

REFORMULATION MARKERS IN DOCTORAL RESEARCH

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Abstract. Working with source texts, using reformulation techniques and improving paraphrasing and summarizing skills in the production of semantically equivalent expressions play a critical role in research papers, particularly at the academic Ph.D. level. This study sets out to examine the use and role of English paraphrastic reformulation markers in the literature reviews sections of doctoral reports and theses submitted by non-English Ph.D. students. We explore reformulation as a discursive process of textual reinterpretation in light of Gülich and Kotschi's (1995) taxonomy of reformulators. A total number of 125 literature review sections in the philological field, consisting of 128,753 words, were analyzed. The results indicate that literature reviews in advanced academic research mobilize a particular type of reformulation discourse in which markers display a clarification function within an *authority-based, readership-oriented* reformulation discourse type.

Keywords: discourse, reformulation markers, Ph.D. research, literature review, paraphrastic.

INTRODUCTION

Paraphrasing skills and reformulation techniques are regarded as critical competences for successful advanced research at Ph.D. level. They are all the more vital for non-native English doctoral students as their ability to work with source texts is often a learning-oriented process that gradually evolves from patchwriting operations to more successful practices and command of resources in the production of well paraphrased, 'equivalent' texts that serve their research needs and purposes. It is outside the scope of the present approach to touch upon issues pertaining to the wide specialized literature that examines *inter alia* paraphrase acceptability, academic writing, positive plagiarism, paraphrase strategies, EFL learning, etc. Nevertheless, at the intersection of some of these technicalities lies a better understanding of reformulation techniques and the processes that enable a student to take ownership of the text within the teaching-learning activities in the academic environment. Rather, the general aim of this study is to explore the semantic and pragmatic distinctive values of the reformulation markers in the literature reviews sections of doctoral reports and theses submitted by non-English Ph.D. students. The premise of this study is that equivalence between alternatives can not only range along a minimal to maximal cline but that the production of strict equivalence can hardly ever be achieved, which makes reformulation a

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complex and volatile semantic category that describes additional discourse values including but not limited to generalization, explanation, implication, specification and summary (Blakemore, 1993; Bach, 1996, 2001; Cuenca, 2003; Gülich and Kotschi, 1995). While in academic writing, paraphrasing or reformulating a text involves the writer's retention of the original text in a newly produced discourse that effectively retells, condenses or clarifies another author's ideas thereby providing credibility to the writer's own argument or thesis, in a discourse analytic/pragmatic approach, paraphrasing may be examined from the viewpoint of the communicative intention underlying the reformulation mechanisms and reformulation markers (Gülich and Kotschi, 1995).

Whereas reformulation is a notion, the lexical units by means of which reformulation is explicitly signaled in the language are called reformulation markers (RMs) or reformulators. Reformulation markers typically occur in expository texts and are critical linguistic resources that guide the communication process and provide cohesion to the discourse. In various areas of specialized discourse, reformulation has been examined relative to field expertise of writers, audience and own expectations, as well as rhetorical purposes intended to be achieved. Within various approaches and under different taxonomies, such as Hyland's (2007) examination of code glosses in hard and soft fields, the analysis of RMs in legal discourse (Mazzi, 2011) and business research (Murillo, 2012), the cross-linguistic approach of RMs in English, Catalan, and Spanish linguistic academic discourse or English and Lithuanian (Šinkūnienė, 2019), reformulation shows disciplinary variations in the argumentation practices of all disciplines. As literature reviews are particularly content-oriented, being exclusively used to provide a foundation for doctoral students' research and to demonstrate their knowledge on the current state of a field, we hold that they may provide a fresh semantic/pragmatic/functional insight into the multifunctional nature of reformulation markers, (re)structuring discursive mechanisms, constructed reported discourse, as well as ways in which writers (re)construct meaning and deictically position themselves within the reformulation discourse. The focus of our examination rests on the paraphrastic reformulation markers (PRMs) that suggest an equivalence operation (Gülich and Kotschi, 1995; Roulet, 1987; Rossari, 1990, 1994; Bouamor *et al.*, 2012) as distinct from the non-paraphrastic reformulation connectives/marker (NPRMs) that indicate distance, correction and reinterpretation operations.

The study is structured as follows. The introductory section presents the scope and purpose of the study. Section 1 defines reformulation relative to equivalence while Section 2 discusses taxonomies and operations of reformulation markers. Section 3 describes the corpus and research methodology, followed by the interpretation of the results in Section 4. The conclusions of our research are presented in Section 5 along with several directions for further studies and research.

