differences in their underlying knowledge structures (Bernstein, 1999).

The specific objectives of the paper are:

a) To identify and compare preferences in linguistic choices made in the discussion sections of articles in Spanish from disciplines of Microbiology and Sociology.
b) To interpret findings with respect to the knowledge structures that characterise each discipline.

The discussions conforming the corpus are from articles published between 2006 and 2008, chosen randomly from indexed journals, which are well known and valued in each of the discipline communities, according to representative researchers. The length of the corpus of discussions in Microbiology papers is of 3507 words, while that in Sociology papers is of 3178 words. The total number of words of the corpus is 6685.

The discussions were analysed in full. However, the paper only shows the excerpts considered the most representative to the pursued objectives.

This paper is organized in five sections. First, the Introduction in which I have presented the research, its foundations, its main objectives and the corpus analysed. Second, there is a section devoted to present the framework, composed by two different theories that dialogue among them in the analysis and discussion of the findings. In third place, I present the results of the linguistic analysis of the corpus and the discussion of the findings based on both theories, organised by discipline. Then, the paper is closed by Final Remarks, in which I synthesise the journey. The references give account of the foundations of the paper and of the corpus analysed.

2. Theoretical framework

2.1. Bernstein's concepts of "forms of discourse" and "forms of knowledge"

In his work on the sociology of education, Basil Bernstein characterised what he called "forms of knowledge", which are object of learning, as well as their context of practice, the identities or subjectivities they construe, and the procedures for learning them. He identifies two forms of knowledge: one which is considered everyday knowledge, based on orality, which he calls "horizontal discourse"; and another that is specialised, based in written form, which he calls "vertical discourse" (Bernstein, 1999).

Bernstein (1996: 170−171) defines horizontal discourse as a form of knowledge that is everyday, oral and common sense, characterised as "local, segmental, context dependent, tacit, multi-layered, often contradictory across contexts but not within contexts". This kind of discourse is "embedded in on-going practices, usually with strong affective loading and directed towards specific immediate goals, highly relevant to the acquirer in the context of his/her life" (Bernstein, 1999: 161).

Vertical discourse, on the other hand, consists of "symbolic specialised structures of explicit knowledge", integrated at the level of meanings. Within this type of discourse, Bernstein identifies two different kinds of knowledge structures: a "hierarchical knowledge structure" that is hierarchically organised and characteristic of the natural sciences; and a "horizontal knowledge structure", that is organised as a series of specialised languages that tend to compete with each other, characteristic of the social sciences and humanities (Bernstein, 1999: 161).

Hierarchical knowledge structures are organised by the integration of low-level propositions into more general and abstract ones. They tend to create very general propositions and theories that show uniformity between phenomena that appear to be different. Hierarchical knowledge structures constitute an "integrating code" (Bernstein, 1999:162). To participate in this development it is necessary to master the theory and research procedures in order to manage the empirical manifestation of the theoretical concepts. Bernstein (1999: 163) acknowledges that there can be opposition between theories in the hierarchical knowledge structure. However, he points out that it would be a mistake to consider that this fact eliminates differences between types of knowledge structures. The attempts to challenge positions in the hierarchical knowledge structure are attempts to solve contradictions to allow the introduction of particular propositions into more general ones.

Horizontal knowledge structures create a series of specialised languages that are not compatible in that they do not share key principles and assumptions. Horizontal knowledge structures are developed by accumulation of different specialised languages, one of which tends to be hegemonic at any one time, with respect to a given discipline (Bernstein, 1996: 173). Horizontal knowledge structures constitute "serial codes" (Bernstein, 1999: 163). This is to say, this kind of knowledge structure progresses by the serial introduction of a new language with new perspectives, new questions, new problems and a new group of speakers. They develop as speakers of each new language challenge the hegemony and the legitimacy of previous languages, and defend the new. To do this it is necessary to develop a "gaze" which interprets "the reality" (Bernstein, 1999: 165).

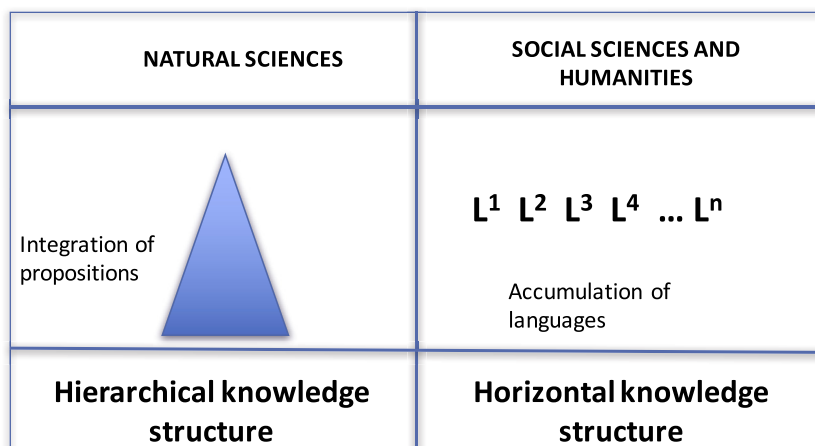| NATURAL SCIENCES	SOCIAL SCIENCES AND HUMANITIES
Integration of propositions	L^1 L^2 L^3 L^4 ... L^n Accumulation of languages
Hierarchical knowledge structure	**Horizontal knowledge structure**

Fig. 1. Forms of vertical discourse.

Fig. 1, following Bernstein (1996, 1999), is a graphic representation of types of knowledge structure, as described above.

Bernstein's concept of knowledge structures has shaped the design of this study in several ways. It has influenced the selection of contrasting disciplines for data collection (Microbiology from the sciences and Sociology from the social sciences). It has also influenced the decision to focus on the discussion section of research articles as this textual location is expected to generate multiple instances of negotiation with other contributions to knowledge and provide a fruitful context for a linguistic analysis of the ways these negotiations are managed. Finally, Bernstein's knowledge structures provide a theoretical frame for interpreting the linguistic findings with respect to evidence of integration or accumulation in the negotiation with other contributions to knowledge.

2.2. The discourse semantic system of APPRAISAL

In the frame of the systemic functional linguistics architecture (Halliday (1982 [1978]; Matthiessen and Halliday, 2009; Martin, 1992, 1997; Martin and Rose, 2007), the system of APPRAISAL has been theorised as interpersonal resources of the discourse semantic stratum of language.

APPRAISAL theorises options in the enactment of evaluation in discourse and the negotiation with other voices (Martin and White, 2005; Hood and Martin, 2005; Martin and Rose, 2007). In Fig. 2 a general outline of the system identifies simultaneous options as three subsystems: ATTITUDE, GRADUATION and ENGAGEMENT. The system of ATTITUDE encompasses three subsystems: AFFECT accounts for feelings and emotions; APPRECIATION, for the evaluation of semiotic objects or natural phenomena; and JUDGMENT for the evaluation of the character of people and the ethics of their behaviour. These evaluations can be positive or negative. The subsystem of GRADUATION theorises options for grading evaluations by degree. This can be as FORCE —raising or lowering the intensity of a value, or as FOCUS -sharpening or softening its categorical limits.

