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Framing research in Food Science: the state of the art on research article, short communication and poster presentation titles

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ABSTRACT

Titles are the first point of contact with readers and are encoded to provide concise information on the paper's contents. Data from available surveys show that the structural construction conforms to four different layouts, namely nominal, compound, full-sentence and question, with a prevalence of the former two formats and an increase in the use of the latter ones. The aim of this paper is to discuss the state of the art of title encoding practices in three written genres commonly employed in Food Science: research articles, short communications and poster presentations. Findings indicate the prevalent occurrence of nominal and compound layouts and the lack of question titles in the three genres analysed. Results also show that titles have a mean length of 15.3 words in research articles, of 14.6 words in short communications and of 12 words in poster presentations. The data are shared to offer a framework of current praxis in Food Science and to inform teachers and authors on how to shape informative titles for their research.

Keywords: Titles, food science, research article, short communication, poster presentation.

1. Introduction

The necessity to publish research in English to gain visibility is widely acknowledged in literature. Genre analytical and bibliometric studies (Swales, 2004; Ferguson, 2007; Hyland, 2009; Larsen & von Ins, 2010) have highlighted the steady growth of research papers published in English either in print or in online venues such as open access journals, open archives, and institutional or personal homepages. Today, the bulk of scientific literature is very impressive and about 11 million specimens are estimated to be at the disposal of researchers (Newman, 2011). The consequence is that within the research papers' economy, titles fulfil a crucial interactional function: they strive for readers' attention by pointing to the research line, to the methods employed or to the findings. The implication for English as a foreign language teachers is the necessity to include title writing activities in their English syllabi to inform junior authors on the writing conventions shared by expert members of the community they will enter.

To meet these aims, in the last decades genre analysts searched titles to elicit the mean word count and the impact of the different layouts on the writing practices in several disciplines. Available surveys are of two types: multi-disciplinary and mono-disciplinary. The former discuss titles in the hard sciences (Buxton and Meadows, 1977; Jaime Sisò, 2009); in education, psychology and literary criticism (Dillon, 1982); in literature, linguistics and science (Haggan, 2004); in medicine and linguistics (Busch-Lauer, 2000); in medicine, life sciences and physics (Ball, 2009); in biology, chemistry, clinical medicine, engineering, oncology and physics (Hartley, 2005 & 2007; Lewison and Hartley, 2005); in anthropology, biology, biochemistry, linguistics, medicine and psychology (Soler, 2007 & 2011). The mono-disciplinary surveys investigate titles from single disciplines, such as computer science (Anthony, 2001); education (Dillon, 1981), food science (Cianflone, 2012a & 2012b); linguistics (Gesuato, 2008; Pułaczewska, 2009); management studies (Forray and Wodilla, 2005); mathematics (Yakhontova, 2006) and veterinary medicine (Cianflone, 2012c). Medicine was object of special attention. Giannoni (2008) discussed titles from medical editorials; Goodman (2000 & 2005) surveyed the use of active verbs and allusions to Shakespeare's works, to Andersen's tales, to the Bible, to proverbs and films;

Siegel, Thacker, Goodman and Gillespie (2006) and Singh, Chaudhary and Suvirya (2009) considered the divergence between the title and the body of the article; whereas Wang and Bai (2007) examined nominal titles and identified three different sub-genres: uni-head, bi-head and multi-head.

The data originating from current literature show that titles conform to a quadripartite layout, labelled nominal, compound, full-sentence and question, with a prevalence of the first two (Hartley, 2007; Soler, 2011) and a growing presence of full-sentence (Jaime Sisò, 2009) and question titles (Ball, 2009).