1. REFORMULATION AND EQUIVALENCE

Terminology-wise, paraphrasing presupposes variation (Daille *et al.*, 1996; Grabar and Zweigenbaum, 2000), or paraphrastic reformulation (Roulet, 1987; Rossari, 1990; Bouamor *et al.*, 2012). Reformulation has blurred borders; however, it is commonly accepted that between linguistic expressions in a paraphrasing relationship there is a semantic equivalence that can take a variety of forms. Typically, reformulation involves an

operation of equivalence between two different discourses (D1 and D2) that express one and the same idea. Albeit linguistic examinations focus on the treating D2 discourse, both discourse segments are equally important. A reformulation recharacterizes the whole (or partial) D1 discourse as a freshly reformulated D2 discourse that clarifies some aspect of D1. However, the relationship of equivalence encompasses (at the very least) a wide range of graduations because the reference and the rephrased expressions can never be equal, the latter bringing something new, “an element of change and communicative progression” (Gülich and Kotschi, 1995:42). It follows that if every discourse is to be interpreted in view of the foregoing one (Brown and Yule, 1983), then any rephrase becomes semantically enriched and structurally different excluding *ab initio* the very notion of perfect/strict equivalence. The implication is that identifying the relation of coherence that connects an utterance to the foregoing discourse segment constitutes the requirement for a successful comprehension (Mann and Thompson, 1988). Reformulation hence remains a complex discourse strategy that results when someone restates something alternatively in other words and assumes that the resulting expression is either a semantic or a pragmatic equivalent formulation (Cuenta, 2003).

Reformulation is widely considered to be a metatextual equivalence operation (Bach, 1996, 2001; Fuchs, 1982; Fuentes, 1993). In particular, reformulation is regarded as being exclusively paraphrastic (Fuchs, 1994; Norren, 1999) as the discursive activity of textual reformulation can, according to Fuchs (1982, 1994), be conceived as a *transfer* system breaking down in three processes: the interpretive passage from the source text to a representation of its content, the transformation of this content, and finally the production of the target text from the transformed content. The process of transformation of the original content points to the non-reflexive, non-transitive and non-symmetrical character of the reformulation nonetheless allows for a postulation of a ‘threshold of distortion’ (Fuch’s own term, 1994:29), both quantitative and qualitative, which accounts for the limits of the deformability of meaning. A somewhat similar approach is taken by Norén (1999) who, inspired by theories of argumentation in language, regards the reformulation process as a passage between argument and conclusion, with reformulation being a “double actualization of a topical field in discourse” (65) which is inclusive not only of the semantic similarity of the two segments, but also of the same argumentative orientation. At a more extended level, Steuckardt (2007) considers that reformulation involves the succession in discourse of two segments which aim at the same state of affairs whereas Kanaan (2011) views reformulation as a series of discursive actions (paraphrase, reinterpretation, nomination, definition, etc.) that are necessary whenever formulation lacks clarity and reformulation can meet this expectation.

All these perspectives, pointing to a variety of ways in which one discourse may reformulate another, call for a methodological agreement over the types and sub-types of existing reformulation relations. While within the specialized literature on coherence, for example, a restatement is considered to be a sub-type of elaboration (Hobbs, 1979), in others, elaborations and restatements are treated as separate relations (Mann and Thompson, 1987). Reformulation relations can be exclusively appositional as in Meyer’s (1992) approach, who proposes a taxonomy of appositional relationships which considers information in the reformulated expression relative to its specificity and ranging from less to more (or to equally) specific. On such a basis, the point of departure in his approach is the plus/minus specificity of the second with respect to the first member which allows

Meyer to sub-classify the last *equally specific* type into (1) paraphrases, (2) units re-orienting the hearer, and (3) paraphrases which correct the first unit. Other perspectives of interpretation contribute a broad understanding of reformulation and of its subtypes; thus, if for Flottum (1993) reformulation can be either horizontal, i.e. at the same semantic level, implying definition, denomination and substitution or vertical, implying generalization/summary or specification, for Fuchs (1982) reformulation (of three types: designation, denomination, and exemplification) is primarily determined by the identity relations established between sign and referent. More theory-neutral and interpretive approaches (*inter alia* Cuenca, 2003; Cuenca and Bach, 2007; Del Saz Rubio, 2008) have favoured a separate treatment of reformulation types (explanation/expansion, rectification/modification, conclusion/reassessment, and summary/compression) to better account for their multi-functionality and environments of use. Finally, in a series of critical studies on the relevance of reformulations (Murillo, 2004; Borderia, 2008), Blakemore (1993, 1996, 2007) argues that reformulations serve in the production of particular contextual effects hence they call for an examination on the basis of interpretive resemblance and communicated thought between a reformulation and the original.

