# Academic Posters Across Disciplines: A Preliminary Study

Larissa D'Angelo

Cross-disciplinary studies of academic genres are a rich source of information on the social practices of researchers. The concept of 'community' is particularly useful to account for how genres are produced, received and responded to by individuals acting as members of social groups. The present paper reports on a preliminary analysis of the main textual and visual elements of conference posters in different disciplines. In particular, it describes which communicative strategies are favoured, which are allowed and, finally, which should be known to aspiring authors seeking admission to the academic community. For this purpose, a corpus of 60 posters belonging to the disciplines of Psychology, Law and Physics was assembled and investigated both textually and visually, applying an analytical framework (D'Angelo 2010b) based on Hyland's (2000) approach to metadiscourse and Kress and van Leeuwen's (1998, 2001) analysis of visual content in the media.

#### **1. Introduction**

Cross-disciplinary studies of academic genres offer a rich source of information on the social practices of academics. In particular, a great deal of research has confirmed the distinctiveness of discourses cohering around the concept of 'community' (Hyland 1998, 2001, 2004; Thompson 2001; Swales 2004; Hartley 2006), thus making researchers more sensitive to the ways genres are written, used and responded to by individuals acting as members of social-disciplinary groups. In particular, research on academic writing has singled out such genres as journal articles, abstracts, book reviews, dissertations and conference proposals, while other genres have received limited attention. The latter group includes *conference poster presentations*, whose linguistic and semiotic features are extensively described only in the best-practice guidelines published by university departments and writing centres (cf. D'Angelo 2010b).

This general neglect on the part of linguists inevitably condemns the poster to secondclass status, compared to other more familiar genres. Swales (2004) argues that not all research genres have equal value in the eyes of disciplinary participants, and their value seems to change from one part of the research world to another. Moreover (cf. Hyland 2000), different disciplines value different kinds of arguments and set different writing tasks: for example, PowerPoint conference presentations have become increasingly popular in almost every discipline but it is in the hard sciences that posters are mostly used and valued. Although a number of disciplines belonging to the humanities (e.g. law and applied linguistics) are slowly discovering the many advantages of using posters as vehicles of scientific knowledge, this eclectic genre is still far from being widely and systematically employed in conferences and workshops in the humanities.

Within the hard sciences, posters play instead an important part in scientific conferences and constitute a valid and interesting alternative to paper presentations. By facilitating informal discussions between presenters and their audience, poster sessions provide an invaluable opportunity for networking – an important aspect of academic life, especially at the beginning of one's career. Also, compared to genres with more rigid structures, these academic works stand out for their lack of prescriptive guidelines, allowance for creativity and individuality, space for narratives and stories, and the goal to both inform and persuade. The present paper seeks therefore to partly fill this knowledge gap by investigating how discourse is presented in posters and what textual/visual reader-oriented strategies are most frequent, depending on the discipline to which they belong. Its preliminary data reveal which communicative strategies are favoured, which are allowed, and accordingly which should be employed by novice authors attempting to enter the academic community.

### 1.1. Special features of conference posters

The academic poster has evolved from more traditional genres, such as articles, conference visuals and handouts (Swales 2004: 16). Like research articles, posters need to follow a clear format and content organisation to ensure both coverage and clarity: in addition to a title/author label and abstract, successful posters generally provide brief introduction, method, subjects, procedure, results, and conclusions sections (cf. Alley 2003). At the same time, as in conference PowerPoint presentations and handouts, the visual presentation and graphics help to enhance a piece of research in a form that is easily noticed and stimulates discussion (Matthews 1990; Tufte 1990). A further useful concept when considering posters is the 'genre set' (Devitt 1991; Swales 2004) or hierarchy of genres, which sees the use of conference presentations limited to more expert scholars and posters mostly limited to junior scholars, working their way up what is perceived as a hierarchy of genres. For this reason, poster presentations are treated as a 'poor country cousin' (Swales & Feak 2000: 81) of oral presentations and retain an uncertain reputation:

The poster as a genre has been struggling to find a niche for itself as a viable alternative to the traditional conference presentation because in most fields it retains a second-class status. Although the APA now offers substantial prizes for the best student posters at its conferences, it is significant, I believe, that these are restricted to JR graduate student work. (Swales 2004: 64).