Before proceeding further with the discussion of titles, it is necessary to delineate the different title layouts, since the consensus on how to define them is not unanimous among title analysts. Soler (2007 & 2011) and Cianflone (2012a & 2012c) prefer a quadripartite list, namely nominal, compound, full-sentence and question. Haggan (2004) acknowledges three different structures: “full sentence”, “compound” and “a remaining group”. Jaime Sisò (2009) employs a double partition and defines titles “indicative” and “conclusive”, although the former can be said to correspond to the nominal and to the compound formats, while the latter resemble specimens of the full-sentence type. Anthony (2001) calls compound titles “hanging titles”, whereas Hartley (2005 & 2007) labels them “colonic”. When discussing titles for educational purposes, the tag “compound” should be preferred; “Colonic”, in fact, designates only titles shaped with the colon and cuts out those titles encoded with the comma, the dash and the full-stop (Anthony, 2001; Cianflone, 2012a). Haggan (2004) encloses titles shaped with the simple present tense among the nominal specimens, although samples with this verbal tense bear a peculiar interactional imprint that will be discussed below.

The term “Nominal” describes those titles consisting of one head, with or without pre-modifiers, followed by other structure/s, or post-modification. This title-type is divided into non-verbal and verbal (Cianflone, 2012a), according to the presence of verbs, in the present participle, in the past participle or in the infinitive tense, which connect heads to the post-modifying structure. Heads, in the form of a noun, a noun-phrase or a nominalized verb in the gerund, introduce the topic, the type of research or the findings, while the post-modification contextualises the research space or fine-tunes the results.

The term “Compound” defines those titles consisting of two parts, connected by a colon, a comma, a full-stop or a dash. The interrelationship between the two sections can be of four types: general-specific, topic-method, problem-solution and major-minor (Swales and Feak 1994), with the prevalence of the former two. In the first model, general information on the research is introduced in the main title, while specific details on the findings are introduced in the subtitle; the second model provides information on the topic at the base of the research in the first part and a description of the type of study or of the findings in the other section (Cianflone, 2012a).

The term “Full-sentence” defines those titles phrased as ordinary sentences that comprise a head, referring to the object of study, followed by a positive or by a negative declarative verb in the present tense, either in the active or in the passive form (Cianflone, 2012a). Verbs play the main interactional role, as they allow the presentation of results as assertive statements of fact (Soler, 2011) by defining an action without disclosing the actor (Hays, 2010).

The term “Question” delineates those titles phrased as sentences in the interrogative form (Ball, 2009). In these specimens, the question is a rhetorical device employed to invite to read on to find the answer, or, alternatively, to challenge accepted views or controversial points.

2. Materials and Methods

In Food Science (FS) three written genres are commonly employed to spread findings: research papers (RA), short communications (SC) and poster presentation (PP). The description of these genres is not necessary in this context since reference to Swales’ (2004) and Hyland’s (2009) works will suffice. It is important to stress that these genres share the “*Introduction, Materials & Method, Results and Discussion*” format and that these written academic genres show the consistent use of charts, figures and tables to add up and to contextualize data or findings.

The three genres have one main difference: the word count. In FS practice, as illustrated by the journals’ guidelines, RAs have the largest word count, attested at 7000/8000 words. SCs are characterized by a shorter format that does not exceed 3000/4000 words, since they are mainly used to spread preliminary

findings gained from ongoing research, or findings originating from a research line limited in scope. Although analysis on the mean word count in PPs is lacking, this genre has the shortest number of words because the whole message must be so compressed to be displayed on a panel (Cianflone, 2012b).

For the survey discussed in this paper, the corpus of analyzed titles was collected following specific selection criteria. To be selected journals had to have an international reputation; they had to publish contributions from native speakers of English and from non-native speakers as well, so that the data would describe the practices shared by the whole community of FS scholars. To be included in the survey, selected papers had to be labelled “original research article” or “short communication” so that data on the impact of titles would originate from the specimens considered as such by the journals’ editorial board. In the case of PP, titles had to be published in a book of abstracts issued for a FS conference.

Following the selection criteria illustrated above, the RA and SC corpus consisted of 126 titles (86 RA titles and 40 SC titles, respectively), collected from three journals published in 2011: *Food Chemistry* (FChem), *Food Control* (FC) and *International Journal of Food Microbiology* (IJFM); the PP corpus consisted of the 241 samples published for *ChimAlsi_2012* (ChimAlsi, 2012), the ninth Italian Congress of Food Chemistry.