The system of ENGAGEMENT includes resources that function to relate the voice of the speaker with other alternative voices (Martin and White, 2005), in the sense in which Bakhtin (1981 [1934]) proposes the concept of dialogism and Voloshinov (2009 [1929]: 151—153) that of discourse interaction. The first level of choice in this system is that of monogloss or heterogloss. Monogloss is the acknowledgment of a single discourse position, and heterogloss admits the existence of more than one position. The linguistic resources for realising heteroglossic discourse, that is for introducing and managing other positions in text in English and Spanish, include those of projection, modality and concession (Martin and Rose, 2007: 59; Oteíza, 2009, 2010). Within the semantic space of heteroglossic discourse, the system of engagement opens to an initial choice of expanding or contracting space for negotiation with other propositions (Martin and White, 2005).
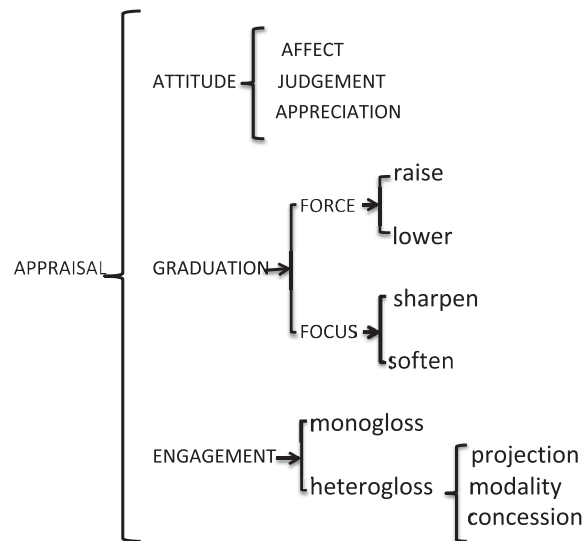
Fig. 2. An outline of the system of APPRAISAL.

One of the resources to expand the space to introduce voices in discourse is that of projection, which consists in "quote or report what people say or think" (Martin and Rose, 2007: 49–52). At the level of lexicogrammar projection is realised mostly in two ways. If quoting, with a projecting clause related to a projected one in relation of parataxis. If reporting, with a projecting clause related to a projected one in relation of hypotaxis, which reformulates or reproduces what is thought or said (Halliday, 1994). When we shift to the level of discourse semantics, we can consider this kind of relation at a more abstracted level, and as drawing on an array of grammatical choices. Martin and Rose (2007: 52) show different means of discourse realisation of projection, as names for speech acts, scare quotes or projecting within clauses. In studies of academic discourse in English and Spanish, for example, Hood (2010) and Moyano (2013, 2015) discuss specialized ways of projection in English and Spanish respectively. In Spanish, for instance, cases in which the projection is realized not by a projected clause but by a participant Verbiage have been found (example 1), as well as projection within clauses, with nominalised mental or verbal processes (example 2). The analyses of instances of heteroglossic discourse accounted for all such instances of projection.

Ex. (1)   Radonjic et al.   relataron   un 66,7%   de sensibilidad para este mismo examen… (M02)
          Radonjic et al.   related   a 66.7%   of sensitivity   to   this same   exam…

Ex. (2)   … es   comparable a   lo comunicado   por otros autores (17) (M01)
          … it is comparable to   what has been communicated by   other authors (17)

According to Halliday (1994), modality is a resource that opens up a space between "yes" and "no". Martin and Rose (2007: 53–56) consider modality as another way of introducing voices in discourse. In the present research, I considered of special relevance the use of negation (deny, in terms of Martin and White, 2005), which is one of the poles of the cline of modality. Deny is a resource to place the authorial voice in relation to another that is opposed to it: it is a persuasive resource, which addresses an alternative position to reject it, to set it aside (example 3).

Ex (3)   … esto **<u>no</u>**   significa sacar   esta temática de la agenda de políticas sociales y de salud (S04)

         … this **<u>doesn't</u>** mean   taking off   this topic   from the social and health policies

Concession is a resource that acknowledges other voices that create an expectation.
However, this is countered later on in discourse by the authorial voice
(Martin and Rose, 2007: 56–58)(example 4).

Ex (4)   [CONCESSION] Es conocida la resistencia natural a fluconazol en *C. krusei*,//
         [COUNTER-EXPECTATION] **pero** en nuestra serie no se aisló dicha especie. (M01)

         [CONCESSION] The natural resistance to fluconazole in C. krusei is known,//
         [COUNTER-EXPECTATION] but in our series the already mentioned species haven't been isolated.

Martin and White (2005: 102–135) open up the heteroglossic options in the subsystem of ENGAGEMENT in an extensive way. In this work some of these resources are considered and explained when they appear in the fragments analysed.

2.2.1. Relevance of APPRAISAL in the analysis of the data

In this study, the texts selected for analysis have been considered in the contexts of their disciplines, i.e. as realising meanings produced as knowledge of different types (Bernstein, 1996, 1999). These differences are hypothesised as realised in language by resources of discourse semantic systems, which have been made evident by linguistic manual analysis of the type proposed by Martin (2009) and Martin and Rose (2007). The methodology comprises the exploration of the texts as discourse structure, paying attention to the patterns revealed by their unfolding and asking how these patterns are managed by discourse systems (Martin and Rose, 2007: 266).

In this study the interpersonal system of APPRAISAL, especially the subsystem of ENGAGEMENT, has particular relevance to a study of differences in how writers from contrasting disciplines discuss relationships between contributions to knowledge within discussion sections of articles. A discourse analytic study that deploys the APPRAISAL subsystem of ENGAGEMENT identifies patterns of choices and shows how they realise different options in opening and closing space for negotiation of knowledge in discussions of research articles in the selected disciplines. In the following sections I synthesise the results of a manual analysis of the corpus.

3. Results and discussion

As noted above, the foregrounded discourse semantic resources in the corpus are those from the system of APPRAISAL, in particular the subsystem of ENGAGEMENT. The results of analyses reported below show differences in how the authors from each discipline make different selections in the ways they engage with claims to knowledge other than their own. The findings are interpreted initially with reference to the system of ENGAGEMENT, and then with respect to the knowledge structure of their respective disciplines. I focus attention first on the data from Microbiology and then that of Sociology.

All the analysed excerpts are presented first in tables for translation. The approach used in all these translations is one of providing a clause-by-clause account of the Spanish text. Then a word-by-word translation is given, indicating some relevant resources, as e.g. the use of clitics and of ellipsis (Ø). An English gloss is then offered as a final step for each clause. Symbol "§" indicates change of paragraph. After their translation, the excerpts are presented in Spanish, separated by independent clauses, indicating the relevant linguistic choices for meaning construction.

To indicate boundaries between clauses and clause complexes, the following symbols are used, as showed in Fig. 3:

Symbol	Unit
///	Clause complex
//	Clause
[[ ]]	Embedded clause
<< >>	Included clause

Fig. 3. Symbols used in excerpts from the analysed texts.

