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DISCIPLINARY CULTURES IN ACADEMIC POSTERS
A textual and visual metadiscourse analysis

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Abstract – Numerous studies have, over the years, confirmed that academic discourses have unique features revolving around the concept of 'community' (Hartley 2006; Hyland 1998, 2001, 2004; Swales 2004; Thompson 2001), revealing that authors belonging to different disciplinary fields display different writing techniques and are urged early on in their academic career to conform to discipline-specific conventions and genre-specific rules. Continuing a cross-disciplinary research on the academic poster genre (D'Angelo 2016), I seek here to highlight significant differences regarding word count, the layout of posters, as well as discipline-specific patterns concerning the use of textual interactive and interactional metadiscourse resources and visual interactive resources. The framework of analysis, drawn in part from Kress (2010) and Kress and van Leeuwen's (2001, 2002, 2006) visual analyses, will be applied to academic posters produced within the disciplines of Applied Linguistics, Medicine, Economics, Biology and Geography. The results widen the current knowledge on academic posters by mapping which textual and visual metadiscourse strategies are employed where and why, and as a consequence, which textual and visual metadiscourse strategies should be well known to poster authors, depending on their academic community.

Keywords: metadiscourse; academic poster; visual analysis; textual analysis.

1. Introduction

The academic poster represents one of the first academic genres a student or young researcher is asked to master, whether individually or within a research group presentation. Apparently simple to create, the academic poster hides, in reality, some difficulties that render the task overwhelming at times and can lead to a series of embarrassing trials and misses. It is indeed an academic genre that is mastered over time, by paying attention to details and by carefully chiseling all of its components: the textual element, the visual components and the oral presentation and defense. When we work with posters, in fact, we work with a genre that does not have one single mode of use and certainly does not follow a rigid structure as, for example, the research article. Numerous definitions of what a poster is and what it entails are available nowadays online, such as the following: "a poster presentation consists of a visual display of research highlights on a fiberboard background combined with an interpersonal question and answer period" (IKDS2015, American Heart Association).

It is the 'interpersonal question and answer period' that renders the poster a genre of its own, differentiating it from paper and PowerPoint presentations, as well as plenaries. Therefore, the academic poster can be considered a multimodal communicative event, where not only text and images play a role, but also graphics, color, speech and even gesture all collaborate in conveying meaning. Because each single element present in the poster can also be found in other academic genres, we can borrow Bhatia's (2004, p. ix)

view of 'hybrid (mixed or embedded) forms of genres' and define the academic poster genre as a typical example of 'hybrid' academic product.

There is no doubt that the academic poster is often met with mixed reviews from both participants and viewers because of several physical limitations, (e.g., the often limited time and space to showcase posters, as well as the limited space that a poster makes available to authors, restricting the amount of text displayed), and the fact that still today certain research genres, the academic poster being just an example, are valued more or less depending on the discipline (Swales/Feak, 2000; Swales, 2004). Poster sessions, however, provide an important place, within the wider conference arena, where academics can showcase their work, present partial if not final results, can engage in precious networking as well as practice their oratory skills (Swales, 2004). For students and researchers that have just entered the academic world, it is undoubtedly a challenging, but formative experience. An experience that forces them to quickly learn how to produce effective linguistic, verbal and visual elements and most of all, leads them to eventually comply to the unwritten rules and conventions of a particular discipline (D'Angelo, 2016). This is an interesting aspect of posters: although their main aim is to inform and persuade readers, they also allow the author a certain amount of creativity, all the while lacking precise and universally accepted poster guidelines. As Miracle (2003) noticed, thanks to the Internet, there is now a great variety of material searchable online addressing issues in poster design and presentation. These guidelines provide easy-to-use information, which aids authors, even inexperienced ones, in presenting discourse clearly and coherently. For example, Online forums and websites such as Better Posters (Faulkes, 2015), Pimp my Poster (Purrington, 2014), the AALS Poster Project (Miller, 2013) and the *Online Journal of Scientific Posters* all gather and display posters presented in different disciplines, mostly within the hard sciences.