<p style="text-align: center;">Research papers corpus</p> <p style="text-align: center;"><i>Food Chemistry</i> 126 (4), 2011</p> <p style="text-align: center;"><i>Food Control</i> 22 (6), 2011</p> <p style="text-align: center;"><i>International Journal of Food Microbiology</i> 145 (1), 2011</p>
<p style="text-align: center;">Short communication corpus</p> <p style="text-align: center;"><i>Food Chemistry</i> 126 (1, 4), 2011</p> <p style="text-align: center;"><i>Food Chemistry</i> 127 (1, 2, 3, 4), 2011</p> <p style="text-align: center;"><i>Food Chemistry</i> 128 (1), 2011</p> <p style="text-align: center;"><i>Food Control</i> 21 (9), 2011</p> <p style="text-align: center;"><i>Food Control</i> 22 (1, 2, 3- 4, 6), 2011</p> <p style="text-align: center;"><i>International Journal of Food Microbiology</i> 145 (1, 2-3), 2011</p>

Poster corpus

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Tab. 1 RA and SC Corpus

The different size of the RA and of the SC corpus should not be interpreted as an imbalance between the two genres. It mirrors current editorial practice since in FS journals RAs far outnumber SCs. The corpus size can be also in line with current title analyses since in literature corpora of 30, 40 or 80 specimens per discipline are usually collected in title surveys (see, for example, Giannoni, 2008; Soler, 2007 & 2011).

The consistent size of the PP corpus also mirrors current FS practice since posters in this disciplinary field do not bear the second class status elicited in other disciplines (see Swales, 2004). On the contrary, PPs are considered by food scientists a valid alternative to the oral presentation and are considered by the conference committee a written genre that allows many presenters to be registered among the conference participants (Cianflone, 2012b).

3. Results

3.1. Mean Length

In the analyses discussed in the review of literature, precise instructions on how to count acronyms, numerical sequences and hyphenated words are not given. Because these linguistic constructions can be considered a peculiarity of FS writing practice, these structures were measured as follows: acronyms, such as “HACCP” in title 1, and numerical sequences, such as “RBL-2H3” in title 3, were considered independent units and counted as single words; hyphenated nouns were counted as single items if they functioned as bound morphemes, as exemplified by “dry-cured” in title 1, by “ γ -oryzanol” and “*p*-coumarate” in title 2 and by “antigen-stimulated” in title 3, otherwise they were considered multiple words, such as “growth/no growth” in title 4.

1. A HACCP plan for mycotoxigenic hazards associated with dry-cured meat production processes [**Research Article title**, Asefa et al., *FC*, 126(4): 831-837]
Total = 10 words: *HACCP* = 1 word; *dry-cured* = one word.
2. Separation of g-oryzanol components and its synthetic *p*-coumarate and caffeate derivatives by NP-HPLC [**Poster title**, D'Ambrosio, ChimAlsi, *Poster 11*]
Total 13 words: *g-oryzanol* = 1 word; *p-coumarate* = 1 word; NP-HPLC = 1 word.
3. Inhibitory effects of flavonoid glycosides isolated from the peel of Japanese persimmon (*Diospyros kaki* Fuyu) on antigen-stimulated degranulation in rat basophilic leukaemia RBL-2H3 cells [**Short Communication title**, Itoh et al., *FCchem*, 126(1): 289-294]
Total 24 words: antigen-stimulated = 1 word; RBL-2H3 = 1 word.
4. The importance of expressing antimicrobial agents on water basis in growth/no growth interface models: A case study for *Zygosaccharomyces bailii* [**Research Article title**, Dang et al., *IJFM*, 145(1): 258-266]
Total 21 words: *growth/no growth* = 3 words.

Titles were, then, manually counted. RA titles are strings of variable length, ranging from 6, as in title 5, to 26 words, as exemplified by title 6. The mean count is attested at 15.3 words per title.