Space is another important consideration, as posters need to condense their content within a very limited amount of space. Most conferences provide 'Instructions for Posters' and assign an area of 4x6 or 4x8 feet. Such conciseness can be difficult to achieve, especially if a paper has been written before the conference. Guidelines thus urge presenters to write short or medium-length sentences, which are visually more effective. The use of compressed language is also recommended by Swales and Feak (2000). Bullet points and telegraphed wording can help to avoid a textually-dense layout; the fact that some posters are not adequately abbreviated is stigmatised by Stoss (2003: Introduction):

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". The poster may be closer to "an illustrated abstract" (Hess and Liegel 2000) written large and put on display.

An academic poster can thus be defined as a multimodal communicative genre, with text, graphics, colour, speech and even gesture used to convey meaning (Kress & van Leeuwen 2001). Also the fact that its content is displayed as a single visual unit distinguishes it from other academic genres. Because of its unique nature, the poster should therefore be analysed differently from other genres, applying more than one analytical framework to fully explain how its different parts contribute to successfully convey meaning.

# 2. Material and methods

A multimodal corpus of 60 conference posters belonging to the disciplines of Law, Physics and Psychology was constructed and subsequently analysed. The Physics posters were taken from CERN's LHCb (Large Hadron Collider Beauty Experiment) research database [http://lhcb.web.cern.ch/lhcb], which allows public access to posters presented at national and international conferences around the world. The (clinical) Psychology posters were

downloaded from an online journal of scientific posters [http://www.eposters.net] and an open repository of posters [http://posters.f1000.com]. The Law posters are from the Association of American Law Schools' website [http://www.aals.org], which publishes posters presented at AALS annual meetings.

The choice of disciplines represents a range of academic knowledge bridging the hard/soft sciences continuum (cf. Hyland 2000); their position between the two is illustrated in Figure 1. To better understand how this multimodal genre is perceived and valued by its users, a number of authors and academic staff in the three disciplines were also interviewed.<sup>1</sup>



Figure 1. Source domains within the disciplinary continuum.

The analysis was conducted using a framework specifically developed for this purpose (D'Angelo 2010b) following Hyland's (2000) well-known approach to textual metadiscourse interpretation, while Kress and van Leeuwen's semiotic work (1998) provided a basis for analysing the visual components of this genre. Textual metadiscourse can be divided into interactive resources (transitions, frame markers, endophoric markers, evidentials, code glosses) and interactional resources (hedges, boosters, attitude markers, engagement markers, self mentions). The same may be said for visual metadiscourse, as images can be read as text, applying the 'grammar' metaphor to their investigation. Its interactive resources organise information and guide the viewer's comprehension; they comprise several interrelated systems (information value, framing, connective elements, conversion processes, taxonomies, flowcharts and networks). Its interactional resources, used to attract and engage viewers, centre around the concept of salience, realised by such factors as contextualisation, representation, placement, contrasts, and use of pictures. The visual elements of posters were therefore assessed qualitatively and classified either as interactional or interactive; their number points to the salience of each option in the genre. Both manual and automatic searchers were performed for this purposed; for computer-based counts, Wordsmith Tools (Scott 2004) and .pdf document searching were employed. The results were then checked manually to rule out any non-relevant occurrences.

# 3. Physics subcorpus

# 3.1. Analysis of the texts

The Physics posters measured in total 13,350 words (667 per poster). Compared to the other disciplines considered, Physics authors are slightly more verbose, despite the advice in online guidelines not to exceed 500 words. The analysis conducted on these texts clearly indicates the prominence of textual metadiscourse, with a total of 105 instances (an average of 3.5 per poster):

<sup>1</sup> Although poster presentations include a spoken component (presenters verbally summarise its contents, pointing out salient elements and interacting with viewers), this was not taken into consideration. The focus here is on the poster's textual/visual elements and on how these are used to interact with the reader instead of verbal interaction.

Interactive	Occ.	%
Transitions	48	65.8
Frame markers	14	19.2
Endophoric markers	2	2.7
Evidentials	2	2.7
Code glosses	7	9.6
Total	73	

Interactional	Occ.	%
Hedges	5	15.6
Boosters	7	21.9
Attitude markers	5	15.6
Engagement markers	12	37.5
Self mentions	3	9.4
Total	32	

Table 1. Textual metadiscourse in Physics posters.