3.1. Discussions of research articles in microbiology

An analysis from the perspective of ENGAGEMENT of the data from the Microbiology texts reveals that a key feature is the use of projection (Martin and Rose, 2007). Resources of projection coupled with instances of comparison, a resource of the discourse system of CONJUNCTION (Martin and Rose, 2007), tend to assign legitimacy to the author's own findings by showing agreement with other propositions produced earlier in the same field of research.

The first fragment, Excerpt (1), is from text (M02) of the corpus. It is about the "sensitivity" of different types of tests applied as methodology in a research. Table 1 presents its translation.

Table 1
Translation of Excerpt (1).

a Tal como   lo describe   la literatura,
  Such as   clitic=describes   the literature
  [[donde   se informa
  [[where   clitic=informs
  [[que   la sensibilidad del examen microscópico   oscila   entre 35 y 80%,]]]]//
  [[that   the sensitivity of the test microscopic   oscillates   between 35 and 80%,]]

'As described in the literature, where it is shown that the sensitivity of the microscopic test oscillates between 35 and 80%,'

b en   nuestro   trabajo
  in   our   work
  la   sensibilidad de los diferentes exámenes microscópicos   osciló   entre 30
  y   40%//the sensitivity of the different tests mycroscopic   oscillated   between 30 and 40%//

'in our work the sensitivity of different microscopic tests oscillated between 30 and 40%//'

c y   ascendió   a 50%   [[al considerar   la suma de los tres   exámenes microscópicos]],//
  and   climbed   to 50%   [[in considering   the sum of the three   tests   microscopics]],//

'and climbed to 50% in considering the sum of the three microscopic tests'

d	probablemente	debido al	escaso	número de parásitos
	probably		due to the	limited number of parasites
	presentes en la	población	de mujeres embarazadas asintomáticas [[estudiada]] (12, 19, 28).///
	present	in the population	of women pregnant	asimptomatic [[studied]] (12, 19, 28).///

'probably due to the limited number of parasites present in the pregnant asimptomatic women studied (12, 19, 28).'

e	Krieger et al. describieron un 60% de sensibilidad en el diagnóstico de T. vaginalis
	Kriegger et al. described a 60% of sensitivity in the diagnosis of T. vaginalis
	a través del examen en fresco con SF en mujeres pertenecientes a una población de alto riesgo
	through the test in fresh with SF onto women belonging to a population of high risk (14).///

'Krieger et al. described a 60% of sensitivity in the diagnosis of T. vaginalis in a fresh test with SF onto women belonging to a high-risk population (14).'

f	Asimismo, Radonjic et al. relataron un 66,7% de sensibilidad para este mismo examen
	Similarly, Radonijc et al. related a 66.7% of sensitivity to this same exam
	y un 52,4% para la coloración de May-Grunwald Giemsa
	and a 52% to the coloration of May-Grunwald Giemsa
	en pacientes con complicaciones ginecológicas (22).///
	in patients with complications gynaecological (22).///

'Similarly, Radonijc et al. related a 66.7% sensitivity in this same test and a 52,4% to a May-Grunwald Giemsa coloration in patients with gynaecological complications (22).'

g	También Wiese et al. describieron
	Also Wiese et al. described
	un 58% de sensibilidad y un 99,8% de especificidad del examen en fresco con SF
	a 58% of sensitivity and a 99.8% of specificity of the test in fresh with SF
	en un estudio [[realizado en forma consecutiva y prospectiva,
	in a study [[realized in form consecutive and prospective,
	[[donde los resultados de los exámenes microscópicos no estaban influenciados por el cultivo (29)]]].///
	[[where the results of the tests microscopic no were influenced by the culture (29)]]].///

'Also Wiese et al. described 58% sensitivity and 99.8% specificity in the fresh test with SF in a study realized consecutively and prospectively, where the microscopic test results weren't influenced by the culture (29).'

h	Asimismo, Costamagna relató un 58,3% de sensibilidad del examen en fresco con SF //
	Similarly, Costamagna related a 58.3% of sensitivity of the test in fresh with SF//

'Similarly, Costamagna related 58.3% of sensitivity of the fresh test with SF'

i	y además describió
	and also Ø described
	un mayor rendimiento para el examen en fresco con SAF/azul de metileno (5).///
	a highest efficiency to the test in fresh wih SAF/blue of methylen (5).///

'and also described the highest efficiency to the fresh test with SAF/methylene blue (5).'

As shown in the analysis of Excerpt (1) below, the author introduces the findings of his paper (**en nuestro trabajo**… *in our work*), in comparison with general findings in the literature (see underlined "Tal como lo ***describe*** la literatura…" *As described in the literature…*). The author reports that the values found in his own work are within the generalized values registered in the discipline. To reinforce the first comparison, he introduces the voices of different authors (bold + underlined; processes for projection in bold + italic) to specify certain results cited from other papers, which are similar of those of his own research ("**Krieger et al. *describieron***" *Krieger* et al. *described*, "**Radonjic et al. *relataron***" *Radonjic* et al. *related*, "**Wiese et al. describieron**" *Wiese* et al. *described*, "**Costamagna relató**" *Costamagna related*). Most of the projections are preceded by conjunctions of comparison (underlined), indicating the coincidence between different findings. The numbers between brackets in the text are original and indicate the correspondent reference located at the end of the article from which the excerpt is taken. This method of citation is a convention in the discipline.

(1)   Tal como lo ***describe*** la literatura, [[donde se informa [[que la sensibilidad del examen microscópico oscila entre 35 y 80%,]]]]///

en nuestro trabajo la sensibilidad de los diferentes exámenes microscópicos osciló entre 30 y 40%//

y ascendió a 50% [[al considerar la suma de los tres exámenes microscópicos]],//

probablemente debido al escaso número de parásitos presentes en la población de mujeres embarazadas asintomáticas [[estudiada]] (12, 19, 28).///

Krieger *et al*. *describieron* un 60% de sensibilidad en el diagnóstico de *T. vaginalis* a través del examen en fresco con SF en mujeres pertenecientes a una población de alto riesgo (14).///

Asimismo, **Radonjic *et al*. *relataron*** un 66,7% de sensibilidad para este mismo examen y un 52,4% para la coloración de May-Grunwald Giemsa en pacientes con complicaciones ginecológicas (22).///

También **Wiese *et al*. *describieron*** un 58% de sensibilidad y un 99,8% de especificidad del examen en fresco con SF en un estudio realizado en forma consecutiva y prospectiva, [[donde los resultados de los exámenes microscópicos no estaban influenciados por el cultivo (29)]].///

Asimismo, **Costamagna *relató*** un 58,3% de sensibilidad del examen en fresco con SF //
y además ***describió*** un mayor rendimiento para el examen en fresco con SAF/azul de metileno (5).///

The instances of projection in Excerpt (1) bring other sources of knowledge into the discourse. In this case they report on previous research findings. The author's strategy of drawing comparisons with his own findings is an integrating one,

reinforcing generalizing knowledge claims in the discipline. Such a strategy is functional in the service of hierarchical knowledge construction.

In Except (2), from (M01), the focus is on the prevalence rate of a disease in a specific population and the presence of certain species of fungus that cause it. The fragment is translated in Table 2.