5. Biosorption of copper by wine-relevant lactobacilli [**Research Article title**, Schut et al., *IJFM*, 145(1): 126-131]
6. Transfer and internalisation of *Escherichia coli* O157:H7 and *Salmonella enterica* serovar Typhimurium in cabbage cultivated on contaminated manure-amended soil under tropical field conditions in Sub-Saharan Africa [**Research Article title**, Ongeng et al., *IJFM*, 145(1): 303-310]

SC titles range from 8 to 24 words, with the mean count attested at 14.6 words per title. Title 7 consisting of 8 words is the shortest title found in the corpus, while title 8, consisting of 24 words is the longest one of the examined corpus.

7. No *de novo* sulfuraphane biosynthesis in broccoli seedlings [**Short Communication title**, Gorissen et al., *FCchem*, 127(1): 192-196]
8. Inhibitory effects of flavonoid glycosides isolated from the peel of Japanese persimmon (*Diospyros kaki* Fuyu) on antigen-stimulated degranulation in rat

basophilic leukaemia RBL-2H3 cells [**Short Communication title**, Itoh et al., *FChem*, 126(1): 289-294]

PP titles range from 4 words, as in title 9, to 29 words, as in title 10 below. The mean count is attested at 12 words.

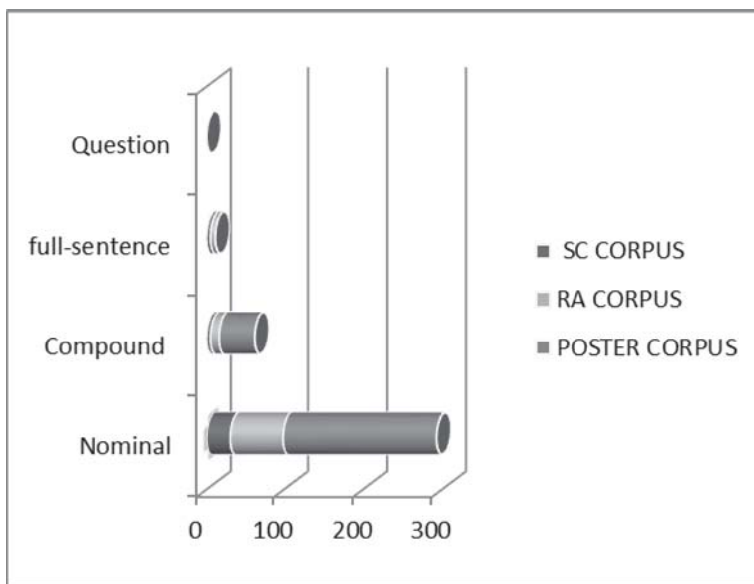
9. NMR-based metabolomics of meat [**Poster title**, Ritota et al., ChimAlsi, *Poster 181*]
10. Rapid determination of acrylamide in conventional cereal-based foods and potato chips through conversion to 3-[bis(trifluoroethanoyl)amino]-3-oxopropyl trifluoroacetate by gas chromatography coupled with electron capture and ion trap mass spectrometry detectors [**Poster title**, Russo et al., ChimAlsi., *Poster 194*]

3.2. Layout Prevalence

The nominal format gave a count of 293 titles; the compound format gave a count of 63 titles; the full-sentence gave a count limited to 11 samples only.

Analyses, graphically summarized in Tab. 2, have elicited that nominal, compound and full-sentence titles are used in RAs and in SCs, with a prevalence of the first two layouts, while nominal and compound titles characterize PPs. The full-sentence layout is not employed to convey the message in PPs, whereas question titles are lacking in the three genres. The only sample encoded with an interrogative sentence was found in the PP corpus. It was counted among the compound titles because the overall layout, divided into two sections by the colon, does not follow the description commonly employed by title analysts to define the question format (see Ball, 2009).

Recipe composition data: Calculation procedure can be considered a valid alternative to chemical analysis for all nutrients? [**Poster title**, Camilli et al., ChimAlsi, *Poster 42*]



Tab. 2 Layout prevalence

4. Nominal Titles

The nominal layout prevails within the three FS genres object of the survey. 293 titles were encoded with this layout: 194 were counted among the PPs, 69 among the RAs, and 30 among the SCs.

