

Larissa D'Angelo / Stefania Consonni (eds.)

New Explorations in Digital Metadiscourse

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Volume 10

Larissa D'Angelo / Stefania Consonni
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New Explorations in Digital Metadiscourse

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First things first: Engaging readers through Google hyperlink titles

1. Introduction

This analysis investigates the function performed by hyperlink titles (HTs) in Google result pages as metadiscursive frames markers (Hyland 2005), functioning as pre-sequences with respect to the associated texts and, as such, as important cognitive stages for preparing and introducing topics – and, precisely, sensitive ones, like end-of-life practices (ELPs) – and the relevant discussion which is fully carried out in the associated hyperlinked texts (or ‘anchor text’, cf. Liu 2011: 203; 231). The main assumption at the basis of this study is that such pre-sequences may metadiscursively function as framing devices (Entman 1993, 2010, Digirolamo/Hintzman 1997, Liu et al. 2019). By positing *data* (i.e. the topic) and anticipating *claims* (i.e. how the topic is to be interpreted, cf. Toulmin 1958/2003) – i.e., by indicating the field and the direction through which it is to be navigated – they can be considered as argumentative resources (or maps, in the ‘orienteeing’ metaphor used above) guiding readers in processing the associated anchor. The aim is to see how this potential function, inherent in HTs, is used to rhetorically stimulate meaning negotiation when assessing culturally relevant and possibly ideology-laden contents.

1.1 What are HTs?

When users launch Web searches by typing specific keywords (either single search words or multi-word expressions) in search boxes, the related results listed on the Search Engine Results Page (SERP) are

active links pointing to either websites, webpages or texts stored in digital archives (e.g. written texts, audio or video files). The format of the ‘anchor’ – i.e. whether it is a site, a page or a text – depends on the function of the word being searched for, which may be semantic (i.e. referring to an object, such as an event, a concept, a person, etc., within a class of objects, for instance the term ‘telegraph’) or a labelling one (for instance, the word ‘Telegraph’ as the name of the popular British newspaper). The latter is represented by those expressions (especially in the case of single words) which in the course of time, besides their semantic function, have started being used as names of organizations and institution, of social platforms, of file or song titles, etc. While the labelling function of a term may lead to anchors which are likely to be digital scaffolding structures, that is articulated sites, archives or extended texts containing several other texts (as is the case of *The Telegraph* website), the semantic function of the search term (i.e. the noun ‘telegraph’) typically corresponds to written texts which are self-standing (content-wise), internally coherent, with a marked referential function (informative, explanatory, descriptive or argumentative) and a sharp thematic point (like dictionary or Wikipedia entries, newspaper articles, etc.). For the scope and purpose of this analysis, only the latter type of results will be considered.

The reason for this choice is that, on the Google SERP, results pointing to the semantic function either replicate (often verbatim) the title of the anchor texts or are represented by formulations that are syntactically similar to newspaper headlines or document titles – namely, presented in nominal blocks (i.e. ‘The telegraph’, ‘Definition of telegraph’, etc.), or, more frequently, embedded in declarative or interrogative formulations (i.e. ‘The triumph of the telegraph’, ‘What is a telegraph?’, etc.), or also in formulations combining two expressions separated by a colon (‘Telegraph: Invention, history and facts’) (cf. Virbel 2002, Eyrolle et al. 2008, Hartley 2005a, 2007). Due to this syntactic and structural correspondence, Google HTs can indeed be considered fully fledged titles and can be analysed according to the same criteria applicable to this genre.

1.2 HTs as titling resources

Due to their prominent metatextual position – notably, on top of the full text, as in titles/headlines, and on the SERP (as well as at the beginning of the hyperlinked anchor text) – titling resources perform a very important anticipatory function, both at the referential and interpersonal level (Virbel 2002; Sala 2013; Sala/Consonni 2019). At the referential level the main focus is on clarity: titles need to disclose the content of the anchor in a transparent and informative way (Day 1994) – thus being at the same time “front matter and summary matter” (Swales 2003: 294). At the interpersonal level, instead, the focus is on effectiveness: titles need to attract the reader’s curiosity, thus being impactful as well as clear (Whissel 1999; Lewison/Hartley 2005; Hartley 2005b). This can be attained by displaying elements which may stimulate the readers’ interest, anticipate their needs and possibly reflect their positioning with respect to the meaning that has been searched for. Finally, titles have to account for the limited physical space allotted to their wording. Hence, in order for them to be easily retrieved through Web searches, they need to be expressed as much as possible in the terms through which certain meanings are codified in a given culture – and, as a consequence, through which given contents are going to be searched for (Haggan 1994).

In this respect, titles also function as consensus-building resources, in that they contribute to circulating certain terms in association to certain meanings, because “it is easier to understand and certainly easier to accept [information] that is consonant [...] with the ideological consensus in a given society or culture” (van Dijk 1988: 121-122). On this basis it is possible to maintain that HTs – similarly to document titles or newspaper headlines – have the function of pre-sequencing the ensuing texts, not only by providing “high-quality semantic clues” (Chakrabarti et al. 1998: 307; see also Liu 2011; Fitzsimmons et al. 2019), but also by framing and perspectivizing given meanings with respect to given worldviews (Entman 1993; Tannen 1993; Ensink/Sauer 2003), hence both anticipating expectations as to the content and cues as to the orientation of its discussion. In this sense titles carry out a strategic metadiscursive function as frame markers: by “provid[ing] framing information about elements of the discourse”,

they help “organize propositional information in ways that a projected target audience is likely to find coherent and convincing” (Hyland 2005: 50, 51).