Table 2
Translation of Excerpt (2).

a	En la población de mujeres embarazadas [[estudiada]] la prevalencia de CVV fue 28% // In the population of women pregnant [[studied]] the prevalence rate of CVV was 28
	'In the population of pregnant women studied the prevalence rate of CVV was 28%'
b	y es comparable a [[lo comunicado por otros autores (17)]], and is comparable to [[clitic = communicated by other authors (17)]], pero menor que [[la hallada en el tercer trimestre de embarazo (1)]] but less than [[clitic = founded in the third trimester of pregnancy (1)]] y mayor que en mujeres adultas en etapa fértil no embarazadas (3, 12)./// and higher than Ø in women adult in stage fertile non pregnant (3, 12).///
	'and it is comparable to what has been communicated by other authors (17), but less than that found in the third pregnancy trimester (1) and higher than that found in adult women in the non pregnant fertile stage (3, 12).'
	§
c	En los últimos años se realizaron varios estudios [[que demuestran In the last years clitic=realized several studies [[which show [[que C. albicans es aún la especie más frecuentemente responsable de la candidiasis [[that C. albicans is still the species more frequently responsable of the candidiasis vulvovaginal (74–94%),// vulvovaginal (74–94%),//
	'In recent years several studies were undertaken. Those studies show that C. Albicans is still the more frequently responsible species of vulvovaginal candidiasis (74–94%),'
d	mientras que otras especies, C. glabrata y C. krusei, son menos frecuentes// while other species, C. glabrata and C. krusei, are less frequent
	'while other species, C. glabrata and C. krusei, are less frequent'
e	y sus hallazgos se relacionan con mayor resistencia a los antifúngicos (15, 20, 21)]]]]./// and their findings clitic=relate with higher resistence to antifungal (15, 10, 21)]]]].///
	'and these findings are related with higher resistance to antifungal (15, 10, 21).'
	§
f	En este estudio, C. albicans también fue la especie [[más frecuentemente aislada,// In this study, C. albicans also was the species [[more frequently isolated, // seguida por C. glabrata (6,3%)]]./// followed by C. glabrata (6.3%)]].///
	'In this study, C. albicans was also the more frequently isolated species, followed by C. glabrata.'
g	Otros autores encontraron entre 6,2% y 16,3% de C. glabrata (3, 5, 6, 11, 12, 15, 23) // Other authors found between 6.2% and 16.3% of C. glabrata (3, 5, 6, 11, 12, 15, 23) //
	'Other authors found between 6.2% and 16.3% of C. glabrata (3, 5, 6, 11, 12, 15, 23)'
h	y Ø habitualmente relacionada a vaginitis crónica (9)./// and found it habitually related to vaginitis chronic (9). 'and found it habitually related to chronic vaginitis (9).'

The linguistic resources deployed in Excerpt (1) are also evident in Excerpt (2) from (M01). In the Excerpt deployed below in Spanish, references to the author's research are in bold; references to the generalized contributions from other researchers are in bold + underlined, and if elided, are shown between simple square brackets. Processes realising projection (in some cases nominalised, e.g. "***lo comunicado***"; "***la hallada***") are in bold + italics. Comparatives are underlined.

(2)   En la población de mujeres embarazadas [[estudiada [**en este trabajo**]]] la prevalencia de CVV fue 28% //

y es comparable a [[***lo comunicado*** por **otros autores** (17)]], pero menor que [[***la hallada*** en el tercer trimestre de embarazo (1)]] y mayor que [***la hallada*** por **otros autores**] en mujeres adultas en etapa fértil no embarazadas (3, 12).///

§

En los últimos años se realizaron **varios estudios** [[**que *demuestran*** [[que *C. albicans* es aún la especie *más* frecuentemente responsable de la candidiasis vulvovaginal (74–94%),//
mientras que otras especies, *C. glabrata* y *C. krusei*, son menos frecuentes//

y sus hallazgos se relacionan con mayor resistencia a los antifúngicos (15, 20, 21)]]]].///

§

En este estudio, *C. albicans* también fue la especie [[más frecuentemente aislada,// seguida por *C. glabrata* (6,3%)]].///

Excerpt (2) begins with the author repeating the results obtained in his study (clause a) and continues with several comparisons made to other existing claims to knowledge in the field. As well as in Excerpt (1), projection coupled with comparison is the choice to make this meaning, locating the results of the author's research among others in the same field. As the introduction of the results of other researchers is generalised, the number of references given by numbers between brackets is relevant to the same purpose. These linguistic options can be interpreted as an attempt to show how the findings made are integrated in the body of a discipline of hierarchical knowledge structure.

However, there are also instances in the data where the author reports results that differ from others in the literature. This can be observed in Excerpt (3), from (M02), which is translated in Table 3.

Table 3
Translation of Excerpt (3).

a	El cultivo en medio sólido (agar Columbia modificado) The culture in medium solid (agar Columbia mofified) solo detectó la mitad de los casos positivos para *T. vaginalis*,// only detected the half of the cases positives for *T. vaginalis*,//
	'The culture in solid medium (modified agar Columbia) only detected half of the positive cases for T. vaginitis'
b	con lo que demostró su escasa utilidad./// with which show its limited utility.///
	'The culture in solid medium (modified agar Columbia) only detected half of the positive cases for T. vaginitis.'
c	Estos resultados difieren de [[los relatados por Stary et al.]],// These results differ from [[clitic=related by Stary et al.]], //
	'These results differ from those related by Stary et al.,'
d	quienes describieron un 100% de sensibilidad de este medio which described a 100% of sensitivity of this medium para pacientes asintomáticas y un 97,3% para sintomáticas (27)./// for patients asymptomatic and a 97.3% to Ø symptomatic (27).
	'These results differ from those related by Stary et al., which described 100% of this medium's sensitivity in asymptomatic patients and 97.3% in symptomatic patients (27).'
e	Estas diferencias podrían deberse These differences could due = clitic a la distinta composición de los medios de cultivo [[utilizados]]./// to the distinct composition of the medium of culture utilised.///
	'These differences could be due to the distinct composition of the culture's medium utilised.'
f	La mayor concentración de agar en el medio sólido podría dificultar The higher concentration of agar in the medium solid could make difficult el desarrollo y la movilidad del parásito,// the development and the mobility of the parasite,//
	'The higher concentration of agar in the solid medium could make difficult the parasite's development and mobility,'
g	ya que en este medio se los observó en escaso número// because in this medium clitic=clitic=observed in limited number//
	'because in this medium they have been observed in limited number'
h	y además presentaban alteraciones morfológicas and also presented alterations morphological (formas redondeadas y presencia de vacuolas en su interior)./// (forms rounded and presence of vacuoles in its inside).///
	'and also presented morphological alterations (rounded forms and vacuoles inside).'
i	Hasta el momento no se han documentado otras publicaciones Until the moment not clitic=have documented other publications [[que pudieran reproducir los resultados observados por Stary et al.]]./// [[that may reproduce the results observed by Stary et al.]].///
	'Until now there haven't been documented other publications that may reproduce the results observed by Stary et al.'
j	Sin embargo, para evaluar la real utilidad de este medio sólido// However, to evaluate the actual utility of this medium solid//
	'However, to evaluate the solid medium's actual utility'
k	se deberían estudiar un mayor número de pacientes con tricomonosis./// clitic=should study a higher number of patients with trichomoniasis
	'a higher number of patients with trichomoniasis should be studied.'