The nominal construction was analysed following the double division of non-verbal and verbal sub-types. In the former, heads are connected to the post-modifying structure by a preposition; in the latter, heads are linked to the post-modifying structure by a verb in the present participle, in the past participle or in the infinitive tense.

The three genres analysed show variety as concerns the heads. In some cases, heads are encoded without pre-modification, as in title 5 or 11. Alternatively pre-modification can consist of adjectives or acronyms. In title 10 above, the adjective *rapid* serves to better qualify the head *determination*; in title 12 the

acronym *HPLT* in adjectival position adds up to the communicative value of the head *synoptic profiling*. In other samples pre-modification is a longer string made up of two or more adjectives, as evident from title 13, where the head *origins* is characterized by the use of two qualifying adjectives, namely *microbial* and *chemical*. In some other cases, as in title 14, the head *survival* is characterized by the use one qualifying adjective, namely *pathogenic*, and by the presence of the noun *microorganism* used in adjectival position. As discussed before, in some cases heads can also be shaped with a nominalized verb, as in title 15, where the nominalized verb in the gerund *incorporating* is used instead of the common noun *incorporation*.

11. Occurrence of ochratoxin A before bottling in DOC and DOCG wines produced in Piedmont (Northern Italy) [**Short Communication title**, Spadaro et al., *FContr*, 21(9): 1294-1297]
12. HPTLC synoptic profiling for a rapid characterization of the phenolic fraction of extra virgin olive oils [**Poster title**, Coran et al., ChimAlsi, *Poster 149*]
13. Microbial and chemical origins of the bactericidal activity of thermally treated yellow mustard powder toward *Escherichia coli* O157:H7 during dry sausage ripening [**Research Article title**, Luciano et al., *IJFM*, 145 (1): 69-76]
14. Pathogenic microorganism survival in *dulce de leche* [**Short Communication title**, Hentges et al., *FContr*, 21(9): 1291-1293]
15. Incorporating HACCP into national food control systems - Analysing progress in the United Arab Emirates [**Research article title**, Al-Kandarin et al., *FContr*, 22(6): 851-861]

In the examined corpus, post-modification shows variety, too. It can be of a simple type, as in titles 5 and 14, where it is connected to the head by a preposition and serves to put the research space in context; alternatively, it can be a complex and very elaborated string, as in title 13, that clarifies and specifies the research line, namely the bactericidal activity of mustard in respect of *Escherichia coli*.

When heads and post-modifications are not connected by a preposition but are linked by a verb in the present participle, in the past participle or in the infinitive tense, these samples are defined verbal nominal titles (Cianflone, 2012a). Within the analysed corpus, 31 verbal titles are encoded with the present

participle; 20 show the use of the past participle, while 10 titles display the infinitive tense. It is interesting to stress that no sample with this last tense was found among the SC corpus.

16. Passata di pomodoro authenticity checks using $\delta^{18}\text{O}$ analysis [**Poster title**, pres. participle, Bontempo et al., ChimAlsi, *Poster* 34]
17. A fast and sensitive method to detect powdered milk in fresh cow milk based on MALDI-TOF-MS [**Poster title**, infinitive, Calvano et al., ChimAlsi, *Poster* 130]
18. Functional properties of *Lactobacillus* strains isolated from kimchi [**Research article title**, past participle, Lee et al., *IJFM*, 145(1): 155-161]
19. The use of microbiological surveys to evaluate the co-regulation of abattoirs in New South Wales, Australia [**Research article title**, infinitive, Bass et al., *FContr*, 22(6): 959-963]
20. Reduction of *Salmonella enterica* on grape tomatoes using microwave heating [**Short Communication title**, pres. participle, Lu et al., *IJFM*, 145(1): 349-352]

5. Compound Titles

The compound layout is the second highest occurrence within the examined FS corpus, with a total of 64 samples: 11 titles among the RAs, 5 among the SCs and 48 among the PPs.

This title format is characterized by the partition into two distinct but interconnected sections, mainly linked by the colon, although the full-stop, the comma and the dash are employed and can be considered a valid alternative. The use of these different connectors does not affect the message brought out by the title. The adoption of one connector instead of another is a matter of personal taste in research articles and in short communications, while the prevalent use of the colon in PPs can be considered a graphical device to call for readers' attention when scanning titles during poster sessions (Cianflone, 2012b).