1.3 HTs as argumentative stages

According to Toulmin (1958/2003), the argumentative process consists of several stages, namely the position of *data* and *claim* (respectively the content and the point to be argued), of *warrant*, *backing* and *qualifiers* (elements corroborating in either abstract or factual terms the validity of the claim), and *rebuttal* (an element which, by circumscribing and contextualizing the validity of the claim, contributes to reinforcing its tenability). With respect to this model, precisely in their metadiscursive function of frame markers, HTs can indeed be considered as argumentative pre-sequences, in that these are sites where *data* are posited and *claims* are anticipated (although in a very synthetic and elliptic way), thus determining and disclosing the type and slant of the ensuing discussion (Johnstone 2009).

This argumentative potential is inherent to the interpersonal dimension which is typical of titles, and favours engagement and cognitive stimulation. More specifically, cognitive engagement stems from the fact that argumentative elements like *data* – and (possibly) some elements of the *claim* –¹ are directly posited by readers themselves when they chose for their Google queries specific search terms in connection with specific topics. As a consequence, readers are likely to read the full anchor text when they find a match between their expectations, and the anticipated informative offer found in HTs, or when the reader’s ideological positioning is aligned with what is implied (or explicitly stated) in the HT.

¹ For instance, if I search Google for the keyword ‘police brutality’, chances are that I do not only want to find information about it as ‘social’ phenomenon – or as *data* (something that happens) – but most likely as a problem, i.e. subject to some form of evaluation – or as *claim* (something negative, that shouldn’t happen). In this sense, by choosing search terms, I am actively taking part in the argumentative process and in the negotiation of meaning with the text I am about to read.

In consideration of the interplay of all these factors, this analysis sets out to address the following research questions:

- How do HTs represent sensitive topics for them to be cognitively effective?
- Though what mechanisms do HTs establish argumentative pre-sequences for the understanding of the anchor text, and how is the readership engaged in the process of meaning negotiation?

This paper reports a corpus-driven study (Tognini Bonelli 2001) carried out on a small selection of HTs (119 items under scrutiny) found in Google SERP resulting from queries concerning ELPs – i.e. End of Life Practices, those practices meant to hasten a patient’s life, typically due to incurable diseases, usually represented through terms such as *euthanasia*, *assisted suicide*, *aid in dying*, etc. These concepts are particularly sensitive because they refer to practices meant to procure death, even though in a way that is medically assisted or meant to relieve from suffering; and in Western culture, together with related notions such as suicide and killing, death is indeed a taboo notion, one that might hurt people’s sensitivity or evoke aversive reactions (Crespo-Fernández 2018)

For this study, only the first SERP for each search term has been considered (each SERP containing an average of nine results), on the assumption that users’ attention will be focused on the first entries displayed, and only in case they are not satisfied with the first results will they then move on to the following SERPs.

This research is also aimed to evidence how lay audiences (those resorting to Google – rather than to specialized sources – to find information they may need) are engaged, and how sensitive subjects are dealt with in order to be accessible and appealing to such readership.

The focus on lay users – i.e. readers with little or no specialized competence in ELPs, but only interest in them, and, because of that, possibly influenced by prejudice, bias, and expectations – is meant to shed light on how they are led to find and select results that they perceive as being relevant and reliable.

The focus on sensitive topics, instead, is due to the fact that, since they imply some form of judgement or positioning, they will not only

elicit general curiosity, but, most likely, strong interest and even some form of urge to find answers to specific questions. For instance, users may be willing to find out whether or why they are right in holding specific standpoints, and to find justification for their positioning in ways which are convincing and compelling. A tentative answer to such questions may be already implied by or alluded to in HTs themselves.

To address such research questions, this study will investigate, firstly, the terms which are used for ELP-related searches and their distribution across our corpus: this will reveal the hierarchy of preferences through which sensitive and value-laden concepts are represented/searched for/found. Secondly, I will consider the structure and articulation of ELP HTs, that will be indicative of the type of negotiation which is implied with prospect readers (i.e. active, passive, presupposing a threshold level of competence, etc.).

2. Material and method

In order to assess the heuristic potential of specific words when used as search terms and, therefore, their possible function as argumentative frames, it is necessary to single out the most common and conventional forms employed by Google users to represent ELPs. To avoid the risk of anecdotal and impressionistic evidence, and to be sure to identify words which realistically correspond to those available to lay users for their Google searches, I went through a three-stage process: a general one, meant to collect possible lexical options, and two other stages meant to refine and organize such findings in terms of usability and productivity.

