

Círculo de Lingüística Aplicada a la Comunicación

ISSN: 1576-4737

 EDICIONES
COMPLUTENSE<https://dx.doi.org/10.5209/clac.81309>

‘Is voice inevitable in written texts?’ Animate agents followed by active verbs as writers’ (de) voicing mechanisms in knowledge dissemination practices

Isabel Herrando-Rodrigo¹

Received: 15 January 2022/ Accepted: 23 February 2022

Abstract. Writers’ identity (Ivanič, 1998) and positioning in written text have been studied under multiple terms. However, a clearer distinction should be made between writers’ positioning (Hyland, 2005a) and writers’ presence or voice (John, 2005). This paper explores how disseminators and specialised writers adapt or mediate the voice of the researchers and writers of medical research articles (Med-RAs) in the corresponding medical popularizations published on-line (Med-E-Pops). By manually scanning a self-compiled corpus of 40 Med-RAs and their 40 Med-E-Pops published in digital sources, it will be shown how evidence of the most personal authorial voice used in research articles, self-mentions, are adapted in the Med-E-Pops texts using other (de)voicing mechanisms. Results from the data-driven analysis show that whereas Med-RAs researchers claim their authorship, knowledge and prestige, Med-E-Pops writers make their own voice negligible to guide the readers’ attention back to the Med-RAs writers’ presence. Med-E-Pops writers ratify Med-RAs writers’ agency creating trustworthy texts for the audience.

Keywords: Writers’ voice; positioning; (de)voicing mechanisms; medical knowledge dissemination practices.

Cómo citar: Herrando-Rodrigo, I. (2022). Is voice inevitable in written texts?’ Animate agents followed by active verbs as writers’ (de) voicing mechanisms in knowledge dissemination practices. *Círculo de Lingüística Aplicada a la Comunicación* 90, 81-94.

Índice. 1. Introduction. 2. Knowledge dissemination practices. 3. Writers’ (de)voicing mechanisms in written texts. 4. Objectives. 5. Corpus and methods. 6. Results and discussion. 7. Conclusion. Acknowledgement. References.

1. Introduction

Increasingly, we all, as lay readers, turn to the Internet to check medical information. The availability of information that is sometimes reliable and many times misleading has led lay readers to look for medical research articles published on the net (hereafter Med-RAs). These Med-RAs are usually written in English by native and non-native speakers of English. However, these Med-RAs are designed to be accepted by members of the same discourse community. That means that *outsiders* may not understand them. Besides, newly published Med-RAs on the latest medical research are not free access publications. Only members of research communities or institutions that are registered in the electronic versions of medical journals have access to these Med-RAs. This situation has led prestigious newspapers—like the New York Times, hospitals and health care institutions—like Johns Hopkins Hospital—to design reliable digital adaptations of the latest Med-RAs and to publish them on their web sites. These electronic popularizations or adaptations, which are labelled in this piece of research as medical electronic popularizations (hereafter Med-E-Pops), build trust among their potential readers thanks to their objectivity and scientific rigor. To this author’s understanding, this new genre, the result of the development of journalistic scientific popularization and electronic genres, gains neutrality when reporting Med-RAs information, by engaging their readers through a writers’ devoicing mechanism. Therefore, this research seeks to contribute to the study of the concept of *voice* in recent medical popularizations published on line.

The different points of view adopted by researchers about the definition of the notion of voice, its realisation, its pedagogical implications or even its applicability, for instance, to the field of English for Academic Purposes (EAP) have led scholars to conduct insightful linguistic studies (Lorés-Sanz, 2008). Their findings cast light upon unexplored areas in Applied Linguistics such as the implications of voice in specialised texts (Mur-Dueñas, 2007; Dressen-Hammouda, 2014). Specifically, in this study I wished to observe how the voice of Med-E-Pops writers is crafted, constructed or created in texts that traditionally have been used by different discourse communities. These medical texts, potentially designed for a lay international Internet audience, all seem to have very similar rhetorical conventions as well as linguistic choices. These rhetorical choices may firstly reveal a recent conventional homogenisation of the Med-E-Pops genre across the web. Moreover, the recurrent use of some lexico-grammatical construc-

¹ Universidad de Zaragoza, Spain Email address: herrando@unizar.es (<https://orcid.org/0000-0003-3895-5534>)

tions points to a potential conscious construction by Med-E-Pop writers of an almost unnoticeable voice that stands back to give the floor to the voice of Med-RAs. The blurring of the voice of the Med-E-Pop writer builds trust in the medical research portrayed in Med-E-Pops and therefore in the Med-E-Pops genre as a reliable vehicle for medical knowledge dissemination.

As this research aims to contribute to the study positioning in written academic and professional genres, the two following sections have been designed to deal first with knowledge dissemination practices and, specifically, with the genre Med-E-Pops. Then, section number 3 delves into the urge of distinguishing between writers' positioning and voice. In particular, a definition and several linguistics realizations are claimed to be necessary here to interpret the phenomenon of writers' voice, and not stance, when disseminating trustworthy medical information on the Internet for an international audience.

2. Knowledge dissemination practices

A large and growing body of literature in the field of Communication Studies has investigated knowledge communication from the notion of *knowledge asymmetries* (c.f. Kastberg, 2011; Engberg, 2016). These asymmetries are created because this type of communication takes place from experts on a field to non-experts on a specific field. To put it in a different way, it could be said that experts know more than the general public and they decide to tell the citizenship what we should know and what should be considered relevant. Knowledge experts may decide to establish communication settings to disseminate their knowledge bridging knowledge gaps and compensating knowledge asymmetries constructing communication settings as Engber (2021) maintains. Here key notions as open science and citizens science –as research policy concepts– and communicative forms; as dissemination, popularization, vulgarization or infotainment come to the fore. Needless to say, numerous international and national academic and professional quality systems demand from knowledge makers to improve their knowledge dissemination practices so as to promote citizen's trust and engagement with science –see Gilberg and Stocklmayer (2012) and Stilgoe, Lock and Wilson (2014) for an account. This situation has led researchers and scientists to develop their knowledge dissemination practices and to improve their communication skills through new technologies and through the mastery of knowledge communication, dissemination and transfer emerging genres (Luzón, 2022). Parallely, being present and participating at different forums and scenarios could positively affect researchers' credibility, visibility, prestige and, possibly, funding. Now, regardless the fact that doctors, virologists, or airborne transmission experts may, for instance, construct different dissemination narratives on Covid-19, they would still be academics mediating from their own academic texts, that is from their Research Articles (RA), onto resulting texts adapted to a general or lay-audience. This setting may presuppose a level of writers' commitment or positioning since the researcher and the content and language mediator would be the same person. This paper, however, focuses on the exploration of the notion of writers' voice in popularized articles that have been written in English by specialized writers –different from the medical researchers or originators, and disseminated on the Internet. One criticism of much of the literature on medical popularizations –above all disseminated on the World Wide Web (see Colson, 2011 for this account on blogs; or Pal & Banerjee, 2021 on Internet users' behavioral responses), is that they could be sensationalist, even misleading (Breeze, 2015). Additionally, the writers' purpose, and voice, may prioritize pharmaceutical lab commercial purposes rather than an informative one. As stated in the introduction, this paper aims to explore whose voice is heard in the Med-RAs popularized version and reflect whether that voice aids to create a trustworthy medical text.