In Excerpt (3) the author does refer to the difference between his own results and those of other work (clauses a to d). The resource to do this is the introduction of a nominalised projection (bold + italics) coupled with a comparison realised by a verb (underlined) (clause c: "**Estos resultados** <u>difieren</u> de *los relatados* por <u>**Stary et al**</u>**",** These results differ from those related by Stary et al.). The reference to his own results —that has been presented in clauses a and b- is in bold; the referenced researcher in bold + underlined.

Then, the author begins an explanation for this divergence (clauses e to h), based on the methods of analysis of the samples (e.g. "Estas diferencias podrían deberse a la distinta composición de los medios de cultivo utilizados" *These differences could be due to the distinct composition of the culture's medium utilised.*). Finally, in order to reject the comparison, the author selects the resource of deny (bold + double underlined) coupled with the projection (process in bold + italics) of the voice of other potential supportive sources (bold + underlined) that have not been forthcoming ("**no** *se han documentado* **otras publicaciones**" *there haven't been documented other publications*). By such means, the findings of the author's own work are legitimated.

(3)　El cultivo en medio sólido (agar Columbia modificado) solo detectó la mitad de los casos positivos para *T. vaginalis*,//

con lo que demostró su escasa utilidad.///

Estos resultados difieren de [[*los relatados* por **Stary et al**]],//

quienes describieron un 100% de sensibilidad de este medio para pacientes asintomáticas y un 97,3% para sintomáticas (27).///

Estas diferencias podrían deberse a la distinta composición de los medios de cultivo [[utilizados]].///

La mayor concentración de agar en el medio sólido podría dificultar el desarrollo y la movilidad del parásito,//
ya que en este medio se los observó en escaso número//

y además presentaban alteraciones morfológicas (formas redondeadas y presencia de vacuolas en su interior).///

Hasta el momento **no** *se han documentado* **otras publicaciones [[que pudieran reproducir los resultados** *observados* **por Stary** *et al*]].///

Sin embargo, para evaluar la real utilidad de este medio sólido//

se deberían estudiar un mayor número de pacientes con tricomonosis.///

The fact that the author attempts to explain the difference found with the literature reviewed, suggests that this difference constitutes a problem. However, in order to show his proficiency in the discipline and justify his own data, the author gives reasons to explain differences based on the research methods applied in each compared experiment. He also uses the resource of projection coupled with negation to reject the reference that contradicts his findings due to its lack of support from other researchers in the field. By these means, the author closes down the space for disagreement, giving as an argument the need of more research (clauses j and k).

The strategies deployed by the author to explain differences between his own data and that of other research, then, support the proposition sustaining that Microbiology is a discipline of hierarchical knowledge structure: the lack of support to integrate in the field the controversial proposition and the explanation of differences based in the domain of the methodology.

Finally, revealed in the corpus (Tables 4 and 5) are some examples of the resource that Martin and White (2005: 125) call "concede + counter pairings" (see Excerpts (4) and (5) from (M01)). This resource establishes some degree of alignment with the readers about the body of the knowledge constructed by the discipline (concession) in order to propose some disalignment of the data produced without being rejected by the readers. In these cases, the author's findings are opposed to the general construction of the discipline, so he needs to obtain some legitimation by acknowledging the general proposition.

Table 4
Translation of Excerpt (4).

a	Es conocida	la	resistencia	natural	a fluconazol	en *C. krusei*,//
	Is known	the	resistance	natural	to fluconazole	in C. krusei,//

'The natural resistance to fluconazole in C. krusei is known'

b	**pero** en nuestra serie	no	se	aisló	dicha	especie.
	but in our	series	not	clitic=isolated	already mentioned	species.

'but in our series the already mentioned species haven't been isolated.'

(4)　[CONCESSION] Es conocida la resistencia natural a fluconazol en *C. krusei*,// [COUNTER-EXPECTATION] **pero** en nuestra serie no se aisló dicha especie.

Table 5
Translation of Excerpt (5).

a	**A pesar que**	todos los	aislamientos	de *C. albicans*	fueron sensibles	in vitro
	Although	all	the isolations	of C. albicans	were sensitive	in vitro
	a los antifúngicos probados,//					
	to the antifungal tested,//					

'Although all C. albicans' isolations were sensitive in vitro to the antifungal tested,'

b	está descrito	el	desarrollo	de resistencia	en esta especie (20, 22).
	is described	the	development	of resistance	in this species (20, 22).

'resistance development in this species is described (20, 22).'

(5) [COUNTER-EXPECTATION] **A pesar que** todos los aislamientos de *C. albicans* fueron sensibles in vitro a los antifúngicos probados,// [CONCESSION] está descrito el desarrollo de resistencia en esta especie (20, 22).

Excerpts (4) and (5) show that the differences found between the research data and other knowledge construed in the field are not always explained. However, the author makes them evident by contrasting his own findings with generalized propositions already accepted in the discipline. This way, the author acknowledges the generalized assumptions in the field, showing that he is an expert and knows the integrated knowledge already built, looking for some legitimation from readers of a discipline with hierarchical knowledge construction. Although the data doesn't allow solving contradictions in order to integrate propositions into more general ones, at least these contradictions are made evident, probably waiting for further research.

The examples from discussions sections of research articles in Microbiology suggest that the author's purpose is to legitimize his findings in the ways they relate to existing claims. He does this by comparing them with the results of research previously published in the same field, by means of projection coupled with conjunctions of comparison. The examples show degrees of convergence across findings from different papers, such that the author can include his results as able to be integrated with already accepted propositions in the field. It is important to note that the number of references in each discussion is high, a resource that also gives to the findings a high degree of legitimation.

Where the author's findings differ from some within the literature, the author tends to explain the difference, drawing on references to the methodology employed in the respective studies. The reference to appropriate research procedures in legitimate knowledge building reflects Bernstein's note on the importance of managing the methodology as well as the theory in hierarchical knowledge structure (Bernstein, 1999: 163–165). However, in some cases where there is some discrepancy in author findings and claims in the literature these may simply be put aside with instances of concede plus counter-expectation. Even in such few cases, the fact that there is acknowledgement of discrepancy and a raising of the issue of how results compare suggests an underlying focus on issues of integration in knowledge building in the discipline.

These results allow the proposal that the discussions in Microbiology show a hierarchical knowledge structure, in which the data produced give account of a phenomenon that can be integrated in more general propositions in the discipline, demonstrating that they are phenomena of the same kind (Bernstein, 1999: 162).

3.2. Discussions of research articles in sociology

In the discussions of research articles in the field of Sociology, a broader spectrum of resources of ENGAGEMENT are identified. The voice of the author is opposed to different voices, some the field of the research (entities and activities related to the production of knowledge itself), some others of the field of the object of study (entities and activities "that constitute the object of study") (Hood, 2010: 121). This strategy is interpreted as the challenge of legitimacy and hegemony of different languages and the defending of the authorial one.