These collections of posters, tips and first-hand experiences of poster designers, in most cases, indicate that poster should not only be creative, but also informative and persuasive. Already in the early 1990s, researchers realized that the poster genre required numerous artistic and stylistic skills from authors and that it is not a genre to be taken lightly. Matthews (1990) for example describes the process of poster design as a detailed process that requires the researcher to act not only as a writer but also as an editor and a graphic designer who must be able to condense the message and render it appealing, all the while displaying functional visual elements that aid communication. This process is meant to render complex information easily accessible by readers, a task that is very difficult to carry out (Tufte/Graves-Morris, 1983). These online resources are certainly a valuable resource because they represent a varied pool of data and a point of reference for the novice poster designer who asks him/herself for the first time what a poster is and what it should look like.

Unfortunately for a long time, it was unclear whether certain academic poster rules and conventions were discipline-specific. Are posters in the hard sciences similar to the posters in the so-called soft sciences? Are there any unspoken rules and conventions that recur within single disciplines and should, therefore, be openly known to novice academics? These are the questions that were answered in previous linguistic and visual studies concerning conference posters (D'Angelo 2012, 2016). A corpus collecting posters from three different academic fields (Particle Physics, Law and Clinical Psychology) was specifically created, allowing a consistent analysis of the genre to be carried out. The present research has added to the current knowledge of the vision-language interaction present in academic posters, by analyzing five more disciplines that span through the soft/applied/hard sciences spectrum, hence expanding the already existing corpus.

The present paper thus presents an intra-disciplinary analysis of academic posters, considering the text and visuals that posters display, depending on the discipline within which they are created. The study, in particular, records and classifies the most common textual and visual strategies employed by poster designers across disciplines. Because the academic poster is a multimodal genre, different modal aspects had to be taken into consideration when analyzing it, a fact that somehow complicated the genre analysis conducted and demanded the creation of an ad hoc framework of analysis, capable of classifying the linguistic and visual resources utilized by poster designers.

2. Methodology

Given the motivations above, the main aim of this paper is to investigate which textual and visual reader-oriented strategies are commonly employed in poster in different academic disciplines, i.e. which visual and textual elements displayed on posters help readers comprehend the content of presentation better and follow the discourse, feeling engaged in the presentation.

To explore this aspect of academic presentations, a corpus of 150 posters gathered from five disciplines has been compiled and analyzed linguistically as well as visually. Thirty posters have been randomly gathered from the following disciplines: Biology, Medicine, Geography, Applied Linguistics and Economics. I wished the corpus to represent a wide spectrum of knowledge domains, which sees a divide between hard, soft, and applied sciences (Becher/Trowler, 2001; Hedges, 1987; Smart/Elton, 1982; Stoecker, 1993; Storer, 1967), although the distinction between hard, social, and soft sciences has been a debated topic for centuries and is still a problematic aspect to consider when selecting fields of study for linguistic analysis. Taking these views into account (Becher/Trowler, 2001; Hyland, 1999; Kertesz, 2001; Stotesbury, 2003), I considered the hard/soft/applied distinction as a continuum rather than as a one-dimensional scale, in which Biology is the 'hardest' of the subdisciplines chosen, Medicine and Geography stands midway, within blurred demarcations, and Applied Linguistics and Economics representing here the 'softest' disciplines.

Because a poster displays not only text but also numerous visual elements, two frameworks of analysis have been applied. For the written text, Hyland's (2005) theoretical approach to metadiscourse interpretation has been utilized, which distinguishes between interactive and interactional resources, whereas for visual elements a descriptive framework has been adapted from Kress/van Leeuwen, (2006) and then applied to the posters collected. The metadiscourse model (Hyland, 2005, p. 49) summarized in Table 1 relies on a theoretical approach that considers the way authors refer to texts, as well as to themselves and their audience. This model is based on Thompson and Thetela's (1995) early model of metadiscourse, which distinguishes between interactive and interactional resources (Hyland, 2001a; Hyland/Tse, 2004). Although Hyland's (2001a) model is heavily influenced by Thompson and Thetela's theoretical framework, it provides linguists with a more detailed framework of analysis that also includes stance and engagement features (Hyland, 1998a, 2000, 2001a, 2005). In the present research, textual metadiscourse markers were categorized as either *interactive* or *interactional* (qualitative analysis) and single instances (raw frequencies) were counted to determine the different levels of textual modality in posters (quantitative analysis). Raw frequencies are accompanied by normalized frequencies (per 1000), and the quantitative and qualitative analyses have been based on both automatic and manual searches.