In the field of journalism many studies have explored the journals' and audiences' rising interest (c.f. Nelkin, 1990; Fayard, 1993; Bucchi & Mazzolini, 2003 or Clark & Illman, 2006 to name a few) about how scientific and technological findings are transferred to and published in non-specialised journals. Specifically, in the last three centuries there has been a growing interest in health news (Gil-Salom, 2000; Hyland, 2010). These articles related to health care, whose main aim is to disseminate medical knowledge, are known as medical popularizations. A considerable amount of literature has been published on the genre of medical popularization as adaptations of RAs for lay readers (see for an account Adams-Smith, 1987; Giunchi, 2002; Garzone, 2006; Gotti, 2014; Sala & Consonni, 2019 among many others). This widespread interest on the role of popularizations has been fed by the appearance of the Internet as the new medium for knowledge dissemination among lay people. So far, however, there has been little discussion about the popularizations published on the Internet as a response to a global social *need-to-know*. Owing to the accessibility of the World Wide Web, lay readers who need to know about medical issues turn to Med-E-Pops. One may wonder how a global audience comes to read and trust in Med-E-Pops instead of just "Googling" whatever they may be looking for. However, this social interest related to looking for comprehensive medical information on the Internet is being encouraged not only by doctors, as observed in a recent work (Herrando-Rodrigo, 2020), but also by institutions—which may encourage professionals with related areas of expertise, as gynecology and urology or hematology and gastroenterology, to keep up to date with scientific findings by reading Med-E-Pops. Hence, if these professionals, who lack time to allocate deeper research due to their tight schedules, find the related medical research useful, they can easily turn to the research article to find out more about a given issue. To finish this section, it could be concluded that the resulting hybrid pattern of Med-RAs adaptations process for an Internet, undefined and international audience (Mahrt & Pushman, 2014) suggests that Med-E-Pops are embedded in the medical colony

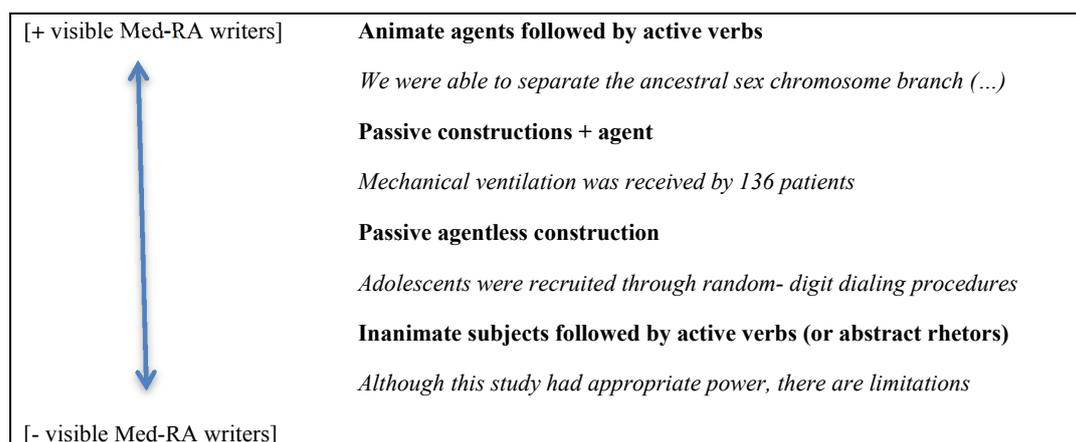
genres—even being considered as an evolution and adaptation of medical electronic journalistic reported versions (Nwogu, 1991). The textual conventions of this cross-bred genre are shaped by the medium of publication, the Internet, and by its communicative purposes since it aims to reach a broader and competent audience. This globalized audience use these texts that deal with newly Med-RAs medical findings because of their clarity, shortness and reliability (Herrando-Rodrigo, 2014).

3. Writers' (de)voicing mechanisms in written texts

Among many completing and related aspects, this Special Issue delves into the field of writers' identity and its study in Applied Linguistics. As it is very well known, attention has been lately paid to this linguistic phenomenon from Ivanič's (1998) seminal work; *Writing and Identity*. It is important to note, nevertheless, that this multifaceted term has been approached by exploring, for instance, how a writer's identity could be alienated by the dominant discourses of the academia or the institutions (Foucault, 1972). It has also been demonstrated that the identity of any writer may be affected by other dominant identities (Fairclough, 1992, 1995). Thus, it can be inferred that the idea of power and the social, ethnic and literary cannons shape not only discourse but also the self-identity of a writer. Stock and Eik-Nes (2016) show how the concept of writers' identity in Applied Linguistics focuses on the academic writers' construction of that identity. In the same vein, awareness has been raised about the real self and the artificial imposed identities adopted in writing. Butler (1990) insists on the fact that constructing an identity when writing is just a performance (Butler, 1990). Ivanič (1998) draws our attention to the fact that some linguistic and textual choices made by writers—being these choices imposed or even expected by the generic conventions of the texts (Swales & Feak, 2004; Matsuda & Tardy, 2007), should be interpreted as realizations of the writers' self. Needless to say, as the studies on dialogicity gathered in this Special Issue, that the writers' identity is perceived, negotiated and interpreted by a given audience while reading the writers' texts.

Although the writers' self has generally been conceived as a marker of individuality and ideological expression of Western cultural hegemony (Hyland & Sancho, 2012), it is also a full-bodied theoretical concept that, as Tardy (2012) claims, has much to offer to the study of written discourse. Needless to say, the multifaceted notion of writers' identity in written texts can be approached under similar angles: persona, ethos, ownership, stance, authority, credibility or voice, to name a few (John, 2005). However, a clearer distinction should be made among all these related yet not identical approaches. For instance, *writers' positioning* that is, "adopting a point of view in relation to both the issues discussed in the text and to others who hold points of view on those issues" (Hyland, 2005a: 175) is different from *writers' presence or voice* "what the writer seems to own; a process, ideas and knowledge" (John, 2005: 88). The former can be framed in an attitudinal dimension to de analysis of discourse (stance) and the latter as an objectivity mechanism to raise credibility in written discourse (authority). The formal features which portray the clearest claim of visibility in written discourse have been approached from traditional angles such as metadiscourse (Hyland, 2005b; Lorés-Sanz, 2006; Mur-Dueñas, 2007), transitivity system (Halliday & Martin, 1993; Martínez, 2001, 2005) or rhetorical studies (Luzón, 2000; Vande Kopple, 2002) among others. Above all, writers are expected to be visible in their academic texts by means of the following linguistic manifestations: the first person plural pronoun we, the object pronoun us and the possessive adjective our, with all the instances used as exclusive elements, that is, referring only to the researchers who write the research articles. As numerous studies already proved (Hyland, 2005a,b; Herrando-Rodrigo, 2010; Carrió-Pastor, 2020), the most visible claim of visibility found in the Research Articles is the use of self-mentions. To explore the notions of identity, visibility and voice in medical research articles written in English, a model of writer's voice, inspired by previous research (see Tang & John, 1999; Martínez, 2001, 2005; John, 2007; Lorés-Sanz, 2008; Bordet, 2013 and Lehman, 2018) and its further interpretation, was devised in 2019 (Herrando-Rodrigo, 2019). This model is revised here to reflect on the voicing mechanisms used when the narrative of the medical findings is recontextualized to different audiences and with different purposes:

Figure 3. Cline of Med-RA writers' visibility (Herrando-Rodrigo, 2019: 58)



Hence, this paper first studies the recurrence of the morphological units that are used to openly represent the authors in Med-RAs (such as the use of personal pronouns, object pronouns or possessive adjectives) and their subsequent adaptation when Med-RAs are transformed into Med-E-Pops. To accomplish this task, Med-E-Pops (as a direct result and conventionalised version of their corresponding Med-RAs) are observed closely. Whereas the focus of this research is to reflect on the potential visibility of the popularizations' writers and therefore the resulting objectivity of the final electronic text published on specialised websites, a contrastive analysis has to be constantly carried out mirroring each pair—Med-RAs and Med-E-Pops. This research procedure enables a lucid reflection on the process of Med-RAs translation into Med-E-Pops and also cast light onto the rationale of the lexico-grammatical and rhetorical choices made by the Med-E-Pop writers when adapting the academic medical texts into popularizations.

It could be expected that specialized writers who report knowledge information may take a stand in the process of knowledge mediation and dissemination from the source text onto the popularized version, avoiding objectivity and neutral arbitration of language and content. These writers may even state their presence somehow deceiving (or not) genre readers' expectations (Stock & Eik-Nes, 2016) since the writers, their editors of the digital publication may pursue commercial (or other) proposes. Acknowledging that voice is inevitable in written texts (Lillis & Curry, 2010), this paper will contribute, in line with previous studies on the notion of interpersonality (Dressen-Hammouda, 2008, 2014; Lorés-Sanz, Mur-Dueñas, & Lafuente-Millán, 2010; Herrando-Rodrigo, 2019; Suau-Jiménez, 2020), to the exploration of the notion of voice as a linguistic phenomenon that can be measured and interpreted from the linguistic and textual features chosen by the writer. In the case of knowledge dissemination texts, (de)voicing mechanisms contribute to raise credibility around the writers and the texts themselves by constructing an almost invisible identity and an audible writers' voice.