The first stage consisted in wide-ranging Web searches for the terms, synonyms, or euphemisms, employed in digital media, popularizing sources, Wiki-pages, and also specialized sources to refer to ELPs. For these queries very general and neutral expressions – such as ‘end of life decision’, ‘end of life practices’, ‘end of life issues’ – were used, thus expressly avoiding terms such as ‘euthanasia’, ‘aid in

dying', etc. since this would necessarily have biased the results and undermined the purpose of these queries. All the texts resulting from these broad searches were then skimmed and scanned in order to locate all terms used to point to ELPs. To account for the full range of lexical possibilities, for each found term, I have also considered the 'suggestions' provided by Google tools like Autosuggest (which operates, when typing a text in the Google search box, by anticipating the possible full words users are typing in) or Related Search options (which appear at the bottom of the SERP) – both based on Google traffic dynamics, the former being a word-based tool (i.e. indicating that some X word is often associated to some Y word in users' searches) the latter a topic-based tool (i.e. indicating that some X query/content is often associated to some Y query/content in users' searches).

At this stage, the terms more frequently found in SERPs and related Web sources and among Google suggestions were by far *euthanasia* (Eu), *assisted suicide* (AS), *assisted death* (AD), *assisted dying* (ADY) – in some cases pre-headed by the modifiers *medically* (respectively MAS and MAD) or *physician* (PAS and PAD) – and *aid in dying* (AID), as well as *mercy death* (MD) and *mercy killing* (MK)². For the purpose of this analysis, I have only considered the expressions above, in that found in (approximately) 50% of the texts dealing with ELPs considered in this stage of the investigation.

For the sake of clarity, it should be pointed out that those terms are not (always) full synonyms. As a matter of fact, *euthanasia* (neoclassical compound, produced as a neologism in the early 17th century and literally translating as 'good death') is a mono-referential term used both in specialized and popularizing settings to refer to the

² Other phrases were also found but not as frequently and consistently, either because uncommon, idiosyncratic or used in very specific domains – and unlikely by lay users – such as *medicalized murder*, *medicalized* (or *medical*) *killing*, *assisted killing* (found for instance in studies of euphemisms for murder used in the Nazi euthanasia program, cf. Mitchell 1999), *expedited death* (cf. Drinan 1995), *merciful death*, *death with dignity* (cf. Oregon Death with Dignity Act, cf. <https://deathwithdignity.org/states/oregon/>), *painless end of suffering*, *termination of life*, *managed death* (cf. Sulmasy 1995), *assisted self-murder*, *assisted self-killing*, or even the 'Liverpool pathway'.

act of (painlessly, deliberately) causing the death of someone who is suffering. Eu could be distinguished into five sub-categories, namely:

- active: deliberately performed by a professional or a lay person to hasten a patient's demise;
- passive: due to deliberately withholding treatment that could keep a patient alive;
- voluntary: performed with the patient's consent;
- non-voluntary: without the patient's consent but as a decision taken by a legal surrogate on the patient's behalf;
- involuntary: without the patient's consent.

All other terms are crystallized and possibly semantically polysemous expressions, and as such, as we will see below, they can project or reflect specific connotations due to their component parts.

AS and MD refer to the action of terminating the patient's life on his/her express requests (i.e. corresponding to voluntary, and active, Eu). PAD, PADY, AD, as well as MAD ad MADY are the terms used when a mentally competent patient resorts to a professional's assistance or prescription to hasten his/her death. The same applies to AID. MK is often used to refer to involuntary euthanasia, carried out without the patient's permission.

The second stage was devoted to checking the usability of the set of terms outlined above with the aid of informants, that is native speakers of English (in our case all from the UK and, more specifically, nine language teachers at the University of Bergamo, not experts in any specialized domain – except the English language – hence possibly representative of the ideal lay user). First, I enquired about the terms they would use in order to search for ELPs, in order to check if the list above needed to be completed or expanded. Once ascertained that this was not the case, I showed the list of the results and ask them to order the terms on the basis of their effectiveness and usability (by this we mean, which were the terms that they would more likely use for ELP-related searches). All of them considered Eu to be the best option, together with AID: being the most neutral – or least biased – terms, they are likely to produce more informative than evaluative results. The next option seemed to be represented by clusters pre-headed by the term

assisted – considering the head *dying* (ADY) to be preferable to *death* (AD), that, in turn, is preferable to *suicide* (AS) – which are considered to be more acceptable in their pre-modified construction (preceded by *physician* and *medically*, in that both modifiers confer a (pseudo-) scientific nuance of meaning to the expressions). They concurred that formulations containing the terms ‘suicide’ (especially AS) and ‘killing’ (MK) were face-threatening, negatively connoted and stigmatizing in that referring to acts (the act of taking one’s own or someone else’s life) which are considered taboo.³ Quite interestingly, all informants seemed to agree that using such stigma-loaded items as search term (thus getting to anchor texts conceiving of ELPs in such a light) may be symptomatic of the user’s standpoint and ideological orientation as to the subject – which may be either critical or very aware of the problematicity of such practices.

Below is the listing of the ELP terms ordered in terms of their usability (as defined above):

- *euthanasia* (Eu);
- *aid in dying* (AID);
- *physician assisted dying* (PADY), *medically assisted dying* (MADY);
- *physician assisted death* (PAD), *medically assisted death* (MAD);
- *physician assisted suicide* (PAS), *medically assisted suicide* (MAS);
- *assisted dying* (ADY);
- *assisted death* (AD);
- *mercy death* (MD);
- *assisted suicide* (AS);
- *mercy killing* (MK).