CATEGORY	FUNCTION	EXAMPLES
Interactive	***Help to guide the reader through the text***	***Resources***
Transitions	Express relations between main clauses	In addition; but; thus; and
Frame markers	Refer to discourse acts, sequences or stages	Finally; to conclude; my purpose is
Endophoric markers	Refer to information in other parts of the text	Noted above; see Fig; in section 2
Evidentials	Refer to information from other texts	According to X; Z states
Code glosses	Elaborate propositional meanings	Namely; e.g.; such as; in other words
Interactional	***Involve the reader in the text***	***Resources***
Hedges	Withhold commitment and open dialogue	Might; perhaps; possible; about
Boosters	Emphasize certainty or close dialogue	In fact; definitely; it is clear that
Attitude markers	Express writer's attitude to proposition	Unfortunately; I agree; surprisingly
Self-mentions	Explicit reference to author(s)	I; we; me; our
Engagement markers	Explicitly build relationship with reader	Consider; note; you can see that

Table 1
Hyland's (2005, p. 49) model of metadiscourse.

As explained previously, the academic poster is a multimodal genre that is capable of simultaneously employing three different components: the written, the visual and the spoken components. In the present research only the written and visual components are analyzed, but to do so, we need to apply a framework of analysis that is capable of understanding how the different written/visual parts present on a poster are somehow capable of creating meaning together or, as Kress and van Leeuwen's (1998) explain, to create semantic relations. Each semiotic mode does it differently, but the semantic result is the same. For example, we can express the idea of an 'action verb' (e.g. *look*, *read*, *see*, *consider*) by using a visual element such as a 'vector' (e.g. an arrow or line) pointing at or connecting something. In this way, we can express with images what we usually express through writing and vice versa. In other cases, this is not possible. Because of this, the relationship between images and text can be seen as complementing each other, but at the same time, the two semiotic codes can work independently (Kress and van Leeuwen, 2006). Because text and pictures are semantic codes that sometimes are not interchangeable, to carry out a complete analysis of posters, the researcher should consider both semiotic codes at the same time, focusing on how they work together for meaning-making purposes.

Drawing from Halliday's theories, Kress and van Leeuwen (1996, p.13) believe that visual elements are used to fulfil three main functions: "an 'ideational' function, a function of representing 'the world around and inside us' and an 'interpersonal' function." The idea is that if interactive and interactional forms can be found in the text of academic posters, we can also search for those visual components found in posters, which play a similar semantic role. Kress and van Leeuwen (1996, 2006) and Kress' (2010) framework of analysis can thus be applied to academic posters to categorize which visual elements play an interactive role.

With Kress and van Leeuwen's (1996, 2006) concept in mind, a framework of analysis has been devised to classify *visual interactive resources*. Much like Hyland's interactive metadiscourse elements found in texts, authors of posters could, in fact, use visual interactive elements to organize the flow of information and help the viewer in the

comprehension of the multimodal text. As shown in Table 2, visual interactive resources are constituted by the following related systems: *information value*, *framing*, *connective elements*, *graphic elements* and *fonts*. The elements found in the central column are drawn from Kress and van Leeuwen's (1996, 2006) and Kress' (2010) visual analysis of images, but they have been grouped into different categories, depending on the interactive function they enact, that is, how they help organize discourse in academic posters. The interactive visual components of posters were identified (qualitative analysis), and each poster was considered having binary features (+F/-F) (e.g. frame lines/no frame lines; vectors/no vectors; pictures/no pictures). To calculate the level of visual modality in posters (quantitative analysis), positive single binary features were added (e.g. frame lines + vectors + pictures).