4. Objectives

This paper explores how Med-E-Pops mirror their Med-RAs counterparts when portraying the most visible claim of visibility found in the Med-RAs: self-mentions. It will be observed how Med-E-Pops writers use (de)voicing mechanisms to craft their invisible presence by bringing the researchers' visibility to the foreground.

5. Corpus and methods

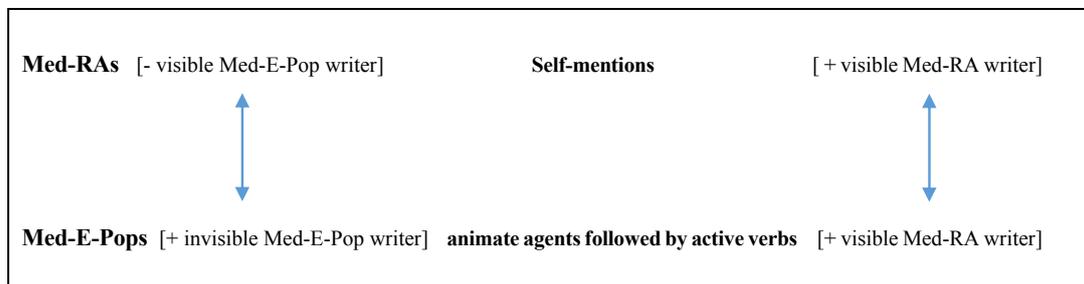
To explore how the writers' voice in Med-RAs has been adapted, or mediated, in their corresponding Med-E-Pops, a self-compiled corpus of 40 Med-RAs and their 40 Med-E-Pops published in 2009 in trustworthy digital sources was gathered to conduct a contrastive discourse analysis. The 40 Med-E-Pops were published in seven different American and British electronic publications and were written in English by specialized writers and journalist. The trustworthy digital sources were recommended to this author by medical experts (see for this account Herrando-Rodrigo, 2020). The electronic publications were: *Doctor's Guide*, *New York Times Health Guide*, *Johns Hopkins News Release*, *Health Day News*, *Medical News Today*, *Science Daily*, and *Nature*. Med-E-Pops were numbered from 1 to 40 following the date of publication in the web site. The corpus of Med-E-Pops amounts to a total of 21,840 words. The average number of words per Med-E-Pop was 546. Since Med-E-Pops acknowledged the Med-RAs and included a link to the original article, 40 coauthored Med-RAs published in international journals—classified in the first quartile of their category JCR (Q1)—were selected. These medical journals were: *American College of Surgeons*, *American Journal of Epidemiology*, *An International*, *Journal of Obstetrics and Gynaecology*, *Annals of Internal Medicine*, *Archives of Neurology*, *Autism*, *British Medical Journal*, *Clinical Cancer Research*, *Clinical Journal of the American Society of Nephrology*, *Gynecologic Oncology*, *Human Reproduction*, *Journal of Allergy and Clinical Immunology*, *Journal of Clinical Endocrinology Metabolism*, *Journal of Consulting and Clinical Psychology*, *Journal of Epidemiology and Community Health*, *Journal of Palliative Medicine*, *Journal of the American Medical Association*, *Neurology*, *New England Journal of Medicine*, *Pediatrics*, *Plos Genetics*, *PlosPathogens*, *The British Journal of Medicine*, *The Journal of Urology* and *The Lancet*. The corpus of Med-RAs amounts to a total of 182,065 words. The average number of words per article was 4,452, once the abstract, footnotes, acknowledgements, and bibliography were removed. To create a pair (Med-RA and Med-E-Pop), the Med-RAs were selected because their corresponding Med-E-Pops fulfilled in the first place a conventionalized criterion defined and studied in previous research mentioned above (Herrando-Rodrigo, 2020).

To study how the clearest realizations of the Med-RAs writers voice (self-mentions) were recontextualized in the Med-E-Pops, the texts were manually scanned and no computers tools were used to analyze the linguistic mechanisms used by Med-E-Pops writers. In the Med-E-Pops corpus, rather than self-mentions as the most salient evidence of the personal authorial voice, animate agents followed by active verbs is the most frequent linguistic mechanism used. These realizations directly refer to the researchers with common and proper nouns as head or nucleus of the nominal groups, which would be interpreted as the clearest claim of visibility in Med-E-Pops:

- (i) **We present** the derivation and validation of (...). [Med-RA5]
- (ii) **British scientists have developed** an online tool for (...). [Med-E-Pop5]

Thus, the following cline is proposed to interpret the results from the contrastive analysis on the writers' voice:

Figure 2. Cline of visibility designed for the interpretation of the Med-E-Pops corpus

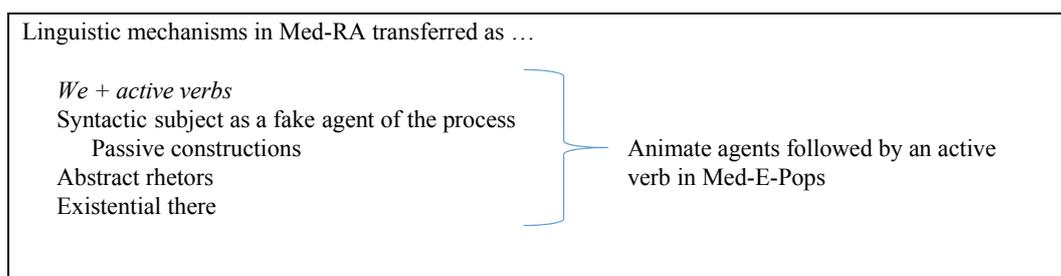


Animate agents followed by active verbs might allow a greater Med-E-Pops writers' invisibility since writers could choose a type of noun: (i) general nouns, a nucleus of the noun phrase that substitutes Med-RAs researchers, or (ii) personal references to the scientists' names). Additionally, the patterns of experience or verbal process that could project a clearer positioning or evaluation on behalf of the Med-E-Pops writers are also intended to be analysed. For such purpose the following section will turn to Systemic Functional Linguistics (SFL) to interpret the semantic implications of active verbs, see by way of example:

- (iii) **The scientists cautioned** that the women in the study would have to be followed (...). [Med-E-Pop26]
- (iv) **Dr. Richard Sherman and Dr. Ojas Mehta** from the University (...) **looked at the potassium** (...) [Med-E-Pop34]

While the clearest instantiation of Med-RAs visibility, the use of self-mentions, was recontextualized in Med-E-Pops by the use of animate agents followed by active verbs, it becomes apparent that not all the noun phrases used in Med-E-Pops might be originally self-mentions in their corresponding Med-RAs as Figure 3 illustrates:

Figure 3. Linguistic mechanisms in Med-RAs transferred as animate agents followed by active verbs in Med-E-Pops



Thus, the following section explores who is visible in each corpus and how Med-E-Pops mirror their counterparts when portraying the most visible claim of visibility found in the Med-E-Pops corpus: animate agent + active verb. Additionally, it also explores the linguistic mechanism (syntactic subject as a fake agent of the process, passive constructions, abstract rhetors and existential there) that originated the choice of animate agent + active verb in Med-E-Pops, for its interpretation from the notion of writers' visibility. In other words, section 6 intends to unveil how the voice of the medical research agents, the Med-RAs researchers, is transferred, maintained or blurred in the popularized Med-RAs versions written by specialized writers –different from the Med-RAs writers.

6. Results and discussion

As stated above, this paper explores how the writers' voice in medical research articles has been adapted, or mediated, in their corresponding medical popularizations published on-line. By manually scanning the self-compiled corpus of 40 Med-RAs and their 40 Med-E-Pops, it will be shown how evidence of the most personal authorial voice used in research articles, self-mentions, are adapted in the Med-E-Pops texts using other voicing mechanisms as animate

agents followed by active verbs. This section intends to show that a clearer distinction could be made among the different used to study the writers' identity in written texts. For instance, the focus could be placed on the distinction between writers' positioning (Hyland, 2005a) and writers' presence or voice (John, 2005) since the former can be framed in an attitudinal dimension to the analysis of discourse (stance) and the latter as an objectivity mechanism to raise credibility in written discourse (authority). Concretely, the findings discussed below are the result of a dissection procedure in which the focus has been placed on the realizations of the Med-E-Pops writers' voice. This notion is understood as a linguistic phenomenon that stands on its own and neutrally claim the presence –regardless how unintended or invisible this presence is aimed to be, of a writer and the consequent interpretation of that presence or visibility.