Physicists tend to use far more interactive than interactional features, the former being more than twice as frequent as the latter; interestingly, the same has been found for other genres (for books reviews, see D'Angelo 2008, 2010a). This may be due to the fact that interactional devices – which serve to address and engage the reader directly (for example, through first-person pronouns and questions) – are perceived as more face-threatening and are therefore used less often. Among the interactive devices, transition markers, frame markers and code glosses are the most frequent, whereas in the case of interactional devices, the most prominent are engagement markers and boosters.

Transition markers are the most common in discourse in general and act as bridges between the different parts of a text, helping the reader to interpret ideas as the writer wants him/her to understand them. The frequent use of code glosses and frame markers indicates instead that authors in this discipline demonstrate their expertise by constructing arguments clearly, and highlight the unfolding text in a less personal/challenging way. The following are examples of code glosses (1) and frame markers (2) in the text of Physics posters:

- (1) fmDST (femto-Data Summary Tape)
- (2) Starting from the Kali nTuple and for each cell:

1.6 histograms are filled (signal and background for 3 different energy cuts).

2. Each histogram is fitted with a combination of gaussian (for the peak) and 2nd order polynomial (for the background). This is an involved, several-step procedure:

- Parameters are fitted one by one
- Reference histograms with big number of entries are used to estimate initial parameters' values
- Background histograms are used to estimate the initial background fit parameters for the signal histograms
- In the end, an average of  $\sim 6$  fits per cell are performed.
- 3. Several iterations are needed to achieve convergency (4-5 are usually enough).

The high frequency of engagement markers is an important indication of reader involvement. They not only bring the reader into the text and establish solidarity among scholars but also create a shared evaluative context. The way physicists employ engagement markers such as question marks can be seen below:

(3) What? A synthesizable "clock level-fidel" simulation of S-TFC component and links [1][2][3] clock level emulation of FE+ROB model with variable parameters Why? Implement and test the TFC functionality and to study the optimum design parameters for the different sub-detector FEs

The most interesting result is that boosters are more numerous than hedges. This suggests that, within this discipline, authors of posters are freer to make bolder statements, draw conclusions or argue for controversial positions. In research articles, however, the frequent use of boosters has been observed in the work of established (rather than novice) scholars:

Faculty members recognized the importance of establishing their authority by adhering to the disciplinary conventions of their fields, such as making references to previous scholarship, situating their work in current discussions, highlighting their contributions to ongoing research, and following standard methodologies of their disciplines. (Kirsch 1993: 52)

The fact that boosters are frequently used also in academic posters, whose authors are mostly postgraduate students or scholars with limited academic experience, makes this result even more interesting. Here are two examples of this bold, upfront style (from a poster by a postgraduate student):

- (4) LHCb will precisely measure CP violation in the decays of hadrons containing b-quarks.
- (5) One can clearly see that the signal from beam 1 MIB is on-time with the proton-proton signal, while beam 2 MIB is separated by about 10 ns.

### 3.2. Analysis of the visuals

Also among the visual components of the Physics posters, interactive resources are more numerous than interactional ones, suggesting that their authors are more concerned with making the poster comprehensible and logical, rather than aesthetically alluring.

Interactive	Occ.	%
Information value	6	6.2
Framing	20	20.6
Connective elements	20	20.6
Graphs	28	28.9
Fonts	23	23.7
Total	97	

Interactional	Occ.	%
Salience	51	86.4
Size of frame	2	3.4
Perspective	6	10.2
Total	59	

Table 2. Visual metadiscourse in Physics posters.

The most common interactive resources found are graphs, and particularly charts and tables. This is probably peculiar to this discipline, where experimental data are prevalent. Another frequently used interactive device are fonts, whose type, colour and/or size guide the reader through the text, making it more comprehensible, highlighting which parts are connected or underlining the most important textual elements. An example of font colour used interactively, is the following, where text colour aids the comprehension of the images:



Figure 2. Font colour used as an interactive device.

Although frames are widely used to separate or connect blocks of text, units of data or images, Physics posters rarely have a clear format (which would help the reader follow and anticipate the flow of information). Other genres such as the research article follow the traditional IMRAD pattern, with an introduction followed by a methodological section, results and discussion. Only 6% of the posters analysed use the interactive resource labelled 'information value' and the majority align the flow of information vertically.