CATEGORY	**Subcategory**	**Function**
INTERACTIVE RESOURCES	*Achieved through*	
Information Value	- Left- Right - Top-Bottom - Left – right + top- bottom - Centre-Margin - Triptych	Organize the layout of information in a poster
Framing	- Frame lines - Color contrast - Empty space between elements	Distinguish sections of text
Connective Elements	- Vectors - Repetition of shapes - Repetition of color - Alignment	Connect ideas and parts of visual and textual discourse
Graphic Elements	- Conversion processes - Taxonomies - Flowcharts - Networks - Tables - Figures (pie charts, graphs) - Pictures - Schematic analytical Pictures	Clarify and organize data for the viewer, aiding the immediate retention of information
Fonts	- Type - Size - Color	Enhance legibility; Help clarify parts of discourse, highlighting the most important parts of the text; Clarifies the organization of text

Table 2
Visual interactive resources (drawn from Kress/van Leeuwen, 1996, 2006, and Kress, 2010).

3. Results

If one looks at the size of the five subcorpora under study, a number of important characteristics emerge. First, based on a simple word count we see that Geographers are the 'wordiest' authors of the entire corpus, followed by Economists and Biologists.

Doctors and Linguists instead have been found to write less than their colleagues (see Table 3 below).

Discipline	*Total number of words per subcorpus*	*Average N° of words per poster*
GEO	26868	890
ECO	26693	890
BIO	26432	845
MED	20974	699
LIN	20030	668
TOT.	**120997**	

Table 3
Total number of words contained in each subcorpus and average number of words per poster, depending on the discipline.

It is now clear that academic posters display different amounts of text depending on the discipline and that differences exist between disciplines in the humanities, the applied sciences, and the hard sciences. It is also clear that the numerous posters that appear on the Internet and are most often produced and distributed by writing centers and department staff do not apply to (or are not respected by) all disciplines alike. What in a research article can be described, explained, and debated in several pages, in a poster must be condensed in the limited amount of space set by conference organizers. Online poster guidelines (Block, 1996; Woolsey, 1989), repeatedly recommend to wisely use the limited space available by not inserting too much text and even the poster rules published by the American Psychological Association declares that a poster should display no more than 800 words (APA Poster Guidelines, 2009). The fact that posters too often display excessive text is stressed by Stoss (2003), a Subject Specialist in the hard sciences and a Reference Librarian with many years of experience in helping students prepare for poster presentations:

> The poster is NOT the pasting of a scholarly article on poster board or foam-core and standing by to defend results reproduced in miniature on the poster. However, it is far too often that one attends a conference poster session and finds this format to dominate the method of poster presentations. The poster may be closer to "an illustrated abstract" (Hess and Liegel 2000) written large and put on display.

Briscoe (1996, p. 136), the author of a well-known manual that teaches researchers in the hard sciences how to prepare better posters and presentations, goes as far as stating that

> It takes intelligence, even brilliance, to condense and focus information into a clear, simple presentation that will be read and remembered. Ignorance and arrogance are shown in a crowded, complicated, hard-to-read poster.

Geographers and Economists, however, prefer 'crowding' the poster with text disregarding the numerous guidelines commonly found online and provided by writing centers. Doctors and Linguists are instead briefer when it comes to writing the text for a poster, and they use shorter, less articulated sentences. This suggests the idea that when

dealing with the poster genre, these academics use a different style than they would usually do with other genres, using visual elements besides the text, to guide the reader through the content displayed. In fact, in a number of Medicine and Linguistics posters collected for the present study, the use of the text is very limited, and the concept developed around the poster is presented with the aid of one or more pictures, figures or schematic analytical figures. The reason why different disciplines portray different amounts of text ultimately lies in those untold rules and conventions that pertain to every single discipline present in the academic world. What is allowed and what is not is established within poster sessions that are discipline specific.

If we look at the text itself we can see (or not) the will of the author to render the text more or less legible, more or less comprehensible and immediately retainable by readers. As Hyland (2005, p. 44) explains, a writer deliberately decides whether to signal or not, in different ways, the organization of a text thanks to textual interactive resources

> This influences the 'reader-friendliness' of a text and primarily involves the management of information flow, addressing how writers guide readers by anticipating their likely reactions and needs (Hyland 2005, p. 44).

One might also assume that the amount of text produced influences the number of metadiscourse elements the author can utilize to guide the reader to achieve the comprehension of the text. This is actually not true, as the present analysis has found that textual interactive resources are not distributed evenly among the five academic fields considered and there is not a strong correlation between the size of the subcorpus and the number of interactive resources found (see Table 4 below).