Based on visibility models, as the one referred in section 4, the clearest instantiation of the writers' voice is carried out by first person pronouns. Table 1 summarizes the contrastive results on the present study:

Table 1. First person pronouns found in Med-RAs and Med-E-Pops.
Total number of tokens and normalised results per 1000 words

Lexico-grammatical variable studied	Med-RAs	Med-E-Pops
First person pronouns	1,165 (6.39)	0

In the Med-RAs corpus, researchers claim the authorship of their work and the ownership of their findings using self-mentions as exemplified below. Only exclusive pronouns were considered in the analysis since they exclude from these self-mentions every participant who is not a member of the research team. Moreover, only plural forms were found since all the Med-RAs were co-authored. See for example:

- (1) Finally, as with all observational studies, **our** data do not allow **us** to infer the direction of causality between negative religious coping and well-being. In addition, although several studies have demonstrated that religious coping generally has a direct association with well-being, it is possible that another, unmeasured variable (e.g., hopelessness) mediates this relationship. [Med-RA31]
- (2) Table 5 shows the results of the Cox regression analysis for the QDScore. After adjustment for all other variables in the model, **we** found significant associations with risk of type 2 diabetes in both men and women for age, body mass index, family history of diabetes, smoking status, treated hypertension, use of corticosteroids, diagnosed cardiovascular disease, social deprivation, and ethnicity. **We** therefore included these variables in the final model and risk prediction algorithm. [Med-RA5]

The tokens found represent the authorial voice of the researchers—making their presence and voice more visible in the texts—by means of the three morphological units under study as Table 2 summarizes:

Table 2. Use of pronouns as authorial markers in Med-RAs.
Total number of tokens and normalised results per 1000 words

we	us	our	Total
763 (4.9)	12 (0.06)	390 (2.14)	1,165 (6.39)

As expected, these results show that the use of the first person plural pronoun *we* and the possessive adjective *our* are the most common authorial devices in Research Articles whereas the frequency of object pronoun *us* is very low.

I now turn to the Med-E-Pops corpus in which no self-mention tokens were found. The contrastive data analysis suggests that Med-E-Pops writers choose to report medical issues in such a way that writers make themselves invisible in order to promote researchers' visibility. In other words, Med-E-Pops writers do not self-represent themselves. To do so, Med-E-Pops writers do not mention themselves anywhere in their texts or try to engage with the reader manipulating or guiding readers' attention towards any point in particular. Med-E-Pops writers only portray the authorship of the Med-RAs researchers. It should not be forgotten that although Med-E-Pops writers attempt to produce an inaudible voice, they still portray their voice by selecting some linguistic devices instead of others. The following instances aim to show that Med-E-Pops writers transform the self-mentions—among other lexico-grammatical features mentioned further in this section—used in Med-RAs into noun phrases, functioning as animated syntactic subjects, followed by active verbs that clearly state who the person directly responsible for the research process is, as exemplified below in the contrastive results from Med-RA3 into Med-E-Pop3:

- (3) Furthermore, **we found that** its expression was MyD88-dependent when cells were stimulated with LPS or Mtb. Genetic variation leading to the loss or alteration of CCL1 function may influence the ability of T cells,

monocytes and dendritic cells to migrate to the site of infection, aggregate into granulomas and develop an effective immune response. This may result in inadequate containment of the bacterium and allow unimpeded bacterial growth leading to pulmonary disease. [Med-RA3]

- (4) Using this method, the **authors showed** that the inflammatory mediator CCL1 is specifically associated with host susceptibility to pulmonary TB. [Med-E-Pop3]

Results from the contrastive analysis of Med-RAs and Med-E-Pops suggest that noun phrases that referred to the researchers in Med-E-Pops mainly replaced the self-mentions used in Med-RAs. These noun phrases found in Med-E-Pops are easily associated with Med-RAs researchers' visibility since a general noun as a phraseological nucleus that establishes a lexical reference with the authors of the medical research is used. However, it should be noticed that not all the noun phrases that referred to the Med-RAs researchers followed by active verbs were always originated by self-mentions back in Med-RAs. Forty eight percent of these noun phrases followed by active verbs found in the Med-E-Pop were originated by impersonal lexico-grammatical features different from self-mentions. These linguistic features were: syntactic subjects that are fake agents, passive constructions, abstract rhetors and one instance of an existential *there*. Some examples, shown below, aim to illustrate this transformation process from Med-RAs into Med-E-Pops:

- a) Self-mentions used in Med-RAs which were transferred as animated subjects followed by active verbs in Med-E-Pops:

- (5) **We present** the derivation and validation of a new risk prediction algorithm for assessing the risk of developing type 2 diabetes among a very large and unselected population derived from family practice, with appropriate weightings for ethnicity and social deprivation. **We designed the algorithm** (the QDScore) so that it would be based on variables that are readily available in patients' electronic health records or which patients themselves would be likely to know—that is, without needing laboratory tests or clinical measurements—thereby enabling it to be readily and cost effectively implemented in routine clinical practice and by national screening initiatives. [Med-RA5]
- (6) **British scientists have developed** an online tool for predicting your risk of developing adult-onset diabetes. [Med-E-Pop5]

- b) Passive constructions in Med-RAs which were transferred as animated subjects followed by active verbs in Med-E-Pops:

- (7) A complete description of the cohort and study design is presented elsewhere. Briefly, black and Dominican- American women who resided in Washington Heights, Harlem, or the South Bronx in New York, New York, **were recruited** between 1998 and 2003, through local prenatal care clinics, into a prospective cohort study. [Med-RA32]
- (8) To assess the impact of PAH exposure in the womb, **the authors conducted** air monitoring between 1998 and 2003, during the pregnancy of 249 black and Dominican-American mothers in the Washington Heights and Harlem areas of New York City. [Med-E-Pop32]

- c) Abstract rhetors or inanimate agents followed by active verbs in Med-RAs which were transferred as animated subjects followed by active verbs in Med-E-Pops:

- (9) **The results of this study indicated** that a brief (6- to 8-session) family-based preventive intervention reduced the 1-year incidence of anxiety disorders and significantly reduced levels of anxiety symptomatology in the offspring of parents with anxiety disorders [Med-RA11]
- (10) In what is believed to be the first U.S. study designed to prevent anxiety disorders in the children of anxious parents, **researchers at the Johns Hopkins Children's Center have found** that a family-based program reduced symptoms and the risk of developing an anxiety disorder among these children. [Med-E-Pop11]

The distribution of the lexico-grammatical structures found in Med-RAs that are transferred to Med-E-Pops as animate agents followed by an active verb is summarized in the following table:

Table 3. Med-RAs lexico-grammatical structures transformed into noun phrases that refer to researchers in Med-E-Pops (total number of tokens, percentage and normalised results per 1,000 words).

Lexico-grammatical structures found in Med-RAs that are transferred to Med-E-Pops as noun phrases followed by an active verb	Number of tokens and percentage	Normalised result per 1,000 words
We + active verb	40 (51.94 %)	1.83
Syntactic subject as a fake agent of the process	17 (22.07 %)	0.76
Passive constructions	13 (16.88 %)	0.58
Abstract rhetors	6 (7.79 %)	0.27
Existential there	1 (0.77 %)	0.04
Total	77	3.48

These results may suggest that Med-E-Pops writers do create a direct connection with the researchers' visibility. Therefore, writers hide their visibility behind the scientists' lexical reference as shown above. In other words, Med-E-Pops writer not only transfer *animate agent + active verb* structures into noun phrases that refer to Med-RAs researchers (see examples 5 and 6 mentioned above) but they also decide to transform other lexico-grammatical features used by the Med-RAs researchers into a more personal reference to the researchers of Med-RAs, as shown in examples 7 and 8; 9 and 10. Table 3 shows that almost 23 % of the noun phrases found in Med-E-Pops originated from syntactic subjects in the Med-RAs corpus and could be classified according to Downing and Locke (2002) as fake agents. A further reference is later made in this discussion of results to these writers' reflections on the verbal process or patterns of experience that follow the nominal groups or animate agents found in the Med-E-Pops corpus. An example is included below to illustrate this point:

- (11) For this analysis, we disregarded CP as an outcome and combined our cohort of 443 CP cases and 883 controls (total 1326) before separating them on the basis of APOs. **A total of 717 of the 1326 babies (54.1 %) met** the following selection criteria for cases. Some cases had more than one condition: [...] [Med-RA1]
- (12) **Researchers** compared 609 normal pregnancies with 717 that had one or more of four adverse outcomes: premature birth, small for gestational age, bleeding during pregnancy or pre-eclampsia. [Med-E-Pop1]

In the example 11, researchers could have said; "We selected 712 of 1326 babies according to the following criteria". It can be clearly seen that the syntactic subject of the Med-RA is not the semantic subject or agent of the process. It may seem that the subject is potentially affected by an involuntary process. It is then the Med-E-Pop writer who transfers that fake agent or depersonalised structure demanded by the rhetorical conventions of the RAs genre into a personal and direct material process that simplifies both the Med-E-Pops syntactic structures and semantic comprehension.