The third stage of the investigation was meant to compare the informants’ list with the listing resulting on the basis of the ‘Number of results’ (NR) option in Google (displayed through the formulation ‘About XXXX results (X seconds)’ which appears below the search box

³ Only two of the informants were aware that AS is a conventional term used in both the legal and medical domain to refer to (some) ELPs, because they served as reviewers of research articles in medicine and law, hence recognized AS as a domain-specific rather than biased term.

after digiting a given search term. This is an approximation of the amount of results for specific search terms, calculated periodically⁴ (hence changing very frequently) on the basis of Google traffic and indicating the number of sources to be realistically found on the Internet in relation to the search term. In other words, this is a statistic estimation of the productivity and ‘popularity’ of given search terms⁵. The purpose was to fine tune the criteria of our analysis and see whether the ordering provided by the informants matched that of Google users. I therefore typed in the Google search box each of the terms listed above, and considered for each the NR indicated in the SERP.

The ranking of the most productive ELP terms according to Google NR figures is as follows:

AS: About 138.000.000 results (0,49 seconds)
AID: About 117.000.000 results (0,43 seconds)
MK: About 56.200.000 results (0,63 seconds)
PAD: About 53.100.000 results (0,49 seconds)
MD: About 38.000.000 results (0,42 seconds)
PAS: About 34.200.000 results (0,56 seconds)
ADY: About 34.200.000 results (0,56 seconds)
Eu: About 15.500.000 results (0,39 seconds)
MAD: About 7.650.000 results (0,80 seconds)
AD: About 6.950.000 results (0,57 seconds)
PADY: About 6.290.000 results (0,55 seconds)
MAS: About 5.290.000 results (0,43 seconds)
MADY: About 914.000 results (0,43 seconds)

⁴ This automatic calculation is carried out through specific metrics parameters as described at <<https://support.google.com/analytics/answer/1032321?hl=en>>; <<https://www.quora.com/How-is-the-total-number-of-results-on-Google-search-calculated>>.

⁵ For this part of the analysis, in order to avoid previous searches influencing the next ones, and in order to avoid possible traffic tracking which would possibly affect metrics calculations, I have used five different machines (always making sure not to log in to any Google account, using private browsing, and deleting cached data before and after each search), then comparing the results that I got from each. These Web searches were carried out on September 29th and 30th, 2021.

At this point, the informants' list and the one produced by Google NPs have been compared to verify whether they were aligned or significantly divergent. The results are organized in Table 1 below.

INFORMANT LIST	Google NR list
Eu	AS
AID	AID
PADY/MADY	MK
PAD/MAD	PAD
PAS/MAS	MD
ADY	PAS
AD	ADY
MD	Eu
AS	MAD
MK	AD
	PADY
	MAS
	MADY

Table 1. Comparison of ELP terms in the informants' list and in Google NRs.

Besides some common positions (in green in the Table, i.e. AID, PAD, PAS, and ADY), the ordering of the two lists is reversed (in red in the Table): Eu – the least marked and most neutral term in terms of connotation (being at the same time technical without being gate-keeping, and sufficiently inclusive for ELPs without being too general) – drops from the first position in the informants' list to the eighth in Google NRs, while MK and AS – which were considered by informants to express negative evaluation – climb up to the top positions in the latter list, with a frequency for AS which is ten times higher than Eu.⁶

⁶ The different positions of multiword expressions – MADY, MAD, MAS, etc. – is difficult to be accounted for here since our informants considered them to be full synonyms to other expressions – MAS=PAS, PAD=MAD, etc. – whereas in Google NP they are treated as totally different expressions. The only possible consideration is that, whether our informants considered them to be fully synonymic in terms of usability, they are not the same in terms of productivity.

Far from being problematic, this difference indicates that, while representing lay users, our informants were indeed biased in providing their ordering, in that they considered effectiveness and usability in terms of cultural accessibility and political correctness (for instance, by discarding formulations containing the terms ‘suicide’ or ‘killing’), which is not necessarily a concern for all Google users. Indeed, we may find that those terms which were considered by informants to be too negatively connoted or openly biased, appear in Google with the highest NR, i.e. as most productive and, as such, likely to correspond to the highest number of results. (The impression, after this last stage of assessment, is that those terms preferred in one list and dispreferred in the other – in red in the table – are particularly worth focussing upon.) At this point, all the 13 forms in the two lists above, irrespective of their ranking, were finally used as search terms. The resulting HTs, displayed on the first SERP per each, count a total of 119 HTs.

3. Results and discussion

After having identified ELP terms which appear to be usable by lay Google users and productive for Web queries, we now investigate the heuristic function of such terms when they are used in HTs to establish argumentative and interpretive frameworks. This part of the analysis will be carried out from two different perspectives: firstly, by considering the type of correspondence between search terms and results (i.e. whether the HTs contain the search term or semantically similar expressions); secondly, by considering the type and syntactic structure of HTs containing ELP terms – on the basis of the fact that given structures presuppose a specific type of discussion in the anchor text.

3.1. Search term and result correspondence

One interesting piece of evidence that could easily be observed while collecting results is that there isn't always a word-to-word correspondence between search terms and results. Below an example of the SERP listing results for the search term 'assisted dying'.