Table 6 presents the translation of Excerpt (6), a fragment of the discussion of (S03). The issue approached in the fragment is the future research about worker's strategies of "direct action".

Table 6
Translation of Excerpt (6).

a	Ahora bien, dos desafíos investigativos se abren aquí./// However, two challenges investigative clitic=open here
	'However, two investigative challenges are opened up here.'
b	Uno de ellos consiste en preguntarnos One of them consists in asking=clitic por la sociogénesis de las condiciones about the sociogenesis of the conditions para la materialización de esta cultura en la práctica./// for the materialization of this culture in the practice.///
	'One of them consists in asking ourselves of the sociogenesis of the conditions for the materialization of this culture in practice.'
c	Una tesis recurrente otorga el poder al cuerpo de delegados, One thesis recurrent gives the power to the group of representatives, por la situación neurálgica del subte en el transporte urbano./// for the situation crucial of the subway in the transport urban.///
	'One recurrent thesis gives the power to the group of representatives, for the subway's crucial situation in the urban transport.'
d	No obstante, esta relevancia no puede explicarnos Nevertheless, this relevance not can explain=clitic un elemento variante en el tiempo./// an element variable in time.//
	'Nevertheless, this relevance cannot explain to us a variable in time element.'
e	Un análisis de la secuencia causal del proceso de privatización del Subte, An analysis of the sequence causal of the process of privatization of the subway, cambio de composición social y cultural de la fuerza de trabajo

change of composition social and cultural of the force of work,   estrategias de distintos destacamentos políticos,   strategies of different detachment political,   crisis de la estructura sindical, cambios en el Gobierno y contexto político,   crisis of the structure union, changes in the Government and context political,   deben ser analizados en sus mutuas implicaciones.///   should be analyzed in their mutual implications.//
'An analysis of the causal sequence of the subway's privatization process, the change of the force of work's social and cultural composition, the different political detachment strategies, the union structure's crisis, the changes in the Government and political context, should be analyzed in their mutual implications.'
§
f Por otra parte, debemos advertir//   On the other hand, Ø should-1p pl warn//
'On the other hand, we should warn'
g que sólo estamos ante la presencia de una de las lógicas de la acción directa: that Ø only are-1p pl at the presence of one of the logics of the action direct: la de una cultura   that of a culture   [[radicalizada en la transformación progresiva de las condiciones de trabajo]].///   [[radicalized in the transformation progressive of the conditions of work]].///
'that we are only attending at one of the logics of the direct action: that of a radicalized culture in the conditions of work's progressive transformation.'
h En nuestras hipótesis, otras lógicas existen y se expresan en la Argentina actual//   In our hypothesis, other logics exist and clitic=express in the Argentina contemporary
'In our hypothesis, there are other logics and they are expressed in contemporary Argentina'
i y poseen niveles diferentes de formulación y sistematización como cultura.///   and have levels different of formulation and systematization as culture.///
'and have different levels of formulation and systematization as a culture.'
j No expresan necesariamente una forma organizada y prefigurada de malestar,//   Ø not express necessarily a form organized and foreshadowed of unease
'They don't express necessarily an organized and foreshadowed form of unease'
k sino una predisposición a la desobediencia frente a él.///   but a predisposition to disobedience behind it.///
'but a predisposition to disobedience behind it.'
l Sólo la investigación puede desentrañar su lógica.///   Only the research can figure out its logic.///
'Only the practice of research can figure out its logic.'
m La acción directa en el campo de la reflexión, sin la mediación empírica,   The action direct in the field of reflection, without the mediation empiric,   se torna insuficiente para su abordaje.///   clitic=become insufficient to its approach.///
'The direct action in the field of reflection, without empiric mediation, becomes insufficient to its approach.'

Excerpt (6) presents a problem related to the challenges that the field opens up for research. These challenges are introduced together first (clause a) and then treated one by one (clauses b to e and f to m). The complete fragment enacts the discussion between two positions: the voice of the author and the voice of other researchers. In the analysis of the Excerpt, the introduction of the voice of others is signalled in bold + underlined; their position is underlined. The author's position is in italics, and the introduction of his voice in bold. The other researchers' position is denied (bold + double underline) and conjunctions (bold + special underlined) are utilised to announce a counter position by the author of the paper. These resources produce the effect of rejection of the propositions previously stated in the field and their replacement by the author's proposition by proclaim (clauses e to f and m), closing down the space for negotiation. At the end of the Excerpt (clause m), a resource of APPRECIATION (bold + italics), from the subsystem of ATTITUDE, is used to explicitly appraise negatively the position of others in the field in terms of valuation of the research (Martin and White, 2005: 56). This resource reinforces the contraction.

(6)   Ahora bien, dos desafíos investigativos se abren aquí.///

Uno de ellos consiste en preguntarnos por la sociogénesis de las condiciones para la materialización de esta cultura en la práctica.///

Una tesis recurrente otorga el poder al cuerpo de delegados, por la situación neurálgica del subte en el transporte urbano.///

[COUNTER-EXPECTATION] **No obstante**, esta relevancia **no** puede explicarnos un elemento variante en el tiempo.///

Un análisis de la secuencia causal del proceso de privatización del Subte, cambio de composición social y cultural de la fuerza de trabajo, estrategias de distintos destacamentos políticos, crisis de la estructura sindical, cambios en el Gobierno y contexto político, deben ser analizados en sus mutuas implicaciones.///

§

*Por otra parte, **debemos advertir**//*

que sólo estamos ante la presencia de una de las lógicas de la acción directa: la de una cultura [[radicalizada en la transformación progresiva de las condiciones de trabajo]].///

***En nuestras hipótesis**, otras lógicas existen y se expresan en la Argentina actual//*

y poseen niveles diferentes de formulación y sistematización como cultura.///

<u>No</u> expresan necesariamente una forma organizada y prefigurada de malestar,//

*[COUNTER-EXPECTATION] **<u>sino</u>** una predisposición a la desobediencia frente a él.///*

Sólo la investigación puede desentrañar su lógica.///

*La acción directa en el campo de la reflexión, <u>sin la mediación empírica</u>, se torna **insuficiente** para su abordaje.///*

Excerpt (6), then, shows clearly by deploying resources of proclaim, deny and counter-expectation how in a discipline like Sociology the voice of the author discusses with other voices in order to persuade the reader of his own position. In the dialogue between the voices in the field, the author acknowledges the existence of different positions about the issue approached and then contracts the dialogic space by presenting deny and counter-expectation and by proclaiming his position. It means, in terms of Bernstein's theory (1996; 1999), that a new language is introduced into the field to challenge other languages previously stated. It is possible to suggest from this that Sociology is a discipline with a horizontal knowledge structure.

In the article (S02), the author negotiates with several voices. A fragment of the discussion is Excerpt 7, translated in Table 7 below.