Table 3 shows that the following lexico-grammatical structure used in Med-RAs (in terms of frequency) that is found to be personalised in this Med-E-corpus is the use of the passive. Thirteen tokens have been found in the Med-E-Pops corpus. In other words, 16.88 % of the noun phrases that represented the Med-RAs researchers in Med-E-Pops were originated in the Med-RA corpus by passive constructions. In these structures the real agent is inferred and somehow present since it is not mentioned but easily deduced. In Med-RAs the agents of the research processes are not introduced because the rhetorical conventions of the medical genre lead researchers towards the use of agentless constructions as exemplified below:

- (13) **Data were collected** retrospectively or prospectively on all patients with 2009 influenza A(H1N1)-related critical illness admitted to the ICU between April 16 and August 12, 2009. Research ethics board approval was granted by Sunnybrook Health Sciences Centre as the central coordinating center on April 30, 2009, and by each participating local research ethics board. [Med-RA40]
- (14) **Anand Kumar, MD, Health Sciences Centre and St. Boniface Hospital, Winnipeg, Manitoba, and colleagues with the Canadian Critical Care Trials Group H1N1 Collaborative conducted** an observational study of critically ill patients with influenza H1N1 in 38 adult and paediatric intensive care units (ICU) in Canada between April 16 and August 12, 2009. [Med-E-Pop40]

Another lexico-grammatical structure used in Med-RAs that has been personalised in the transferring process or adaptation from Med-RA into Med-E-Pop was the use of abstract rhetors or inanimate subjects followed by active verbs (almost 8 % of total number of tokens) show how a RA lexico-grammatical convention such as the use of non-animated nouns carrying out human research processes by means of active verbs are personalised as well by the Med-E-Pops writers as shown in the following examples:

- (15) Pediatric solid malignancies display important angiogenic potential, and blocking tumour angiogenesis represents a new therapeutic approach for these patients. **This is the first report evaluating circulating endothelial cells**, bone marrow derived (BMD) endothelial progenitor cells, and angiogenic plasma proteins in the peripheral blood of patients with pediatric solid malignancies. We observed that strikingly high levels of BMD endothelial progenitors correlated with metastatic disease. **These results support and extend recent preclinical findings indicating** that these cells may play a pivotal role in metastatic disease progression. [Med-RA28]
- (16) **While the researchers were not surprised to detect** circulating endothelial cells and endothelial progenitor cells in paediatric patients, they **were surprised** to find these cell levels were significantly higher in patients with metastatic disease compared with levels found in healthy participants [Med-E-Pop28]

I have considered the recurrence of the only instance of *existential there* meaningless, due to its low frequency that may resemble a collocation, which responds to the rhetorical conventions of the Med-RA genre:

- (17) Thus, **there was no evidence** that the serotonin transporter genotype alone or in interaction with stressful life events is associated with an elevated risk of depression in males alone, females alone, or both sexes combined. The only significant finding across studies was the potent association of stressful life events with the risk of depression. [Med-RA17]
- (18) **The authors reanalyzed** the data and found “no evidence of an association between the serotonin gene and the risk of depression,” no matter what people’s life experience was, Dr. Merikangas said. [Med-E-Pop17]

These results suggest that Med-E-Pops writers try to preserve the Med-RAs authorial visibility in the Med-E-Pops by translating the self-mentions used by the Med-RA authors into noun phrases that make a lexical reference to the researchers. Furthermore, there was a balance between this process of *visibility transfer* from Med-RAs self-mentions and the transformation of other lexico-grammatical structures mentioned above. That is, 52 % of the total number of nouns that refer to the Med-RAs researchers found in the Med-E-Pop corpus came from self-mentions in the corresponding Med-RAs, and the remaining 48 % originated in other lexico-grammatical structures (syntactic subjects such as fake agents, passive constructions, abstract rhetors and existential *there*). Therefore, it can be stated that Med-E-Pops writers chose to personalise and activate the researchers’ visibility in Med-E-Pops even when the same researchers had decided to use impersonal lexico-grammatical structures in their own Med-RAs, as is the case in 48 % of the instances discussed above. By doing this, Med-E-Pops writers emphasize the fact that the real actors of the research process reported in the Med-E-Pops are the Med-RAs researchers and not themselves as Med-E-Pops writers.

Turning the attention to these animate agents followed by active verbs, disregarding their original lexico-grammatical realization in Med-RAs, it should be noticed that in the Med-E-Pops corpus noun phrases are the most direct illustration of the Med-RAs researchers’ visibility in Med-E-Pops. Therefore, having observed and analyzed the texts included in the corpora it was decided to explore the noun phrases that referred to the researchers followed by active verbs or research acts in Med-E-Pops since the verbal processes ratify the Med-RAs researchers’ visibility in the Med-E-Pops. The following examples are included here to illustrate the starting point:

- (19) **We used a two-stage screening process** to define the prevalence and characteristics of mental disorders in Shandong, Zhejiang, and Qinghai provinces, and in a prefecture of Gansu province (Tianshui prefecture). We identified 363 primary sampling sites in the four provinces using multistage stratified random sampling methods (panel 1; figure). 66 554 individuals aged 18 years or older were identified with simple random selection methods in these sites, and 63 004 (95 %) completed the first-stage screening assessment. [Med-RA15]
- (20) To do the study, published in the journal Lancet last week, **researchers** at Columbia University and major psychiatric hospitals in Beijing, Shandong, Zhejiang, Qinghai and Gansu screened 63,000 adults with questionnaires, and psychiatrists interviewed more than 16,000 of them, often in local dialects. [Med-E-Pop15]
- (21) **Follow-up is needed** as many of the women in the cohort have not yet reached the peak age for ovarian cancer. [Med-RA26]
- (22) **The scientists cautioned** that the women in the study would have to be followed for many more years to see if their risk increased over time. The mean age for diagnosis of ovarian cancer in women is 63. [Med-E-Pop26]

In this study, those nouns that act as a nucleus of what explicitly refers to the Med-RAs researchers are described and classified—regardless of their original lexico-grammatical structure in Med-RAs—into two different categories to observe whether this classification may cast light on the interpretation of Med-E-Pops writers’ voice. In the Med-E-Pops corpus there were no traces of first person plural personal pronouns, object pronouns or possessive adjectives capable of representing the Med-E-Pops writers—as mentioned at the beginning of this section. What is found instead is the use of noun phrases that refer to Med-RAs researchers as (i) general nouns, a nucleus of the noun phrase that

substitutes Med-RAs researchers, and (ii), as personal references to the scientists' names, the name of the lead researcher and a reference to *his/her* colleagues or the cohesive use of the personal pronoun *they*, thereby establishing a cohesive reference to the researchers (see cohesion and coherence in Halliday & Hasan, 1976). These tokens were studied separately to observe whether a distinction between general nouns and nouns with personal reference to the researchers was meaningful to draw further conclusions on the research objectives of this study. These linguistic units are the syntactic subjects of an active voice verb, which represents an action carried out by the Med-RAs researchers. Here some examples are included to illustrate the classification inferred from the analysis of the Med-E-Pop corpus:

(i) General nouns that refer to the Med-RAs researchers:

- (23) **The scientists tested** each baby's blood within five days of birth for the DNA or RNA of eight different viruses, including five strains of herpes. [Med-E-Pop1]
 (24) **The authors propose** that this is key to maintaining graft viability in the long-term. [Med-E-Pop8]
 (25) **The researchers found** that a total of 168 patients had confirmed or probable H1N1 infection and became critically ill during this time period, and 24 (14.3 %) died within the first 28 days from the onset of critical illness. Five more patients died within 90 days. The average age of the patients with confirmed or probable influenza H1N1 was 32.3 years, 113 were female (67.3 %), and 50 were children (29.8 %). [Med-E-Pop40]

(ii) Use of proper names:

- (26) To find out, **he and his colleagues recruited** 41 volunteers with a history of large local reactions to insect stings. Many of the volunteers were subject to unavoidable frequent stings owing to outdoor jobs or hobbies. From that group, **Golden selected** those whose reactions were marked by extremely large swellings of at least 16 cm—about the size of a football—and winnowed out those who couldn't commit to evaluations that involved live insect stings or the rigorous study schedule. [Med-E-Pop18]
 (27) **Richard A. Krasuski, MD, Cleveland Clinic, Cleveland, Ohio, and colleagues examined the prevalence of PFO incidentally discovered** during cardiothoracic surgery and investigated the relationship of repair on outcomes and long-term survival. [Med-E-Pop24]
 (28) In the new study, **Dr. Richard Sherman and Dr. Ojas Mehta** from the University of Medicine and Dentistry of New Jersey, Robert Wood Johnson Medical School, **looked at the potassium** and phosphate content in “enhanced” and additive-free meats and poultry from area supermarkets. [Med-E-Pop34]

As regards the overall results, a total number of 77 tokens (3.52 when normalised per 1,000 words) were found in the Med-E-Pops corpus. The tokens found contribute to the projection of the authorial voice, of the Med-RA researchers in the Med-E-Pop texts. Table 4 illustrates the distribution of each realisation along the corpus:

Table 4. Use of noun phrases in Med-E-Pops referring the Med-RAs authors. Total number of tokens, normalised results per 1000 words and percentages of the total of nouns frequency.

The researchers	The authors	The scientists	Proper name and a reference to the research team	Total
40 (1.83) 51.94 %	10 (0.45) 12.98 %	4 (0.18) 5.19 %	23(1.05) 29.87 %	77 (3.52)

These data also show that the use of *the researchers* and the use of the proper name of the lead researcher followed by an active verb is the most recurrent authorial marker. The 77 tokens of authorial reference to the Med-RAs researchers were recorded in 38 Med-E-Pops. Therefore, only two Med-E-Pops showed no instance of personal reference to the Med-RA author (Med-E-Pop7 and Med-E-Pop14).

- (i) As for *general noun phrases that refer to the Med-RAs researchers*, 40 tokens of the noun phrase *the researchers* were recorded in the Med-E-Pops corpus. This figure (1.83 per 1,000 words) reveals that Med-E-Pops writers favour its use. It seemed at first interesting to consider the three nouns—the researchers, the authors and the scientists—under a single category; under the umbrella term of general noun phrases that refer to the Med-RAs researchers. This decision was made inspired by the observation of the results in context. However, I have included below the distribution later made for the research findings. The noun *researchers* is more recurrent because it is the noun that best describes the people who carry out the *research process*. It can be considered that the two other nouns found in the corpus have been used as synonyms of the noun *researchers*. The distribution of these 54 tokens (2.46 per 1,000 words) can be found in 32 Med-E-Pops. 20

Med-E-Pops only used these general nouns and the remaining 12 Med-E-Pops combined the use of these nouns with a reference to the proper name of the Med-RAs researchers.

- (ii) *Proper names.* The 23 tokens (1.05 per 1,000 words) of the noun phrases naming the *lead researcher* and *his/her team* or *colleagues* were found in 18 Med-E-Pops. Six Med-E-Pops only used proper names or personal references to refer to the researchers (Med-E-Pop21, Med-E-Pop25, Med-E-Pop27, Med-E-Pop34, Med-E-Pop36 and Med-E-Pop38). The remaining 12 Med-E-Pops, as mentioned above, combined the use of the general nouns that refer to the Med-RAs researchers, and the name of the lead researcher plus a reference to the rest of the team without naming them. This use of lexical reference highlights the presence of the researchers against the Med-E-Pops writers’ presence. A contrastive example has been included here by way of illustration:

Med- RA30	Med-E-Pop30
(29) We observed that immediately following the suppression of recombination between X and Y, likely due to their importance in both sexes, X gametologs largely maintained the ancestral autosomal sequence and functional constraints. In contrast, Y gametologs, as predicted due to absence of recombination [6], evolved under weaker purifying selection than X gametologs. Further, these different rates have been roughly maintained through evolutionary time by each of the sex chromosomes. Both X and Y gametologs, on average, acquired functional constraints stronger than quickly and slowly evolving copies of autosomal paralogs, respectively. This might have contributed to the survival of these gametologs.	Penn State researchers found that the Y chromosome, carried only by males, has evolved at a much more rapid pace than the X chromosome, which is carried by both males and females. The rapid evolution of the Y chromosome has led to a dramatic loss of genes on the chromosome.

I aimed to approach the notion of voice from the constructions of agents followed by active verbs. The data found in the Med-E-Pops corpus led this study to use SFL approaches to discourse analysis in order to interpret and discuss these findings. On the basis of Downing and Locke’s (2002) approach on how to express patterns of experiences, it should be realised that all the verbal processes found in the Med-E-Pops were active verbs that referred to either (i) material processes or processes of doing and causing or (ii) cognition or mental processes -as exemplified below. Table 5 below shows the distribution of these results in the Med-E-Pops corpus.

- (i) **University of Iowa researchers studied** 40 drivers with early Alzheimer’s disease and 115 elderly drivers with no diagnosis of dementia. [Med-E-Pop4]
- (ii) Although **the authors did not reflect** at length on the role of China’s economic rise, which has led to mass migrations of poor people to the cities, **they acknowledged that** they were measuring some effects. [Med-E-Pop15]

Table 5. Total number of processes that followed the noun phrases normalised per 1,000 words and percentage over the total number of instances

Material processes	Cognition processes	Total
40 (1.83) 51.94 %	37 tokens (1.69) 48.05 %	77 (3.52)

The material processes express an action or an activity, which is typically carried out by a *doer* or agent. Forty instances out of the 77 (1.83 per 1,000 words) tokens of processes were material. These verbal acts simply state what kind of actions and activities the researchers carried out in their research process. Almost 52 % (51.94 %) of the verbs that followed noun phrases that referred to Med-RAs researchers selected by the Med-E-Pops writers portrayed material processes carried out by the medical researchers. The writers explain what scientists did in order to infer their findings. The following example aims to support this:

- (30) **Emily T. Martin**, PhD, Children’s Hospital Research Institute and the University of Washington, Seattle, Washington, **and colleagues analyzed** data from 6 HSV-2 studies to assess the effectiveness of condom use in preventing the virus. [Med-E-Pop25]

Mental processes refer to processes of experiencing and sensing. Thirty-seven tokens (1.69 per 1,000 words) out of the overall number of processes found in the Med-E- Pops corpus represented cognitive processes that referred to the research carried out by the Med-RAs researchers. These mental processes (48.05 % of the total number of tokens) are focused on what has been done. They can be divided into processes of perception (*see, hear, feel*, etc.), cognition (*know, think, believe*, etc.) and affection (*like, dislike, please*, etc.). They share the role of a typical human participant

who consciously experiences (*sees, feels, thinks, etc.*). In this Med-E-Pops corpus only tokens of perception and cognition processes were found after the nouns that refer to Med-RAs researchers in Med-E-Pops. No distinction has been made between the subcategory *perception* and *cognition*. Actually, almost all the tokens belonged to the latter category. Example 31 aims to illustrate this point:

- (31) After adjusting for risk factors, the **researchers concluded** there was no increase in ovarian cancer risk associated with the drugs, nor was there an increased risk for women who underwent 10 or more cycles of treatment or for women who never became pregnant despite treatment. [Med-E-Pop26]

These patterns of experience or verbal processes that followed noun phrases that make lexical reference to the Med-RAs researchers were material processes and mental or cognition processes. These processes are, undoubtedly, carried out by the Med-RAs researchers. Med-E-Pops writers limit their responsibility to simply reporting what the researchers did and inferred from their research process.