- (1)
 - i) Euthanasia and assisted suicide: What are they [...]
 - ii) Euthanasia and assisted suicide – NHS
 - iii) Assisted suicide – Wikipedia
 - iv) States That Allow Assisted Death - Death with Dignity Acts
 - v) Assisted dying
 - vi) Euthanasia, assisted suicide and non-resuscitation on request
 - vii) Assisted Dying and Legal Change - Oxford Scholarship
 - viii) Euthanasia and assisted dying rates are soaring

As we see, there are some verbatim correspondences, where the search term produces a result containing it, as is the case of (v), (vii), (viii), but there also instances of non-verbatim correspondence – which even occupy higher ranking positions on the SERP – where results contain a mere approximation of the search term, parts of it, or even other expressions thematically associated to it (i.e. synonyms, quasi-synonyms or terms pertaining to the same semantic field). Table 2 below evidences the frequency and distribution of verbatim (in white) and non-verbatim correspondences (in blue). Asterisks in the columns stand for each HT found in the SERP for every term searched for (indicated by the label on top of each column). As we see, there is a predominance of blue/non-verbatim results in our corpus (66 out of 119 vs. 53 for verbatim ones). The fact that a single search expression may produce a majority of results not containing the search term itself seems to imply the existence of a set of interrelated references which factively contribute to shaping certain concepts with respect to certain terms, which then become available and readily usable to Web users. To put it simply, the non-verbatim forms seen in (1) concerning ADY shape the idea of 'assisted dying' as something related to 'euthanasia' and 'assisted suicide', and not to 'physician'/'medically assisted dying', on the one hand, nor to 'mercy death' and 'mercy killing', on the other.

<i>Eu</i>	<i>AID</i>	<i>ADY</i>	<i>AD</i>	<i>AS</i>	<i>MADY</i>	<i>MADE</i>	<i>MAS</i>	<i>PADY</i>	<i>PADE</i>	<i>PAS</i>	<i>MK</i>	<i>MD</i>
*	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*
	*	*			*	*	*	*	*	*	*	
	*					*	*	*	*		*	

Table 2. Frequency and distribution of verbatim (in white) and non-verbatim correspondences.

In order to find out whether there is an explanation to such verbatim (mis)matching, a closer look at the distribution of the various results becomes necessary. By observing the results, from a quantitative point of view, we can see that, in general, short clusters (1-2 words) are more likely to yield verbatim correspondences. We can then notice that the most frequent verbatim correspondences concern the terms *Eu* (100% of the cases), followed by *AID* and *MK* (both 90%), and *AS* (around 80%); in the remaining searches – with the exception of *ADY* (around 60%) – verbatim returns are around 40% or less frequent. These results seem to indicate that there is a restricted and very easily identifiable set of common expressions used by the literature (i.e. media, digital popular press, personal or corporate webpages, forums and blogs) to refer to ELPs.

From a qualitative perspective, instead, we find that three of the four expressions highlighted in Table 1 – that is, those revealing some form of ideological positioning, either in terms of political correctness (which is indeed an ideological stance, precisely meant to express ‘lack of negative stance’, as in the case of *Eu*) or negative attitude (such as *MK* and *AS*) – are the ones returning verbatim results. Therefore, these terms – irrespective of (or possibly due to) their implicit bias – appear to be particularly common and productive ways of codifying ELPs. This

may imply that users' searches tend to be evaluation-based or ideology-driven, rather than merely information-oriented.

Another interesting piece of evidence is represented by the large amount of non-verbatim correspondences. This seems to indicate that there is an epistemic pool of interrelated notions and cross-references so tightly connected that, whatever the search term, we are likely to end up on the same (sets of) results (synonyms or approximations). This, in turn, appears to corroborate the idea that certain sensitive referents are effectively represented and understood by means of specific terms and standardized forms which (in the course of time) have become culturally accessible, easily recognizable and, as such, taken to be particularly transparent to point to given meanings.

3.2 HT type

The next part of our analysis investigates the informative structure and syntactic organization of HTs, since their articulation may be indicative of the way a specific content will be (cognitively) dealt with in the anchor text (Hartley 2005b, Sala/Consonni 2019). By observing the HTs in our corpus a major distinction can be found between those pointing to elements which are *central* with respect to the phenomenon searched for (i.e. implying that the anchor will help understand some core aspects on the basis of some specific principles or criteria), and others which are *peripheral* ones (i.e. concerning situational and contextual instantiations of a given phenomenon within specific time-space settings and constraints). Titles pointing to *central* features are those codifying definition (implicitly or markedly) or meaning relations (more specifically, combinations in terms of association or dissociation, see 3.2.1 below). Those pointing to peripheral aspects are instances of *contextualization* ('States That Allow Assisted Death - Death with Dignity Acts'), *news-event-related* ('Wife cleared of husband's 'mercy killing' murder'), or *affect-based* ('Exploring the experience of supporting a loved one [through medically assisted death]'). The distribution of both types can be seen in the table below (purple for *central* strategies and white for *peripheral* ones). For the purpose of this

analysis (also due their scarcity in the corpus) *peripheral* HTs will not be considered.

<i>Eu</i>	<i>AID</i>	<i>ADY</i>	<i>AD</i>	<i>AS</i>	<i>MADY</i>	<i>MADE</i>	<i>MAS</i>	<i>PADY</i>	<i>PADE</i>	<i>PAS</i>	<i>MK</i>	<i>MD</i>
*	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*
	*	*			*		*	*	*	*	*	
	*					*	*	*	*		*	

Table 3. Distribution of central and peripheral HTs.