Also the use of graphs, especially two- or three-dimensional ones, can count as an interactional device, in that a viewer tends to be more attracted to a poster with charts, graphs and schematic analytical pictures, than by one containing text only. However, a poster with

too many graphs easily obtains the opposite effect, so for the purpose of this study only those containing between 1 and 4 occurrences were selected as having this interactional device.

Along with charts, also pictures considerably augment a poster's salience. More than half the posters in this discipline have at least one picture, although only half use pictures big enough to be clearly seen from at least six feet (the typical distance between a poster and its viewer). On the other hand, most pictures adopted a frontal or vertical perspective, two devices that help to establish a relationship with the viewer. Just like an engagement marker, the frontal perspective (perhaps with a person looking directly at the camera) seeks to bring about an imaginary relation between the represented person and the viewer. Also referred to as 'demand pictures', these acknowledge viewers explicitly, addressing them with a visual 'you' (Kress & van Leeuwen 1998: 122). In Figure 3 below, a detail of the poster has a frontal picture of its author next to the title. This implies that the author is trying to build a relationship with her audience in a positive, direct way.



Figure 3. Poster detail displaying a demand picture.

### 4. Law subcorpus

#### 4.1. Analysis of the texts

The Law posters contained a total of 10,250 words (an average of 512 per text). Therefore, Law posters contained less text than Physics posters, a characteristic that has not been found in genres such as the research article and the book review, where lawyers tend to produce longer texts and more complex sentences (D'Angelo 2010a). The relative brevity of Law posters might thus suggest that the discipline gives more importance to visual elements; however, 10% of the posters contained only text, with the information sometimes arranged in different sections similar to the layout of a research article. An example is given in Figure 4.

Optometrist in Court: Development and Summative Evaluation of an Innovative Educational Program N. Scott Gorman, O.D., M.S., Ed.J. <sup>1</sup> • Kathy Cerminara, J.D., LL.M., J.S.D. <sup>2</sup> Vanessa Morales, B.S. <sup>1</sup> • Dinanga Mulumba, B.S., M.S. <sup>2</sup> Nova Southeastern University College of Optometry <sup>1</sup> and Shepard Broad Law Center <sup>2</sup> Fort Lauderdale, Florida				
Introduction Optimetric students learn about medical recordReeping, the condraceping, one of other battom of the roke of other battom, thowever, they do not participate in activities that give them experience in the legid consequences of poor legid battom or the con-	Purpose By immersing students in the macagement of a patient and subsequent malpractice trial, subjects largered about factors that contribute to interpret timerand data taskens develops beighterned semiloity to the need to keep accurate and complete modelad records, preparity dispose and manage patients for the basis care practitioners when	Methods An explanatory single case study using an embedded case study eleginors are used to a study of the options survey wan administered to the subjects to determine the and post-study wan administered to a steep characteristic study of the administerior of the study of the summarize evaluation is being medical malpractice. A summarize evaluation is being medical malpractice. A summarize evaluation is being based CIPP Model the hotop- based CIPP Model for Evaluation.	Other Participants A law professor specializing in medical majaractic addressed the subjects on the subject, to complement written substantion to complement written substantion to the subject of the subject of the storency and the plaintift, and members of NSD. Elidong Learning Institute served an jarens. An actual jadge enducted the proceedings.	Conclusions To the best of the researchers' knowledge, no other optimetric school has interneted optimetric environment. This research in the subjects' knowledge about medical maphysicatics following the educational program. This subjects believed that participation in the program was of value to them. With some
Subjects came from a non- protected convenience sample of optimient subjects of the sample of southerastern University College of Optionserty who are members of the College of Optimiently who are members of the College of Optimiently space of the College of Optimiently space and the subjects of the study.	Activities The subject sever instruction to the endoy in Jamasey 2007 during an orientation seasoin held at the Collage of Optimetry, A per- electronic season of the season of the main season of the season of the main season of the season of the partnersheet the records for a main season of the season of the Jamasey 2007 through Ferbauary 2007. The subjects attended a muck, lay westcain season in its	Embedded Case Study While a single case study, there may be enhedded subanis. In second embedded subanis, including the majoracine law lecture, review of the patient's medical records, equit without medical records, equit without propagation, jury selection, more court mulpraceir tail, docus group interview. Each of these embedded subanis is bying	Measures/Administrati The interaction and in this study included a process of knowledge about malgraticity in order to a study and a set of of the program; and a set of questions to quide data collection during the ficus group interview. Additionally, the electration resolution, classroom sension, jury selection session, more than preparation sension, more than programing sension, more than a units, and videorement the the	References References Suffichesan, D. (2003) The CIPP model for evaluation. In T. Kellaghan, D. L. Suffichesan & L. & Wingate
Funding This project was funded through the President's Faculty Research and Development Grant.	Southeastern University Institute for Learning in Retirement. They also attended a day-long most majuratic trial at Shegan Broad Law Centri-t coartown in March 2007. Following the trial, and 2007. Following the trial, and a flocas group, and a poor-test and ophilos savery were administered in WebCT.	program (Yin, 2003).	University staff. Descriptive statistics are being used to analyze the results of the option survey. A dependent samples streat is being used to analyze the pre- and post- tent data. Educational process and product achievement is being measured, interpreted, and judged utilizing the CIPP Evaluation Model.	Vieweight and Characterization and Characterization of Educational Evaluation (pp. 31-42). Dordrecht: Rower Academic Publishers. Yin, R. (2003). Case study research: Design and methods. Throusand Oaks, CA; SAGE Publications