7. Conclusion

This paper suggests that the projection of the writers' voice and their presence is inevitable in written texts. In this way, Med-E-Pops writers' choice for invisibility is still a choice that can be identified, analyzed, measured and interpreted. The starting point for the contrastive analysis of the researchers' and writers' clearest claim of visibility was the use of *we (they/the researchers) + active verbs* in their corresponding context (Med-RAs and Med-E-Pops). It was realized that in the Med-RAs corpus the frequency of use of self-mentions as traces of visibility was 6.39 per 1,000 words whereas in the Med-E-Pops corpus the frequency of the feature that more openly portray visibility (nominal groups that refer to the Med-RAs researchers followed by active verbs) was 3.52 per 1,000 words. It can first be concluded that Med-E-Pops writers have the same interest in preserving the visibility already expressed in Med-RAs by the researchers themselves through the use of self-mentions as in personalising and ratifying the researchers' visibility in Med-E-Pops. Secondly, the reformulation from impersonal (Med-RAs) to personal constructions (Med-E-Pops) also assists the understanding of whose agency, and therefore visibility, should be perceived. Med-E-Pops writers set out to clarify the idea that the real agents of the research story narrated in the Med-E-Pop are the Med-RAs researchers. Finally, it was observed that all these animate agents that referred to the Med-RAs researchers attempted not to enhance the Med-E-Pops writer's visibility but to blur it, by bringing the researchers authorship and therefore visibility to the foreground. These noun phrases are followed by patterns of experience that describe material and mental processes only carried out by the Med-RAs researchers. This practice confirms a direct semantic relation between *who did what* in the research process and facilitates the understanding of the medical content and research narrative. Thus, Med-E-Pops writers project their presence 'positioning themselves' as almost invisible mediators between Med-RAs and their corresponding Med-E-Pops.

All in all, the depersonalisation process observed in Med-E-Pops could be interpreted as the writers' conscious choice to avoid the projection of their own voice. This is not because the writers lack personal involvement with what they are writing about. On the contrary, Med-E-Pops writers detach themselves from their own opinion, by bringing the medical research agents' visibility and the researchers' findings into the popularised text using different lexico-grammatical structures associated to writers' devoicing mechanisms. Thus, as maintained by the open debate addressed in this Special Issue and recent research (Suau, Lorés, Mapelli & Herrando-Rodrigo, 2021), this study ultimately suggests that approaches to the notion of voice and related methodological frameworks of analysis need to be constantly refined and readapted to the specific corpus it is applied to, accepting new markers and new lexico-grammatical realizations.

Acknowledgement

This research is a contribution to the InterGedi research project and has been funded by the Ministerio de Economía y Competitividad (FFI2017-84205-P) and the Gobierno de Aragón (H16_17R) Spain.

References

- Adams-Smith, Diana E. (1987). The process of Popularization-Rewriting Medical Research Papers for layman: Discussion Paper. *Journal of the Royal Society of Medicine*, 80: 634-636.
- Bordet, Ganvier (2013). The Rhetorical Role of 'Collocational Chains' and their Implications in the Building of Scientific Discourse Strategies. *European Journal of English Studies* 17 (3), 235-250. <https://doi.org/10.1080/13825577.2013.867183>

- Breeze, Ruth (2015). Media representations of scientific research findings: From „stilbenoids raise CAMP expression“ to „red wine protects from illness“. In Maurizio Gotti, Stefania Maci and Michele Sala (eds.). *Insights into Medical Communication*. Bern, Berlin, Brussels, Frankfurt am Main, New York, Oxford, Vienna: Peter Lang, 311-330. <https://doi.org/10.4000/asp.4739>
- Bucchi, Massimiano & Renato Mazzolini (2003). Big science, little news: Science coverage in the Italian daily press, 1946–1997. *Public Understanding of Science* 12: 7–24. <https://doi.org/10.1177%2F0963662503012001413>
- Carrió-Pastor, Maria Luisa (2020). Variation in the Use of Self-Mentions in Different Specific Fields of Knowledge. In Marria Luisa Carrió Pastor (ed) *Academic English. In Corpus Analysis in Different Genres*. London/New York. Routledge, 5-25. <http://dx.doi.org/10.1016/j.esp.2020.07.002>
- Colson, Vinciane (2011). Science blogs as competing channels for the dissemination of science news. *Journalism*, 12(7), 889-902. <https://doi.org/10.1177%2F1464884911412834>
- Clark, Fiona & Illman, Deborah (2006). A Longitudinal Study of the New York Times Science Times Section. *Science Communication* 27 (4), 496-513. <http://dx.doi.org/10.1177/1075547006288010>
- Downing, Angela & Locke, Philip (1992) 2002. *A University Course in English Grammar*. London: Routledge.
- Dressen-Hammouda, Dacia (2008). From novice to disciplinary expert: Disciplinary becoming and genre mastery. *English for Specific Purposes* 27, 233-252. <https://doi.org/10.1016/j.esp.2007.07.006>
- Dressen-Hammouda, Dacia (2014). Measuring the voice of disciplinary in scientific writing: A longitudinal exploration of experienced writers in geology. *English for Specific Purposes* 34, 14-25. <https://doi.org/10.1016/j.esp.2013.10.001>
- Engberg, Jan (2016). Emphasising the Individual in Legal Translation: Consequences of Knowledge Communication and Post-Structuralist Approaches. In Giuliana Garzone, Dermot Heaney and Giorgia Riboni (eds) *Language for Specific Purposes: Research and Translation across Cultures and Media*. Cambridge: Cambridge Scholars Press, 41-61.
- Enberb, Jan (2021). *Dissemination, popularization and vulgarization of science - How to distinguish them?*. InterGedi International Conference 90th 10th December, 2021 (Zaragoza, Spain). Online Conference. <https://zenodo.org/badge/DOI/10.5281/zenodo.5733244.svg>.
- Fairclough, Norman (1992). *Discourse and Social Change*. Cambridge: Polity Press.
- Fairclough, Norman (1995). *Critical Discourse Analysis*. Harlow: Longman.
- Fayard, Pierre (1993). *Sciences aux Quotidiens*. Niza: Z'édicions.
- Foucault, Michel (1972). *The Archaeology of Knowledge*. London: Tavistock.
- Garzone, Giuliana (2006). *Perspectives on ESP and Popularization*. Milano: CUEM
- Gil-Salom, Luz (2000-2001). El discurso de la ciencia y la tecnología: El artículo científico de investigación vs. el artículo de divulgación científica. *RESLA* 14, 429-449.
- Gilberg, John. K., & Stocklmayer, Susan. M. (eds.). (2012). *Communication and Engagement with Science and Technology: Issues and Dilemmas - A Reader in Science Communication*. Routledge. <https://doi.org/10.4324/9780203807521>
- Giunchi, Paola (2002). “Information or Misinformation? ‘Translating’ Medical Research Papers into Web-posted Accounts”. In Giuseppina Cortese and Philip Riley (eds.). *Domian-specific English*. Bern: Peter Lang: 271-293.
- Gotti, Maurizio (2014). Reformulation and recontextualization in popularization discourse. *Ibérica*, 27, 15-34.
- Halliday, Michael A. K., & Hasan, Ruqaiya (1976). *Cohesion in English*. *English Language Series*. London: Longman.
- Halliday, Michael A. K. & Martin, James (1993). *Writing Science: Literacy and Discursive Power*. London: Falmer Press.
- Herrando-Rodrigo, Isabel (2010). ‘If you suffer from...Check the Internet’: The role of Self Mentions and Engagement Markers in Medical Research Articles and Electronic Popularizations. In Lorés-Sanz, Rosa, Mur-Dueñas, Pilar and Lafuente-Millán, Enrique (eds.) *Constructing interpersonality: Multiple perspectives on written Academic genres*. Cambridge: Cambridge Scholars Publishing, 255-275.
- Herrando-Rodrigo, Isabel (2014). Is the Medical Profession in Spain Living the Culture of ‘Google it’?. En L. Andrezej y W. Krystyna (eds.). *Occupying Niches: Interculturality, Cross-Culturality and Acultrality in Academic Research*. Switzerland. Springer International Publishing: 135-149.
- Herrando-Rodrigo, Isabel (2019). Raising awareness around writers’ voice in academic discourse: An analysis of writers’ (in) visibility. *Brno Studies in English* 45(2): 53-76. <https://doi.org/10.5817/BSE2019-2-3>
- Herrando-Rodrigo, Isabel (2020). Collaborating with Disciplinary Experts in Corpus Compilation Processes. In María Luisa Carrió Pastor (ed) *Academic English. In Corpus Analysis in Different Genres*. London/New York. Routledge, 117-135. <https://doi.org/10.4324/9780367815905>
- Hyland, Ken (2005a). Stance and engagement: A model of interaction in academic discourse. *Discourse studies*, 7(2), 173-192. <https://doi.org/10.1177/1461445605050365>
- Hyland, Ken (2005b). *Metadiscourse*. London: Continuum. <https://doi.org/10.1017/S0047404508080111>
- Hyland, Ken (2010). Constructing proximity: Relating to readers in popular and professional science. *Journal of English for Academic Purposes* 9: 116-127. <https://doi.org/10.1016/j.jeap.2010.02.003>
- Hyland, Ken & Sancho-Guinda, Carmen (2012). *Stance and voice in academic genres*. Basingstoke: Palgrave Macmillan. (eds.)
- Ivanič, Roz. (1998). *Writing an identity: the discursal construction of identity in academic writing*. Amsterdam: John Benjamins Publishing Company.
- John, Suganthi (2005). *The writing process and writing Identity: Investigating the influence of revision on linguistic and textual features of Writer Identity in dissertations*. UK: University of Birmingham. PhD Thesis (Unpublished).
- John, Suganthi. (2007). Meeting the challenge of developing an academic identity a textual approach. In: Teo, P and Ho, C. (eds.), *Discourse in the modern world: Perspectives and challenges*. Singapore: McGraw-Hill, 28-52.
- Kastberg, Peter (2011). Knowledge Asymmetries - Beyond “To Have and Have Not”. *Fachsprache: International Journal of Specialized Communication*, 137-151.
- Lehman, Iga (2018). *Authorial Presence in English Academic Texts: A Comparative Study of Student Writing Across Cultures and Disciplines*. Berlin, Bern, Bruxelles, New York, Oxford, Warszawa, Wien: Peter Lang. <https://doi.org/10.3726/b14175>
- Lorés-Sanz, Rosa (2006). ‘I will argue that’: First person pronouns and metadiscoursal devices in research article abstracts in English and Spanish. *ESP Across Cultures* 3, 23-40.