Discipline	**Corpus size**	**INTERACTIONAL RESOURCES (n. of raw occurrences)**	**Normalized per 1000**
BIO	26432	367	13,8
ECO	26693	284	10,6
GEO	26868	262	9,7
LIN	20030	245	12,2
MED	20974	204	9,7
TOT	**120997**	**1362**	**56**

Table 4
Total number of interactive resources per subcorpus.

Biology posters, for example, contained the largest number of textual interactive resources, followed by Applied Linguistics posters. In particular, a high number of figures is mostly found in Biology and Economics posters, and are for transitions, evidentials, and endophoric markers, except for Applied Linguistic posters that make a great use of code glosses. The frequent use of code glosses (as well as frame markers) indicates that in this discipline authors demonstrate their expertise by constructing arguments in a clear and

detached way, with less face-threatening acts. Transitions are the metadiscourse resources most frequently used in discourse in general, and they have the important function of connecting ideas and sentences, guiding the reader in the unfolding argumentation. As we can see from Figure 1, transitions are wisely and frequently used mostly in Biology, Economics and Geography posters. Finally, the low number of evidentials found in Applied Linguistic posters seems to indicate that linguists generally dedicate a minimum number of words to acknowledge already known data from outside sources.

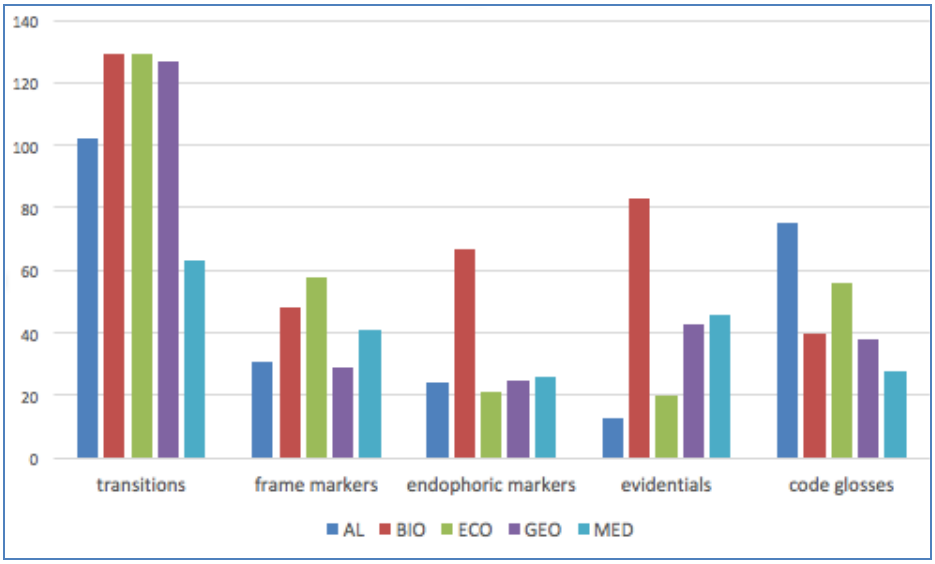

Figure 1
Distribution of textual interactive resources per subcorpus.

These results give us a strong indication of how a poster author in different disciplines decides to manage metadiscourse resources, thus constructing a relationship with the reader that is more or less collaborative. In fact, with judicious use of metadiscourse,

> […] a writer is able not only to transform what might otherwise be a dry or difficult text into coherent, reader-friendly prose, but also to relate it to a given context and convey his or her personality, credibility, audience sensitivity, and relationship to the message (Hyland 2000, p. 4).

Managing metadiscourse resources correctly is, in other words, the ability to relate to an audience in ways that they will expect and understand. It means creating texts that are easier to comprehend, more interesting, and more likely to create the desired response in the reader. It is the ability to turn a lifeless text into discourse that meets the needs of participants and facilitates communication and the spreading of knowledge (Hyland, 1998, 1999, 2005). Learning to master metadiscourse also means we can offer a credible and successful writing persona, who is capable of using the correct (and anticipated) forms of engagement and persuasion, thus establishing our point of view more persuasively. This research has shown that of the academic fields considered, Biology can mostly showcase efficient writers, capable of mastering interactive metadiscourse resources efficiently, followed by Economics and Geography, Applied Linguistics and finally Medicine, where we see that poster authors are the least reader-friendly of all.