Figure 4. Law poster containing only text.

One of the interviews I conducted mentioned that authors often use great amounts of text not because the discipline lacks experimental data or instruments, but because authors construct

their posters from one or more research articles they have already written and, in many cases, already published. This seems to influence the way a poster is presented, allowing a simple copy and paste operation from the paper(s) to the poster. The practice goes against one of the most frequent best-practice tips, which recommends a balance between text and images allowing 40% of blank space to make the poster more legible and less crowded.

The choice of placing only text on a poster was explained by one of the interviewees (a post-doc fellow) as evidence that the genre is still in its infancy in the discipline of Law. Researchers and practitioners have only just begun to view poster sessions at conferences and even fewer actually produce and present a poster. The relative lack of examples in the field and limited knowledge of the genre probably explains the diversity in this subcorpus. A number of authors closely follow the research article format; some simply print out a sequence of PowerPoint slides and others use only a tiny amount of words (in one case 50 words for the whole poster), relying entirely on the visual impact of the pictures.

Turning to metadiscourse, lawyers have been found to use interactive and interactional markers more frequently than applied linguists, doctors and economists in other genres (Sala & D'Angelo 2009; D'Angelo 2010a). As Table 3 below shows, this does not seem to occur in Law posters, which contain far fewer modality markers (both interactive and interactional) than those produced by physicists.

Interactive	Occ.	%
Transitions	17	51.5
Frame markers	9	27.3
Endophoric markers	1	3.0
Evidentials	1	3.0
Code glosses	5	15.2
Total	33	

Interactional	Occ.	%
Hedges	2	8.4
Boosters	-	-
Attitude markers	5	20.8
Engagement markers	11	45.8
Self mentions	6	25.0
Total	24	

Table 3. Textual metadiscourse in Law posters.

In particular, there were no occurrences of boosters – a clear sign that lawyers avoid bold statements. Instead the most recurring resource, as in the Physics subcorpus, were transition markers, followed by frame markers. The latter are arguably numerous because of the frequency of bullets and numbered lists, whose condensed format appeals to the reader's need to identify information rapidly and efficiently (as in Figure 5).



Figure 5. Repeated use of bullet points in a Law poster.

Another peculiarity is that numerous posters display their text within networks (Figure 6), taxonomies (Figure 7) or conversion charts. The text contained in these diagrams is inevitably condensed, chunked and fragmented. The result is a text which, compared to the Physics posters, is more readable but lacks interactive resources; it is organised in a way that makes it impossible to fully understand the poster's content without the aid of visuals.



Figure 6. Text presented in the form of a network.



Figure 7. Text presented in the form of a taxonomy.

# 4.2. Analysis of the visuals

The Law posters include a wide range of layouts, involving the use of visual elements such as pictures, schematic analytical figures and graphs; at times the use of visuals is so prominent that the text has a marginal role. The poster's central concept is presented in one or more visuals or even through a visual/verbal metaphor. Figure 8, for example, contains a metaphor linking the pearls depicted in the visual and the 'pearls of wisdom' mentioned in the text. It shows how images can be forcefully used to convey meaning (and, in a certain sense,

entertain the viewer): this poster is not easily forgotten. Because the role played by visuals is so important in certain disciplines, Dubois (1985) suggests that the commercial display booths prominent in biomedical conferences may have inspired poster presentations.