Swales and Feak (1994) have shown that the interrelationship between the two sections can be of four types: general-specific, topic-method, problem-solution and major-minor. In the analysed corpus, the *general/specific* and the *topic-method/type*

of *study* categories seem to prevail. As exemplified by title 21, readers are first offered general information on the topic, circumstantiated by the type of analysis carried out; alternatively, as in title 22, the topic is introduced in the first section, while the type of investigation, namely a *case study*, is specified in the second part.

21. Irradiated meat: Analysis of dose-correlated volatile compounds [**Poster title**, colon, Mariani et al., *ChimAlsì*, *Poster 89*]
22. Critical evaluation of the EU-technical guidance on shelf-life studies for *L. monocytogenes* on RTE-foods: a case study for smoked salmon [**Research article title**, colon, Vermeulen et al., *IJFM*, 154(1), pp. 176-185]
23. Acidic ribosomal protein 60S: A new tomato allergen (López et al., [**Short Communication title**, colon, *FChem*, 127(1), pp. 638-640]
24. Multiresidue determination of antibiotics in feed and fish sample for food safety evaluation. Comparison of immunoassay vs LC-MS-MS [**Research article title**, full-stop, Cháfer-Pericás et al., *FContr*, 22(6), pp. 933-999]
25. *Vitis vinifera* cv. Uvalino, a neglected grape vine as a source of nutraceutical lipids [**Poster title**, comma, Argentieri et al., *ChimAlsì*, *Poster 4*]
26. The extreme xerophilic mould *Xeromyces bisporus* — Growth and competition at various water activities [**Research article title**, dash, Leong et al., *IJFM*, 145(1), pp. 57-63]

6. Full-Sentence Titles

The full-sentence format mirrors the nominal verbal sub-type as it is characterized by the use of a declarative verb either in the present simple or in the present passive tense. Because of this resemblance to the nominal title, Haggan (2004) includes these title-types within the nominal format. In this survey, titles shaped with the present tense were considered an independent layout and not part of the verbal nominal titles because of the specific interactional role they play. The use of the present tense, in fact, characterizes titles in two ways. It gives a note of confident optimism (Soler, 2007) to the results introduced in the title and, at the same time, it allows authors to present findings in an impersonal and detached style in line with the neutral tone of the scientific prose (Cianflone, 2012c).

Although some researchers (e.g. Berkenrotter & Huckin, 1995; Jaime Sisò, 2009) have stressed the growing use of these title format to display findings, among the surveyed FS samples it can be said that the full-sentence layout shows an almost inconsistent presence. Only 11 titles were detected in the corpus. 6 were found within the RA and 5 within the SC corpus, respectively, while no full-sentence title was found among PPs.

27. Sucrose monolaureate improves the efficacy of sodium hypochlorite against *Escherichia coli* O157:H7 on spinach [**Research article title**, Xiao et al., *IJFM*, 145(1), pp. 64-68]
28. SigB plays a major role in *Listeria monocytogenes* tolerance to bile stress [**Research article title**, Zhang et al., *IJFM*, 145(1), pp. 238-243]
29. Desiccation survival of *Listeria monocytogenes* and other potential foodborne pathogens on stainless steel surfaces is affected by different food soils [**Short Communication title**, Takahashi et al., *FContr*, 22(3-4), pp. 633-637]

7. Discussion

The data discussed in this paper cannot be considered exhaustive since they originate from the analysis of samples taken from three FS journals and from one book of abstracts. Nevertheless, findings offer insights on the encoding practices employed by FS researchers to conceive titles in terms of mean length and in terms of layout in the three written genres commonly used to spread research findings.