Textual interactional resources are instead utilized to collaboratively engage the

reader in the development of the text. With textual interactional resources, authors can comment and evaluate material as well as understand the speaker's angle, i.e. his attitudes, motives and judgements (Halliday/Hasan, 1989). More importantly, Hyland (2005, p. 17) argues that

> […] while the phrasing and expressions writers use may sometimes seem 'automatic' or unconscious, all language use consists of making choices from a system of finite options. […] The decisions we make when interacting with others, whether to use an active or passive verb, a categorical or hedged assertion, a contrastive or additive conjunction, and so on, are therefore choices motivated by intentions to express certain meanings in specific situations (Halliday 1994).

The analysis carried out has found that in the corpus textual interactional resources appear, although in different degrees, depending on the discipline. Economics and Biology posters, in particular, have been found to display text that is dense with textual interactional resources. In comparison, Geography, Applied Linguistics and Medical posters have been found to use fewer textual interactional resources. In particular, the high frequency of boosters and self-mentions found in the Biology subcorpus indicates that within this discipline, authors of posters have more liberty to make bolder statements, draw conclusions, or argue for controversial positions (see Figure 2). The high frequency of engagement markers is also an important indication that Economists are the ones who mostly engage and involve readers through their posters. Engagement markers, in fact, enable authors to involve readers into the text and establish solidarity among scholars. Also, their frequent use of attitude markers is a clear sign that Economists are the authors who mostly show their persona in the text, not only by mentioning themselves but also by stating their ideas with emphasis. Biologists also register a high number of interactional markers, in particular hedges, boosters and self-mentions. In contrast, Doctors use fewer attitude markers, engagement markers and self-mentions, preferring a more impersonal and detached style, devoid of face-threatening utterances.

Discipline	**Corpus size**	**INTERACTIONAL RESOURCES (n. of raw occurrences)**	**Normalized per 1000**
ECO	26693	445	16,6
BIO	26432	384	14,5
GEO	26868	345	12,8
LIN	20030	247	12,3
MED	20974	198	9,4
TOT	**12097**	**1619**	**65,6**

Table 5
Total number of interactional resources per subcorpus.

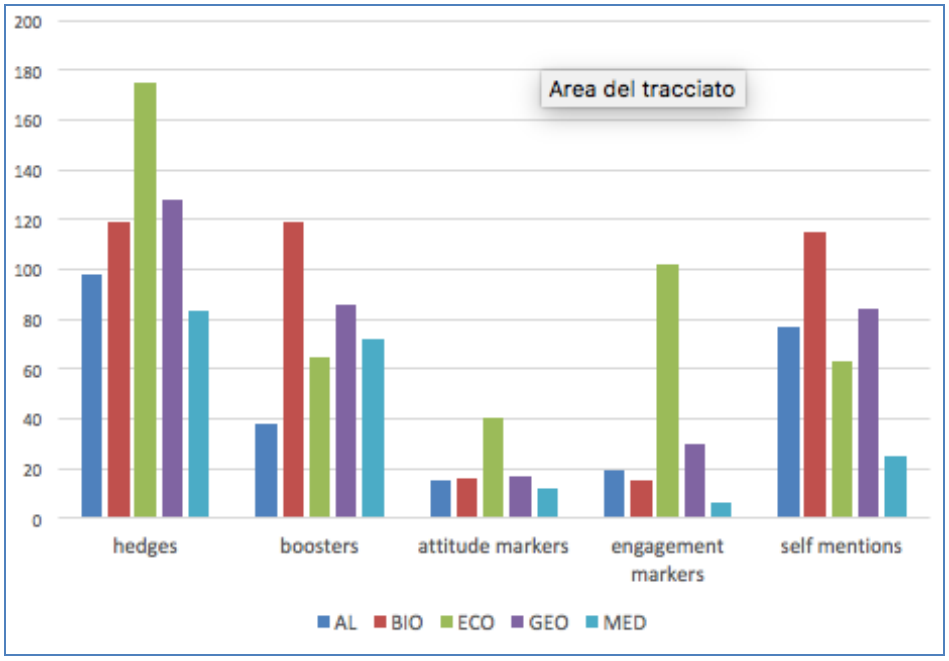

Figure 2
Distribution of textual interactive resources per subcorpus.