Table 7
Translation of Excerpt (7).

a Los resultados encontrados   permiten afirmar //   The results   found   allow to affirm//
'The found results allow to affirm'
b que   no se puede considerar   al cuerpo de profesionales   como un bloque homogéneo,//   that not clitic=can consider   the body of professionals as   a block homogeneous,//
'that the body of professionals cannot be considered to be an homogeneous block,'

c sino que   en su interior   se visualizaron
  but that inside   clitic=visualised
  una diversidad de posturas teóricas,   concepciones, prácticas y   posicionamientos,
  a   diversity   of postures theoretical, conceptions,   practices and positioning,
  en relación con la   práctica profesional en general
  in reation to the practice professional in general
  y   en el abordaje de la violencia contra la mujer en particular.
  and in the approach of the violence against the woman in particular.

'but that inside a diversity of theoretical postures, conceptions, practices and positioning related to the professional practice in general and to the approach of the violence against women in particular are visualised.'

Excerpt (7) begins with the author presenting the findings of the research as evidence for the claim he makes as projection of his own voice, using the resource of proclaim of ENGAGEMENT (bold). In the content of the projection, the author selects a pairing of deny (bold + double underlined) plus counter-expectation (bold + special underlined), in order to reject a conceptualization (underlined) that is probably extended and shared by the specialized reader construed in the text, and so proclaims by counter-expectation his interpretation of the findings of his own paper (italics).

(7)   **Los resultados encontrados permiten afirmar**//

      que <u>no se puede considerar al cuerpo de profesionales como un bloque homogéneo</u>,//

      [COUNTER-EXPECTATION] **<u>sino que</u>** *en su interior se visualizaron una diversidad de posturas teóricas, concepciones, prácticas y posicionamientos, en relación con la práctica profesional en general y en el abordaje de la violencia contra la mujer en particular.*

In Excerpt (7), the same purpose shown in Excerpt (6) is pursued by the author: to persuade the audience of his own position, this time proclaimed with the support of the evidence provided in the research. The rejection of the position of another probably established interpretation of the readers shows the contradiction of different positions around the issue that is approached: the degree of agreement among health professionals about how to treat violence against women. The author contracts the space for negotiation, closing the possibility of disalignment with his own

interpretation of the issue. Resources of proclaim and deny plus counter-expectation and the way they construe a rejection of other voices contributes to the consideration of this fragment as an example taken from a discipline with horizontal knowledge construction.

Table 8 below, shows the translation of Excerpt (8), a fragment of the same paper (S02).

Table 8
Translation of Excerpt (8).

a	Como se señaló en el grupo del tipo tradicional,// As clitic=indicated in the group of the type traditional,//
	'As was indicated, in the group of the traditional type,'
b	se deslizan posiciones [[que remiten a explicaciones etiológicas clitic=slip in a remark positions [[that refer to explanations aetiological [[basadas en rasgos de personalidad o en estructuras psicopatológicas, [[based in features of personality or in structures psychopathological tanto de la víctima como del victimario]]]]./// such of the victim as [of] the aggresor]]]].///
	'positions that refer to aetiological explanations based in features of personality or in psychopathological structures such of the victim as of the aggressor are slipped in a remark.'
	§
c	Desde esa perspectiva, el hombre violento es agresivo// From that perspective, the man violent is aggressive//
	'From that perspective, the violent man is aggressive'
d	porque bebe, se droga o ha perdido el empleo./// because Ø drinks, clitic=gets in drugs or has lost the employment.///
	'because he drinks, gets in drugs or has lost his employment.'
e	En cambio, la mujer puede ser vista, incluso, como provocadora de la violencia:// On the other hand, the woman can be seen, even, as agitator of the violence://
	'On the other hand, the woman can even be seen as violence agitator:'
f	ya sea porque se le endilga el mote de masoquista// either because clitic=clitic=land with the nickname of masochistic//
	'either because she is landed with the nickname of masochistic'
g	o porque se considera// or because clitic=consider//
	'or because it is considered'
h	que reproduce situaciones de una familia de origen disfuncional. that reproduce situations of a family of origin dysfunctional.
	'that she reproduce situations of a family with a dysfunctional origin.'
	§
i	Frente a estas representaciones es de destacar sin embargo,// Responding to these representations Ø is of highlight, however,//
	'Responding to these representations it is for highlighting, however,'

j	que la mayoría de los estudios en el tema muestran
	 that the majority of the studies about this topic show
	 [[que la incidencia de trastornos mentales entre los agresores
	 [[that the incidence of disorders mental among the aggressors
	 no es mayor que [[la que se observa entre la población en general]]]];//
	 not is greater than [[wich clitic=observed among the population in general]]]];//

	'that the majority of the studies about this topic show that the incidence of mental disorders among the aggressors is not greater than which is observed among the general population.'
k	y, de igual modo, el abuso de sustancias, <<más que ser la causa de la violencia>>, and, in the same way, the abuse of substances, <<more than being the cause of violence>>, contribuye a facilitarla o se transforma en una excusa atenuante (Corsi, 1997: 47)./// contributes to facilitate=clitic or clitic=transforms in an excuse mitigating (Corsi, 1997: 47).///
	'and, in the same way, substances abuse, more than being the cause of violence, contributes to facilitating it or it is transformed in a mitigating excuse (Corsi, 1997: 47).'

The first part of (8) (clauses a to h) presents the representations of health professionals about the violence suffered by women that have been hospitalised. The author mentions only the position of what he calls the "traditional" group of professionals. These opinions come from the field of the study, as this consists in an ethnographical research.

The author introduces the voice of the traditional group (bold) to project their position. The content of the representations (underlined) are introduced by processes (bold + italics) that realise attribution with the option of distance ("***se deslizan***", "***puede ser vista***", "***se le endilga***", "***se considera***") This means that the author, although acknowledging this position, rejects it (Martin and White, 2005: 113).

(8)   Como se señaló **en el grupo del tipo tradicional,**//

se deslizan posiciones [[que remiten a explicaciones etiológicas [[basadas en rasgos de personalidad o en estructuras psicopatológicas, tanto de la víctima como del victimario]]]].

§

Desde esa perspectiva, el hombre violento es agresivo//

porque bebe, se droga o ha perdido el empleo.///

En cambio, la mujer *puede ser vista*, incluso, como provocadora de la violencia://

ya sea porque *se le endilga* el mote de masoquista//

o porque *se considera*//

que reproduce situaciones de una familia de origen disfuncional.

§

Frente a estas representaciones **es de destacar**, sin embargo,//
que **la mayoría de los estudios en el tema** *muestran* [[*que la incidencia de trastornos mentales entre los agresores* **no** *es mayor que [[la que se observa entre la población en general]]]];*//

*y, de igual modo, el abuso de sustancias, <<**más que** ser la causa de la violencia>>, contribuye a facilitarla o se transforma en una excusa atenuante* (Corsi, 1997: 47).