3.2.1 Types of central titles

Definition HTs are those pointing to anchors where to find definition, description, or explanation of the phenomenon searched for. Such a function can be implicitly expressed or metalinguistically marked.

Implicit or indicative formulations simply replicate the term searched for, or the expression conventionally associated to a given ELP, in nominal and verbless blocks (mostly the case of Wikipedia entries), for example:

- (2) *Euthanasia – Wikipedia*
- (3) *Assisted suicide – Wikipedia*
- (4) Assisted dying

Metatextually marked forms are those which integrate the search term into a syntactically self-standing sentence which explicitates the pragmatic function of the anchor (i.e. ‘X - Fast facts’, ‘FAQ about X’, ‘Definition of X’, ‘Meaning of X’, etc.):

- (5) *What is a mercy killing?*
- (6) *Ten Facts About Medical Aid in Dying*
- (7) *Physician-Assisted Death: What Everyone Needs to Know*

As we see, definition HTs point to anchors which are anticipated as being primarily descriptive, expository and informative, and therefore, on the whole, with little argumentative potential (allowing no space for objections, disagreement or meaning negotiation). As such, they are little cognitively engaging (even when this aspect is metalinguistically emphasized – for instance, by the use of interrogative forms).

Combination HTs are represented by formulations relating two different concepts (one usually being the search terms, the other being a closely or remotely associated idea, possibly within the ‘epistemic pool’ of cross-references mentioned above). Combinatory strategies can be distinguished into *association* and *dissociation* markers.

Association titles are those forms positing “the unification of separate elements into a simple whole (bringing elements together)” (Komlósi 2006: 180), that is, correlating, combining and bringing together terms/concepts as if they were related, or part of a larger whole, as the following examples show:

- (8) *Euthanasia, assisted suicide and non-resuscitation on request*
- (9) *Suicide, physician-assisted suicide and mercy killing [...]*
- (10) *Euthanasia and assisted suicide: What are they [...]?*

Even though we may expect the anchor to contain elements by which to clearly differentiate between the concepts which are associated in the HT, it is nonetheless relevant that in HTs such concepts are presented as similar, contiguous or overlapping.

Dissociation titles are instead those structures distinguishing, separating or even contrasting concepts which may commonly be mistaken as being contiguous or part of the same whole, in that “dissociation disintegrates and separates elements that formed a unit before [or applies when] a concept is differentiated from a concept that

it was part of” (Komlósi 2006: 180). This dissociative function can be carried out, either:

a) from a *protagonist’s* perspective (the *protagonist* being the arguer supporting a claim, the one who “defends a standpoint”, van Eemeren/Grootendorst 2009: 120), that is when the HT points to an anchor which, in positive terms, explains or discusses the difference between the two meanings, as in the following cases:

- (11) *How does mercy death differ from mercy killing?*
- (12) *What’s the difference between assisted suicide and euthanasia?*
- (13) *ASSISTED SUICIDE - Four Differences between Mercy-Killing and Merciful Death*

b) from an *antagonist’s* perspective (where “the antagonist calls [the standpoint’s] acceptability into question”, van Eemeren/Grootendorst 2009: 120), when the HT, in negative terms, counterclaims, falsifies or deconstructs a combination of concepts which may be taken from granted. This can be carried out through negation and questions (conducive *yes-no* polar questions, which cast doubt onto the propositional meaning and presuppose answers of the opposite polarity):

- (14) *Medical Aid in Dying is NOT Assisted Suicide*
- (15) *Is "aid in dying" suicide? – NCBI*
- (16) *Physician Assisted Suicide: Medical Practice or Killing in [Practice?]*

Unlike definition HTs, combinatory formulations are more engaging: by pointing to the relationship between two concepts, they presuppose a threshold (or even an advanced) level of competence on the part of the reader, and his/her active role in the process of meaning negotiation. Moreover, combinatory HTs have a marked argumentative potential: they presuppose the interpretation of a concept with respect to another one – this being especially true for dissociative antagonistic forms, which imply a relatively high degree of knowledge of the concepts juxtaposed, negated or questioned for them to be understood.

Table 4 below shows the occurrence and distribution of central HT types in our corpus. Each square in the columns stands for a HT found on SERPs by using as search term the one displayed in the first line: *definition* HTs are indicated in pink, *association* HTs in green, *protagonist dissociation* in dark blue, and *antagonist dissociation* in light blue (blank squares marked with ‘-’ refer to peripheral formulations).

<i>Eu</i>	<i>AID</i>	<i>ADY</i>	<i>AD</i>	<i>AS</i>	<i>MADY</i>	<i>MADE</i>	<i>MAS</i>	<i>PADY</i>	<i>PADE</i>	<i>PAS</i>	<i>MK</i>	<i>MD</i>
*	*	*	*	*	*	*	*	*	*	*	*	-
-	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	-	-	-	*	*	*	*	*	*	*
*	-	-	*	*	-	-	*	*	*	*	-	*
*	*	*	*	*	*	*	-	*	*	*	*	*
*	*	*	*	*	*	*	*	*	-	-	*	-
*	*	*	*	*	*	*	-	-	-	-	*	*
*	*	*	*	*	-	*	-	*	-	*	*	-
	*	*			-	-	*	*	*	*	*	
	-					*	-	-	*		*	

Table 4. Distribution of HT types in our corpus.