Before considering visual interactive resources found in the corpus, it is worth looking at the different use researchers make of the standardized IMRD (Introduction – Methodology – Results – Discussion) format, which appears in various academic genres. In the present research, each subcorpus has been analyzed individually, and significant differences have been found in the way posters are organised. In the Biology, Medical and Geography subcorpora almost all the posters collected follow the IMRD format, whereas, in the Applied Linguistic and Economic subcorpora, only about half the posters show a clear, standardized layout. In these cases, the reader is not guided by an IMRD format, often leaving the reader guessing how the discourse develops.

Visual interactive resources play a fundamental role in poster design because they help readers understand the content and manage the flow of information, making a poster easily understandable to the public. Creating a poster that is immediately comprehensible to readers is crucial because this genre is characterized by high visual competition: if the poster cannot be understood within the first few minutes, it will lose its audience. As mentioned before, Matthews (1990) and Tufte (1991) have underlined that in posters, like in PowerPoint presentations and handouts, visual presentation and graphics play a fundamental role in presenting research in a form that is easily understandable.

After researching the use of interactive visual resources that render a poster more comprehensible and well-organized, results have shown that there is no significant difference in the overall amount of visual interactive resources among the five subcorpora considered (see Figure 3). The discipline and subdisciplines considered have all been found to produce posters that use visual interactive resources, which successfully manage the flow of information. The fact that visual interactive elements are equally present in the five subcorpora considered underlines the idea that posters are designed first and foremost with the idea of communicating concepts in a clear and well-organized manner. Nowadays more than ever, academics are recurrently advised (by their peers as well as by guidelines found online) to achieve both coverage and clarity. This might explain why all authors

strive to produce posters that follow a precise format and content organization.

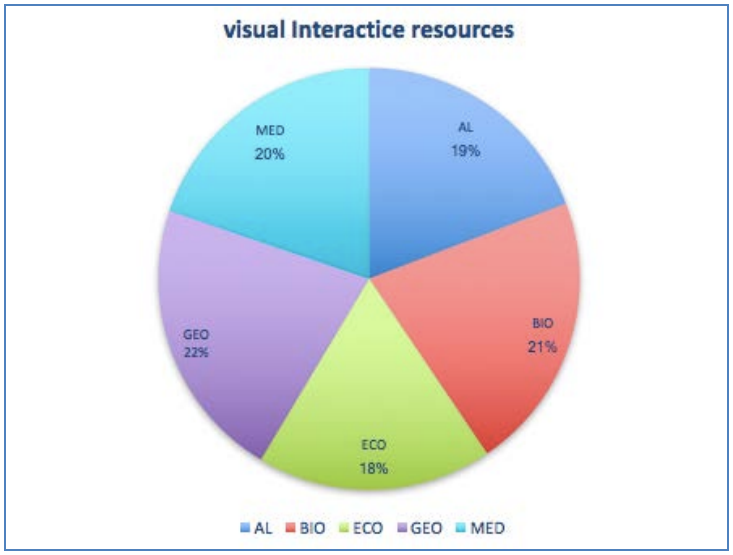

Figure 3
Percentage of visual interactive resources per subcorpus.

4. Conclusions

The social practices of academics can be uncovered by using a rich source of cross-disciplinary studies on academic genres. The concept of 'community' (Hartley 2006; Hyland 1998, 2001, 2004; Swales 2004; Thompson 2001;) in particular, has interested researchers working in this field and has led them to focus their attention on how genres are written, the feedback they receive and how these genres are used by community members. In particular, research on academic writing has studied different genres such as research articles, essays, theses, and plenaries; other minor genres such as conference posters, have instead received limited attention from researchers, and linguistic and semiotic analyses on this academic genre are still scarce and limited to guidelines published online by university departments and university writing centres (D'Angelo 2010).