- Lorés-Sanz, Rosa (2008). Authorial visibility in research article and research article abstracts: the intergeneric perspective. In Burgess, Sally and Martín-Martín, Pedro (eds.) *English as an Additional Language in Research Publication and Communication*. Berlin: Peter Lang, 105-122.
- Lorés-Sanz, Rosa, Mur-Dueñas, Pilar & Lafuente-Millán, Enrique (eds.). (2010). *Constructing interpersonality: Multiple perspectives on written Academic genres*. Cambridge: Cambridge Scholars Publishing
- Lillis, Theresa & Curry, Mary Jane (2010). *Academic writing in a global context: the politics and practices of publishing in English*. London: Routledge.
- Luzón, María José (2000). Collocational framework in medical research papers: a genre-based study. *English for Specific Purposes* 19 (1), 63-86. [https://doi.org/10.1016/S0889-4906\(98\)00013-1](https://doi.org/10.1016/S0889-4906(98)00013-1)
- Luzón, María José (2022). ‘Coronavirus explainers’ for public communication of science: Everything the public needs to know. In Andreas Musolff, Ruth Breeze, Kayo Kondo, Sara Vilar-Lluch (Eds.) *Pandemic and Crisis Discourse: Communicating COVID-19 and Public Health Strategy*, Bloomsbury Publishing, 72-97.
- Mahrt, Merja & Puschmann, Cornelius (2014). Science blogging: an exploratory study of motives, styles, and audience reactions. *Journal of Science Communication* 13, <https://doi.org/10.22323/2.13030205>.
- Martínez, Iliana. A. (2001). Impersonality in the research article as revealed by analysis of the transitivity system. *English for Specific Purposes* 20(3), 227-247. [https://doi.org/10.1016/S0889-4906\(00\)00013-2](https://doi.org/10.1016/S0889-4906(00)00013-2)
- Martínez, Iliana A. (2005). Native and non-native writer’s use of first person pronouns in the different sections of biology research articles in English. *Journal of Second Language Writing* 14 (3), 174-190. <https://doi.org/10.1016/j.jslw.2005.06.001>
- Matsuda, Paul & Tardy, Christine (2007). Voice in Academic Writing: The Rhetorical Construction of Author Identity in Blind Manuscript Review. *English for Specific Purposes* 26 (2), 235-249. <https://doi.org/10.1016/j.esp.2006.10.001>
- Mur-Dueñas, Pilar (2007). ‘I/we focus on...’ A cross-cultural analysis of self-mentions in business management research articles”. *Journal of English for Academic Purposes* 6 (2), 143-162. <https://doi.org/10.1016/j.jeap.2007.05.002>
- Nelkin, Dorothy (1990). *La ciencia en el escaparate*. Madrid: Fundesco
- Nwogu, Kevin N. (1991). “Structure of Science Popularizations: A Genre-Analysis Approach to the Schema of Popularized Medical Texts”. *English Specific Purposes* 10: 111-123. [https://doi.org/10.1016/0889-4906\(91\)90004-G](https://doi.org/10.1016/0889-4906(91)90004-G)
- Pal, Anjan & Banerjee, Snehasish (2021). Internet users beware, you follow online health rumors (more than counter-rumors) irrespective of risk propensity and prior endorsement. *Information Technology & People* 34 (7), 1721-1739. <https://doi.org/10.1108/ITP-02-2019-0097>
- Sala, Michelle & Consonni, Stephania (2019). Article titles in online medical popularization. In Marina Bondi, Silvia Cacchiani and Silvia Cavalieri (eds.) *Communicating Specialized Knowledge: Old Genres and New Media*. Cambridge: Cambridge Scholars Publishing 16-32.
- Stilgoe, Jack, Lock, Simon J & Wilsdon James (2014). Why should we promote public engagement with science? *Public Understanding of Science*. 23(1), 4-15. doi:10.1177/0963662513518154
- Stock, Ingrid & Eik-Nes, Nancy (2016). Voice features in academic texts – A review of empirical studies. *Journal of English for Academic Purposes* 24, 89–99. <https://doi.org/10.1016/J.JEAP.2015.12.006>
- Suau, Francisca (2020). Closeness and distance through the agentive authorial voice: Construing credibility in promotional discourse. *International Journal of English Studies* 20, 73-92. <https://doi.org/10.6018/ijes.416301>
- Suau, Francisca, Lorés, Rosa, Mapelli Giovanna & Herrando-Rodrigo, Isabel (2021). La interpersonalidad discursiva como alternativa al metadiscurso interpersonal. *Onomazéin* 54, 113-141. <https://doi.org/10.7764/onomazein.54.07>
- Swales, John & Feak, Christine (2004). *Academic Writing for Graduate Students: Essential Tasks and Skills*. Michigan series in English for Academic and Professional Purposes. <https://doi.org/10.3998/mpub.2173936>
- Tang, Ramona & John, Suganthi (1999). The ‘I’ in identity: Exploring writer identity in student academic writing through the first person pronoun. *English Specific Purposes* 18, 23-39. [https://doi.org/10.1016/S0889-4906\(99\)00009-5](https://doi.org/10.1016/S0889-4906(99)00009-5)
- Tardy, Christine (2012). Current conceptions of voice. In Ken Hyland and Sancho Guinda, Carmen (eds.) *Stance and voice in academic discourse*. Basingstoke: Palgrave Macmillan, 34–46.
- Vande Kopple, William J. (2002). Metadiscourse, discourse and issues in composition and rhetoric. In: Barton, Ellen and Stygall, Gail (eds.) *Discourse Studies in Composition*. New Jersey: Hampton Press, 91-113.