As we see, the most frequently found HTs are *definition* formulations (54 out of 119, approximately 45% of the total occurrences, for an average of 4 titles per SERP for every search term).⁷ *Definition* HTs have a limited argumentative appeal, in that they simply posit the theme, the given information, without disclosing cues as to the type of informative articulation that is going to be found in the anchor. By observing the data, we notice that definition HTs are preferably used to introduce the quite critical concept of MK (which may possibly benefit

⁷ Even though not indicated in the Table, the exact half of these is represented by indicative forms – i.e. sounding detached, depersonalized, with an encyclopaedic character and pointing to the thematic nature of the associated entry – and the other half by metalinguistic framing structures – i.e. sounding more interactive, and ranging in terms of formality from a higher degree – ‘*meaning of x*’ ‘*definition of X*’ – to a lower degree – ‘*what is x?*’.

from a transparent exposition, likely to explain the apparently oxymoronic relationship between the terms ‘mercy’ and ‘killing’); or for multi-modified expressions/concepts (notably MAD, PADY, PADE, and also ADY and AID) whose lexical specificity may require informative detail.

Combinatory HTs, both associative and dissociative, have a frequency of 37 out of 119 and their distribution is quite homogeneous in the corpus (with an average of 3 combinatory forms per SERP). However, either type presupposes a different interpretive approach, thus performing a different pre-sequencing function. As a matter of fact, *associative* formulations (17/119) expect a lower level of background knowledge and a more open attitude on the part of the reader: these strategies are quite limited and appear to be most appropriate in the case of Eu HTs. On the other hand, *dissociative* formulations, which are slightly more numerous (20/119), codify a more structured stance, presuppose some background knowledge and a more solid competence on the part of the anticipated reader. Their overall distribution on the various SERPs is quite balanced (with the sole exception of MADE, which has no such entries). Of these, *protagonist* forms (8/119) – by which the prospect reader is expected to know the difference between the lexicalized concepts and is ideally prepared to be told the specific reasons why this is – are more frequently found in HTs concerning MD, which is one of the ‘value-laden’ search terms emerging from the contrast between the informants’ and NP lists (cf. Table 1). *Antagonistic* formulations (12/119), instead, presuppose a competent readership, familiar with the notions lexicalized in the HT, and account for the risk that users may confuse ELP concepts and are thus willing to find out on what basis they are different. These HTs seem to be mostly used with very specific and articulated (multi-word) ELPs (namely, MAS, PADY and PAS), possibly in order to highlight significant differences between them and other more general ELPs.

The final part of the analysis will focus on *combinatory* formulations, in order to see which ELP concepts are found in HTs in combination with search terms (both in the case of verbatim and non-verbatim results). This will help us understand what concepts or cross-references (among those available in the ‘epistemic pool’) ELPs are conceived of in the Web. Tables 5a and 5b below contain the

classification of combinatory HT types: the symbol ‘+’ marking association (in the green squares), the symbol ‘v’ marking dissociation (*antagonistic* in light blue squares, *protagonistic* in dark blue squares; the acronym/label after such symbols represent the term(s) displayed in the HT (the symbol ‘*’ stands for combinatory elements which are different from the 13 considered here).

<i>Eu</i>	<i>AID</i>	<i>ADY</i>	<i>AD</i>	<i>AS</i>	<i>MADY</i>	<i>MADE</i>
+AS	+*	Eu+AS	Eu+AS	+Eu	+*	Eu+AS
+AS	v*	ASvEu	ASvEu	+Eu	AIDvAS	ASvEu
+AS	v*	AIDvAS	AIDvAS	vEu		
vAS				AIDvAS		

Table 5a. Forms of combination in combinatory HTs.

<i>MAS</i>	<i>PADY</i>	<i>PADE</i>	<i>PAS</i>	<i>MK</i>	<i>MD</i>
Eu+AS	Eu+AS	Eu+AS	Eu+AS	+PAS	PAS+MK
AIDvAS	AIDvAS	AIDvAS	AIDvAS	vMD	vMK
PAS+*	PAS+*		+*		vMK
					vMK

Table 5b. Forms of combination in combinatory HTs.

Combinatory formulations are 38/119. In general, we see that the terms which tend to occur in combination with the one searched for (or with related ones, in non-verbatim formulations) are AS (21 out of 38 cases), Eu (13), AID (8), and MK (4). The first noticeable piece of evidence is that AS is by far the idea which appears to be particularly effective in grabbing readers’ attention and stimulating their interest. This is especially interesting since, as we have noticed above, this cluster is quite controversial in that possibly critically connoted (due to its reference to ‘suicide’). The second and third-ranking combinatory terms, respectively Eu and AID, are less marked in that umbrella terms conventionally used to refer to ELPs. Therefore, when used as reference, they may work as conceptual facilitators. More marked –

although relatively infrequent – is instead the use of MK, in that, like AS, it is negatively connoted (containing the word ‘killing’).

Finally, it is worthwhile seeing how these combinatory elements – whose function is to connect the search term to existing ideas concerning ELPs – may perform an argumentative function, namely by either presupposing contiguity between search term and combined term (through *association*) or contrast (via *dissociation*). Association titles (16) seem to reflect, although on a minor scale, the same trend observed in combinatory HTs in general, where search terms are predominantly associated to AS (12) and Eu (9), while other associations are rare and little relevant. In terms of meaning negotiation, the reader is actively engaged by being offered the possibility of making sense of one meaning (the search term) in relation to another one (AS or Eu).