This general lack of interest on the part of current linguists inevitably leads this genre to retain an invisible 'second-class status', compared to other more investigated genres. As Swales (2004) recognized, research genres are valued different according to the discipline and its participants. Also, as Hyland (2000) pointed out, depending on the discipline, members are required to engage in different kinds of arguments and communicate their research through different writing tasks: if PowerPoint conference presentations, for example, have become fashionable and increasingly common in almost every discipline, in the hard sciences conference posters are widely used already at undergraduate level (Bartsch/Cobern, 2003; LaPorte et al., 2002). Although a number of (sub)disciplines belonging to the Humanities, such as Law and Applied Linguistics, are slowly discovering the advantages of using posters as vehicles of scientific knowledge, for the most part, this versatile genre is still far from being widely and systematically included in conferences and workshops organized within the Humanities. Posters, however, no matter the discipline, can become an interesting and effective alternative to paper

presentations. Posters are capable of initiating discussions between presenters, all the while maintaining an informal setting. Because of this, poster sessions become an opportunity for networking, which is an important aspect of a researcher's career.

In the light of what has been said, the present investigation has hopefully clarified that also the poster genre can be said to reflect disciplinary conventions and interpretations. The result of this study, in particular, reveals which communicative strategies are employed in different disciplinary contexts, which communicative strategies (visual and textual) are allowed, and, finally, which communicative strategies should be taught to MA and PhD students, to ease their entrance in the academic community.

A word count revealed that Geographers and Economists are the 'wordiest' authors on posters of the entire corpus, followed by Biologists and Doctors and Linguists. Significant differences have been found in the layout of posters: a tendency not to use the standard IMRD format, thus displaying apparently disorganized posters, has been found in Applied Linguistics and Economics, whereas the Biology, Medical and Geography subcorpora can count almost entirely on posters with a clear organisation of content, that mostly utilize the IMRD format.

Concerning textual metadiscourse in posters, the analysis revealed that textual interactive resources are not distributed evenly among the five academic fields considered. Biology posters contained the largest amount of textual interactive resources, followed by Economics and Geography posters. Biologists can, therefore, be said to be more concerned than Linguists and Doctors with guiding the reader through the text and with making content highly accessible. Textual interactional resources are used in different degrees in the corpus depending on the discipline. Economics and Biology posters, once again, have been found to use a higher number of metadiscoursal elements, in this case, interactional markers. This gives authors a way to display text in a form that aids the comprehension of the reader. These posters, among a group of posters displayed at a poster session, would involve readers more, thanks to the large use of textual interactional resources. In comparison, Applied Linguistics and Medical posters have been found to use less textual interactional resources, thus involving the reader less.

Concerning the visual metadiscourse resources searched, the analysis revealed that visual interactive resources play a fundamental role in poster design because they help readers understand the content and manage the flow of information, making a poster easily understandable to the public. Poster designers in all five subcorpora have been found to produce posters that are comprehensible to their public, by using visual interactive resources that successfully manage the flow of information and interestingly, a disparity in the distribution of each type of resource has not emerged.

Having summarized the study's main findings and demonstrated that disciplinary preferences and conventions in poster design do exist, it is worth mentioning that this is a peculiar genre, subject to change and developments, triggered mostly by technological innovations. These technological innovations have an influence not only on the way posters are written and organized, but also on how they are presented (Bach et al. 1993; De Simone et al. 2001; MacIntosh-Murray 2007; Powell-Tuck et al. 2002). In this sense, the poster genre can be said to experience the changes that other academic genres also experience. It would be a mistake, in fact, to picture all genres as static and highly integral. They are actually very dynamic and they change depending on the context in which they are used (Berkenkotter/Huckin 1995; Bhatia 1997). Future textual and visual research on this genre should therefore carefully consider this fascinating although troubling factor.

A larger corpus that is not limited to the posters but also records poster presentations with video recordings carried out during conferences would also provide a

much richer source of data and numerous inspirations for genre-related research. For example, very interesting insights into spoken genres have emerged thanks to the analyses of data held in the British Academic Spoken English (BASE) corpus, at the universities of Warwick and Reading, and the Michigan Corpus of Academic Spoken English (Thompson 2001). One can expect to find only a rich soil for research in a corpus of academic poster presentations consisting of visual, textual, and spoken components, all complementing each other.

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