As regards length, PPs show the shortest word count, while RAs show the highest. The difference can be linked to the role the three genres play in FS research. As discussed above, the RA is commonly employed by FS scholars to report results originating from completed research; as a consequence, a longer title is necessary to frame and to better contextualise findings. The SC, on the other hand, is a written genre employed to discuss research of a preliminary type or limited in scope; as a consequence, the concise SC format is also reflected in the title whose word count is shorter than the RA counterpart. The shortest length is found among the PPs. In this case, the count mirrors the peculiar interactional trait proper of this genre. Findings presented at conferences by

means of PPs, in fact, must be condensed to be displayed on a panel and this conciseness is also reflected in titles that should be easily read from a distance. For this reason authors prefer to avoid wordy and lengthy strings. Thus, title 10 above, consisting of 29 words, can be considered an exceptional example originating from personal taste.

As regards the layout prevalence, some interesting peculiarities emerge. The consistent occurrence of the nominal and of the compound format indicates that FS researchers seem to favour those titles with a specific communicative imprint that makes the piling-up of information easy. The nominal layout, in fact, allows to display information by means of pre-modifiers and by means of post-modifications, or alternatively, by the use of verbs; while the compound layout allows authors to uncover information through its partition into two independent but interconnected sections.

As concerns the nominal verbal format, it can be considered an interesting alternative to the non-verbal one because verbs give titles a specific interactional imprint. A verbal nominal title encoded with the present participle, as can be seen in titles 16 and 20, or with the infinitive tense, as can be detected from titles 17 and 19, shapes the message in a colloquial fashion as it seems to involve readers by putting researchers and readers on a level. A title outlined with the past participle, on the other hand, seems to encode the message with a more detached interactional style. As can be inferred from title 18, the use of the past participle tense confers titles a sort of impersonal imprint and seems to inform readers that the whole research is over and that the spreading of findings (in print or at a conference) is the last step along the research cycle.

As concerns the compound format, the double partition into two distinct, but interconnected, segments, serves an important interactional aim. It caters for the introduction of relevant information in a concise fashion by exploiting what Haggan (2004) calls “the add-on principle”. The almost consistent presence within the examined corpus indicates that FS researchers want to communicate findings with a structure that, because of the double partition, can serve to attract readers’ attention when scanning titles in online search platforms. In PPs, on the other hand, a compound title can be interpreted as a device to catch readers’ attention from a distance and to invite them to come closer and to read the whole poster.

The limited presence of full-sentence titles is not in line with the praxis elicited in other surveys. Elsewhere, the impact of this layout in different disciplines has been connected to the need for a strong communicative imprint that resembles the journalistic style (Berkenrotter & Huckin, 1995; Haggan, 2004; Jaime Sisò, 2009). Although further analyses based on larger corpora are necessary, for the moment it can be said that this format does not seem to meet FS researchers' preferences.

The non-existent presence of question titles contradicts the results brought out by other analysts (see Ball, 2009), although it is in line with the writing praxis elicited by Jaime Sisò (2009) and Soler (2011). The data gained from this pilot survey may indicate, as was the case with the full-sentence titles, that the question format does not meet FS authors' preferences in the written academic genres considered in the present study. Again, further analyses are necessary since this layout can be employed in other written academic genres not considered in the present pilot study, like the editorial or the review paper.

8. Conclusion

Titles are considered by analysts independent discourse units (Gesuato, 2008; Haggan, 2004) conceived to be easily indexed and searched in online search platforms. They play two main functions: they catch attention and influence researchers' decision to read on. Writing titles, therefore, is a complex activity that asks authors to consider editorial policies, community practices and personal preferences to produce short, catchy and informative strings that offer readers as much information as possible in a limited number of words.

The data gained from the present analyses can serve to define the encoding practices in FS. The first peculiar trait is that food scientists meet the interactional criteria of informativity and economy by shaping their titles with a mean word count ranging from 12 to 15.3. The second peculiar trait is that, to gain the communicative effect of rousing interest, FS scholars shape their titles using two distinct formats: nominal and compound.

The findings discussed in this paper should be considered a description, though of a preliminary nature, of the state of the art in three FS written research genres. Data can serve to highlight the conventions used by FS scholars

to attract and to inform perspective readers. The data on the frequency of the layouts can be used by language teachers working with FS students to stress how textual schemata and rhetorical patterns concur to shape FS titles that intrigue readers and that convince them to read on.

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