Dissociative HTs are slightly more frequent (22). Here argumentative engagement works in two different ways. With protagonistic formulations, the reader establishes the *data* – through the search terms – and the HT offers a combination of concepts which may function as a *claim* (of the type: ‘these two notions/terms may appear to be similar’). At this point the anchor will help the reader to take them apart, notably, by using either of them to better distinguish the other. Protagonist HTs use AS (4), Eu (4) and MK (2) as combinatory elements. Therefore, while accounting for a possible similarity between ELPs, they imply that specific ELPs are better understood against such notions as AS, Eu and MK. Antagonist formulations are instead meant to dissipate confusion and falsify contiguity, or even to discard wrong ideas that the readership might have concerning given phenomena. Here, the *data* posited by the reader through his/her query is met with a *claim* that deconstructs an association of concepts (i.e. ‘these two notions/terms are not similar’). In this case, the terms used to perform such dissociation are AS (8) and, quite surprisingly, AID (7). They represent two drastically different stances concerning ELP, i.e. critical for AS and positive for AID. Therefore, antagonist HTs claim that a given ELP is not only dissimilar from, but is not to be confused with AS and AID. The ELP phenomenon at stake is thus distanced from either possibly objectionable practices (AS) – hence justifying it – or from neutral ones (AID) – hence marking it as critical.

4. Concluding remarks

The findings collected through this analysis provide enough basis to assess the RQs posited at the beginning of this study.

The first line of investigation concerned the ways HTs engage readers in introducing sensitive topics like ELPs, i.e. those which activate different types of responses (to put it simply, either in favour or against them). After having identified a list of ELP-related expressions through very broad Web searches, then refined on the basis of reliable informants' feedback, and in consideration of the results obtained by using each of such expressions as search terms, we have noticed that a way of stimulating readers' participation is not just through results matching as closely as possible the potential search terms (i.e. through verbatim returns), but through formulations containing ELP-related terms which are probably more shared and transparent for lay readers (i.e. non-verbatim returns). We have observed that there are some terms – notably Eu, AID, MK and AS – that are particularly productive in that, on the one hand, they yield the majority of verbatim results (e.g. I search for Eu and I get Eu in the HT) and, on the other, they tend to appear frequently also in those HTs yielded by other search terms (e.g. I search for MADY and I get Eu in the HT).

Even though non-verbatim returns (66 out of 119) are more frequent than verbatim ones (53), which may appear to jeopardize engagement, we have also seen that the terms which are more productive are clearly polarized – more precisely Eu and AID, which, while being lexically neutral, are more positively connoted (Eu etymologically meaning 'good death', and AID containing the idea of 'aid'), while MK and AS contain negative connotation (pointing to cultural taboos, such as murder and suicide). Therefore, the displaying of such terms in non-verbatim HTs is indeed a way of capturing the reader's interest by presupposing a given positioning towards the ELP searched for, and a way of stimulating response by readers aligning with such stance.

The second line of investigation focused instead on the type of argumentative pattern and the function of metadiscursive pre-sequence played by HTs with respect to the anchor text, which imply a specific type of response (active or passive) on the part of the reader. For this we have examined the rhetorical structure of the HTs. In this respect we have seen that the majority of HTs (54/119) are formulated as definition-type – introducing an anchor which is expected to define and explain ELPs. Through such formulations the reader is addressed from a ‘pedagogical’ angle, that is from an expert-controlled perspective, where expert notions are explained to non-experts. This presupposes their little competence on the matter as well as their passive role in meaning negotiation. In a more restricted number of cases (37/119) HTs are organized by combining two ELP-related notions. Such formulations frame the anchor texts in argumentative terms (by advancing *claims* like ‘the two notions are similar’, ‘the two notions may seem similar’, ‘the two notions are not similar’). Such HTs are more interactive and engaging, in that they presuppose a competent reader who is familiar with the idea that certain concepts are related and, as such, is more rhetorically engaged in the negotiation of meaning. In fact, unlike definition HTs which simply anticipate cognitive gaps to be filled, combinatory formulations presuppose claims to be verified. More specifically, association HTs do so by advancing claims to be accepted/align to (‘A + B’), dissociative antagonistic HTs by offering claims to be checked or substantiated (‘A ≠ B’), and dissociative antagonistic HTs by pointing to positions to be revised (‘A vs. B’) – the latter requiring a more advanced level of competence on the part of the reader, hence possibly sounding more challenging and interactive.

Google is indeed a source of information on a variety of topics available to and used by lay audiences. But, in order to get to this information, users have to first skim the entries which are listed on the SERP and eventually select the ones they perceive to be relevant. This is the metadiscursive function of HTs: not only to provide digital/physical links to access anchor texts, but also to textually frame and thematically pre-sequence the anchor and make its content appealing. This is particularly challenging when dealing with sensitive subjects like ELPs – containing reference to taboo ideas like death

suicide, and even murder. This study has attempted to see how, in such cases, HTs can be exploited to make contents sound relevant, to engage audiences and project users' role as interested, ideologically positioned (in favour or against) and above all competent interactants in the process of meaning negotiation.

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