Figure 8. Visual/verbal metaphor in a Law poster.

Once the attention of a passer-by has been obtained, however, it is vital to keep the viewer's interest alive as long as possible, which means mastering the one-to-one interaction sufficiently well to deliver the poster's message. Tham (1997: Preamble) stresses that a poster must be understandable on its own, even in the absence of a presenter:

A poster is simply a static, visual medium (usually of the paper and board variety) that you use to communicate ideas and messages. The difference between poster and oral presentations is that you should let your poster do most of the "talking"; that is, the material presented should convey the essence of your message.

Poster guidelines in the hard sciences claim that a well-constructed poster should be selfexplanatory and free the presenter from answering obvious questions, so that he/she can supplement and discuss particular points of interest. In Law, however, the poster is used mainly to attract the attention of viewers, while the message is communicated orally as the author stands by the poster and completes the information on the board, answering questions and debating the viewer's comments.

If we turn to the visual components (Table 4), Law posters generally use slightly fewer interactive/interactional resources than Physics ones. However, more attention is given to 'information value', which ensures that the poster is organised coherently and that the reader knows which information to process first. As in Physics, most Law posters adopt a top/bottom, left/right format and authors rely on colour, size and graphic diversity to highlight separate sections, differentiate content and reinforce the visual message: in Figure 8, for instance, the font type recalls the elegance of the pearls.

Interactive	Occ.	%
Information value	11	14.1
Framing	19	24.4
Connective elements	17	21.8
Graphs	8	10.2
Fonts	23	29.5
Total	78	

Interactional	Occ.	%
Salience	46	82.1
Size of frame	4	7.1
Perspective	6	10.8
Total	56	

Table 4. Visual metadiscourse in Law posters.

Although the number of posters with pictures is the same in both subcorpora, lawyers tend to rely more often on 'size of frame' than physicists. The finding is explained by the fact that here, as in advertising, authors use one or two enlarged images occupying most of the space available (Figure 9). This works very well in attracting viewers – a fundamental aspect of poster presentations which is often forgotten. Such prominent visuals recall Wittich and Schuller's (1973: 125) description of the poster as "a visual combination of bold design, colour, and message intended to catch and hold the attention of the passer-by long enough to implant a significant idea in the mind".



Figure 9. People displayed in Law posters.

The use of pictures displaying people varies considerably across the corpus. They are widely used in Law posters, unlike Physics posters (36% vs 16%). Importantly, they do not depict real people but actors: the pictures are staged, with actors posing in front of the camera. This produces visually appealing images that better serve the author's message, as in Figure 9, where the two actors represent a warrior and a 'wiseman'. The connection between picture and title is self-explanatory, and the text on each side further clarifies the concept.

# 5. Psychology subcorpus

### 5.1. Analysis of the texts

The Psychology subcorpus contained a total of 23,528 words (1,066 per poster). This means they employ twice the amount of text found in Physics and Law posters. As illustrated in Table 5, however, the interactive resources were much less common than in Physics and only slightly more so than in Law. This suggests that psychologists are less concerned with making the text reader-friendly and easily accessible.

Interactive	Occ.	%
Transitions	39	76.5
Frame markers	1	1.9
Endophoric markers	2	3.9
Evidentials	4	7.8
Code glosses	6	11.7
Total	51	

Interactional	Occ.	%
Hedges	8	57.1
Boosters	4	28.5
Attitude markers	1	7.1
Engagement markers	2	14.2
Self mentions	1	7.1
Total	14	

Table 5. Textual metadiscourse in Psychology posters.

The lower percentage of interactive resources might also be due to the frequent use of bullet points in lists and chunked text (see Figure 10). As in the Law posters, fragmented text produces a condensed, direct discourse that does not need markers or other interactive elements.



Figure 10. A Psychology poster using chunked text and bullet points.

The low number of interactional resources also indicates that Psychology posters prefer to communicate their results in a formal, rather impersonal manner, avoiding the use of attitude markers, engagement markers and self mentions. Formality is also observed in textual organisation, with 87% of posters randomly dividing the text into titled sections according to the IMRAD format. Although it is a multimodal, rather eclectic genre, the poster often borrows features from more traditional genres such as the research article.