In the rest of the Excerpt (8), the author states his position, first proclaiming by pronounce (**es de destacar)** and then by endorse, introducing the reference to other researchers by projection (bold + underlined), giving as proof other researchers' findings in the field (***muestran***) (Martin and White, 2005: 126–127). Then, the authorial voice is aligned with a group of these authors, not mentioned explicitly ("**la mayoría de los estudios**" *the majority of the studies*), and with another who is introduced by a non-integrated reference ("(Corsi, 1997: 47)"). In this way, his position is shared with an apparently important body of representatives of the discipline. The content of the projection discusses with the voices of the "traditional group" and perhaps other voices from common sense, using resources of deny (bold + italics + double underlined). What the author is denying −aligned with the voices of other researchers in the field- is a reformulation of the traditional group position.

Example (8), then, strongly rejects the position of voices from the field of study (Hood, 2010) by the use of distance, proclaim and deny, from the system of APPRAISAL, subsystem of ENGAGEMENT. The main resources are the type of processes chosen for the projections of attribution, which construe distance between the author's position and the other voices, and denials of reformulations of the statements of the traditional group of professionals that respond to the survey. The resource of proclaim contracts the space for negotiation, looking strongly for the alignment of the readers. This time, voices from the field of research (Hood, 2010) are invoked to support the author's position by endorse. In this negotiation of voices in dialogue, then, the author first acknowledges the existence of previous positions from which the authorial voice distances and then proclaims his own voice supported by other researchers. This negotiation tends to contraction and shows that Sociology is a discipline of horizontal knowledge construction, due to the strong rejection of other voices that can represent not only common sense but also some old fashion interpretations of the phenomenon in the field. The new voice stands as hegemonic.

The last example (Excerpt 9), from (S04) is translated in Table 9.

Table 9
Translation of Excerpt 9.

a	Tanto las tendencias observadas en las tasas de fecundidad adolescente As much the tendencies observed in the rates of fertility adolescent como en el volumen de nacimientos de madres de ese grupo de edades muestran as in the volume of births from mothers of this group of ages show [[que las noticias sobre un aumento constante de la maternidad en la adolescencia no son fundadas]]./// that the news about an increase constant of the maternity in the adolescence not are well founded
	'As much the observed tendencies in the adolescent fertility rates as well the volume of births from mothers of this group of ages show that the news about a constant increase of the maternity in adolescence are not well founded.'
b	Sin embargo, esto no significa However, this not means [[sacar esta temática de la agenda de políticas sociales y de salud]],// [[taking off this topic from the agenda of policies social and of health]],//
	'However, this doesn't mean taking off this topic from the social and health policies,'
c	como queda claro a partir de los resultados obtenidos, as Ø remains clear from the results obtained, [[que resumimos a continuación]]./// [[that are synthesised right after]].///
	'as it remains clear from the obtained results, that are synthesised right after.'

In this text, the author proclaims (bold + underlined) his position about the phenomenon that is the topic of the article: adolescent maternity. He does it using the data construed in the paper as evidence, and rejects by deny (bold + double underlined) a generalized position in the field: the increase of the affected population (underlined). Immediately, by counter-expectation, rejects also a possible interpretation of his proclaim, which has the effect of pointing out the need of social and health policies (underlined). At the end of the paragraph, the author reinforces the dialogic contraction, by using again the findings of the work as evidence (bold + dash underline).

(9)   **Tanto las tendencias observadas en las tasas de fecundidad adolescente como en el volumen de nacimientos de madres de ese grupo de edades muestran** [[*que* las noticias sobre un aumento constante de la maternidad en la adolescencia **no** *son fundadas*]].///

[COUNTERESPECTATION] **Sin embargo**, esto **no** significa [[sacar esta temática de la agenda de políticas sociales y de salud]],//

como queda claro a partir de los resultados obtenidos, [[que resumimos a continuación]].///

Again, Excerpt (9) shows how the author rejects other voices in the discipline, as well as a possible interpretation of his proclaim, based in the results obtained in the research. This example, then, reinforces the interpretation of Sociology as a discipline of horizontal knowledge construction.

The examples from discussions of research articles in Sociology tend to show a very different pattern than that of Microbiology. They give evidence of different degrees of negotiation with the audience in order to persuade it about the position construed by the author about the topic addressed.

The linguistic resources chosen (proclaim, deny, deny plus counter-expectation, different kind of projection, all from the subsystem of ENGAGEMENT of APPRAISAL) contribute to this purpose. The author relies in the data construed in the research to establish a position and brings different voices from the field of research or from the field of the object of study (either voices from ethnographic data or from generalized common sense) to reject them. The dialogue of different positions, then, tends to dialogic contraction, in order to persuade the audience about the author's interpretation of the phenomena. So that these examples allow showing the construction of segmented knowledge, in which different positions dispute hegemony (Bernstein, 1999: 163—165).

The negotiation with different voices made by the author is conducted by the development of a "gaze" which interprets "the reality" (Bernstein, 1999: 165). This gaze is supported in the discussions analysed by the data produced in the paper and by the interpretation supported by other coincident studies, which are referenced explicitly or implicitly in the text.

This analysis supports, then, the proposition that the discussion section of research articles in Sociology produces horizontal knowledge construction, which supposes the existence of diverse interpretations of the phenomenon under study. These different positions emerge from the existence of different theories in the field as well as from common sense.

4. Final remarks

The purpose of this paper is to explore particular aspects of disciplinary difference in academic research writing in order to expand theoretically informed resources available for the support of academic literacy programs in Spanish. The study draws on Bernstein's sociology of knowledge, particularly his work on hierarchical and horizontal knowledge structures (Bernstein, 1996, 1999), and the linguistic theory of SFL, specifically the discourse semantic system of APPRAISAL, to illuminate different patterns of knowledge construction in two disciplines, in texts written in Spanish. The specific focus is on the discourse strategies employed in author's negotiations of their own findings with respect to other contributions to knowledge in their fields of research. The data constitute the discussion sections of research articles from the contrasting disciplines of Microbiology and Sociology.

Linguistic analyses revealed differences between the disciplines in the ways they deployed resources from the system of APPRAISAL, and how these different discourse strategies realised different patterns of interaction with other contributions to knowledge in their fields. In Microbiology, for example, resources of projection coupled with comparison contribute to building integration of the author's findings with other knowledge already construed in the field, while in Sociology, the proclaim of the author's position plus the couple of deny and counter-expectation result in the rejection of different voices projected from the field of the research or from the field of the object of study.

A final step of interpretation returns to Bernsteins' distinctions of hierarchical and horizontal knowledge structures and how they progress. The linguistic patterns in the Microbiology texts can be interpreted as building integration between new knowledge and knowledge already stated in the field, i.e. building a discipline of hierarchical knowledge structure. The linguistic patterns in the Sociology texts can be interpreted as presenting discussion of different languages disputing hegemony in a discipline of horizontal knowledge structure.

This study offers a contribution to an important and growing field of discourse studies in academic Spanish, and it is hoped that it might open up space for expanding our understanding of how variations in the discourses of disciplines reflect not just differences in specific fields of study, but importantly in the kind of underlying knowledge structure they enact.

Studies of this kind can also contribute valuable support for those engaged in supporting the development of Spanish academic literacy programs in higher education. In order to helping students to developing discourse of disciplines, it is very

important to show them how discourse semantic resources contribute to construe knowledge in different disciplines, especially in the discipline under study.

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