#### 5.2. Analysis of the visuals

The highly organised, standardised style of Psychology posters is also reflected in their visuals. The interactive elements helping the viewer to understand how information is organised and laid out are particularly numerous, much more so than in Law and Physics. In particular, psychologists widely use framing, thus encasing text in frames that clearly separates discourse into sections.

Interactive	Occ.	%
Information value	19	15.6
Framing	36	29.5
Connective elements	18	14.7
Graphs	30	24.6
Fonts	19	15.6
Total	122	

Interactional	Occ.	%
Salience	40	90.9
Size of frame	2	4.5
Perspective	2	4.5
Total	44	

Table 6. Visual metadiscourse in Psychology posters.

Psychology posters also contain a high number of tables with experimental data, as in Physics. This places the discipline in the middle of the hard/soft sciences continuum, for it retains the wordiness of the soft sciences but also provides experimental data in tables and graphs, as customary in the hard sciences (Figure 11).



Figure 11. Psychology poster displaying tables and graphs.

Unlike physicists, psychologists seem to avoid pictures, with or without people, and rely solely on the salience of the text (in terms of colour, size and type), graphs and background colour. This makes Psychology posters the least salient in the corpus, with only 44 interactional occurrences against the 59 in Physics and 56 in Law posters.

One post-doc fellow interviewed on this particular aspect provided a simple explanation: it is very frequent for researchers and practitioners in this discipline to rely on templates available online, borrowed from colleagues or included in software applications to help authors design a conference poster. The use of the IMRAD format and highly standardised templates seems to have become the norm for psychologists, who construct clear, formal and yet unadorned posters. Apparently confirming this hypothesis is the award-winning poster below (Figure 12), which is an example of best practice in the field of Psychology.



Figure 12. Example of best practice in a Psychology poster.

#### 6. Conclusions

The present paper reports on an exploratory study of conference posters, a relatively heterogeneous genre whose rules and conventions differ across disciplines. At the same time, however, most of the posters examined follow similar conventions, based on best-practice advice widely available online from university websites, personal weblogs, conference webpages, writing centres, poster websites and online poster journals. This wealth of information and prescriptive guidelines indicates that poster sessions are an increasingly important part of academic conferences as a valid alternative to paper presentations.

However, the linguistic investigation of academic posters and the construction of multidisciplinary corpora including this genre is still in its infancy. In particular no analysis has yet been conducted of the semiotic code of text and images, that is of how posters exploit the visual as well as textual resources in their content. As a contribution to our understanding of the genre, the present study focuses therefore on the interactive/interactional communicative strategies used by conference posters in Physics, Law and Psychology. Despite their diversity and the fact that posters are a novelty for lawyers, the range of interactive and interactional elements present in texts and visuals is the same, which suggests the presence of cross-disciplinary conventions. At the same time, however, several differences between subcorpora are noticeable: the prevalence of pictures and images in Law suggests that commercial display booths (prominent at biomedical conferences) may have inspired Law poster presentations; the frequency of graphs and boosters in Physics posters is much higher than in other disciplines and the use of templates in Psychology tends to produce highly standardised posters in this field.

Such similarities and differences are expected to become even more evident as the analysis extends to other disciplines and a greater number of posters is considered. However, the fact that in the humanities the poster genre is very seldom used may pose challenges to the construction of a multidisciplinary corpus representing the soft as well as the hard sciences. Also, although posters are beginning to appear at large international conferences in fields such as Law, very few conference websites publish them online, which may limit the range and number of posters available in certain disciplines. Finally, the analytical framework will have to be fine-tuned as new disciplines are investigated and new visual elements and communicative techniques considered. Although these challenges might complicate the investigation, I hope they will also make its findings all the more worthwhile.

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Larissa D'Angelo is a research fellow at the Department of Comparative Languages, Literatures and Cultures of the University of Bergamo and a lecturer of English. After graduating in Foreign Languages and Literatures, she studied in the USA (Youngstown State University), where she obtained an M.A. in English. Her publications deal with the synchronic/diachronic analysis of genre, gender and cultural identity in academic discourse. She is now at the end of her second year as a research student on the University of Reading's applied linguistics doctoral programme. Email: l.dangelo@student.reading.ac.uk.