2. PARAPHRASTIC REFORMULATION MARKERS

In general, discursive markers make up a class of lexical, semantically empty, syntactically optional and marginal elements that have a pragmatically multi-functional character (Schiffrin, 1987, 2001; Fraser, 1990, 1998, 2009; Del Saz Rubio, 2003; Aschenberg and Loureda Lamas, 2011). We have shown above that for all the variation of approaches, reformulation is largely accepted to be a discourse function that covers a wide variety of values including explanation (*that is to say, that is, in other words, in more technical terms, technically speaking, in plainer/ simpler terms, to put it more simply*, etc.), summary (*in sum, to summarize, to sum up, in short/brief, in a nutshell*, etc.), rectification (*on second thought, or better yet/still, or better said*, etc.), illustration (*for instance, for example, namely*, etc.), contrast (*alternatively, although, but, contrariwise, contrary to this/that, conversely, despite (doing) this/that*, etc.), conclusion (*in conclusion, to conclude, to cap it off, to top it off*, etc.). The role of RMs is to help establish a relationship between the reference discourse (D1) and treating discourse (D2) whenever the structural-semantic values of the relationship between the reference and treating discourses make it impossible to determine the particular nature of the treatment kind on their own, this role being exclusively accomplished by the marker. The following corpus examples illustrate the reformulation values mentioned above:

Explanation

- (1) “In many cases, because adaptations are to a different medium, they are remediations, **that is**, translations in the form of intersemiotic transpositions from one sign system (*for example*, words) to another (*for example*, images).” (MAN-ALW-17)

Summary

- (2) “The push was focused on the replacement of structural and descriptive linguistics and the role they play in the categorisation of formal language properties through the application of a theory that identifies the rules governing the generation of sentences (Blommaert, 2014; Doyle et al., 1996; Nicholas & Brookshire, 1993). **In short**, the language structure as proposed by transformational linguists is the rational or innate attributes of the mind that allow the development of the phenomenon.” (GYA-DPA-15)

Rectification

- (3) “In the study of communication effectiveness in patients with aphasia, there is a need to determine the disruptions in lexical and grammatical processing and its effect on the knowledge of the conditions for the understanding of a single utterance. **Better yet**, there is a need to understand a core component of pragmatic processing identified as topic-focus distinction expressed through the application of a variety of grammatical devices that denote the linkage and juxtapositions of focal new information and the topic of discourse.” (RAF-ALJ-16)

Illustration

- (4) “In his *Über die verschiedenen Methoden des Übersetzens* Academy address, the German philosopher differentiates between two distinct types of translators dealing with two different kinds of text, **namely** the ‘Dolmetscher’, who works on commercial texts and the ‘Übersetzer’ in charge of rendering creative texts.” (ASM-CET-17)

Contrast

- (5) “Text-based approaches to translation began to be developed and, **despite** their variety (Neubert 1985, Baker 1992, Hatim and Manson 1990), their common denominator was the fact that they brought the text to the centre of the process of translation and underlined the importance of context, discourse and pragmatic factors.” (DAD-TME-20)

Conclusion

- (6) “[...] she contends that ‘metaphors with end weight very much serve a persuasive function.’ (ibid.). **To conclude**, the textual function of metaphor cannot be correlated only with a particular section of the text rather, it can be regarded as belonging to all three macro slots.” (DAD-EFT-19)

The role of RMs is to help establish a relationship between the reference discourse (D1) and treating discourse (D2) whenever the structural-semantic values of the relationship between the reference and treating discourses make it impossible to determine the particular nature of the treatment kind on their own, this role being exclusively accomplished by the marker. Since in general, reformulation is considered to be genre specific - in oral and written discourses alike - by relying on a segment already produced it preserves an invariant that allows not only for the recognition of the operation thus implemented (Gulich and Kotschi, 1987; Kanaan, 2011) but also for the lexical, syntactic, semantic and pragmatic features that have been modified. On such basis, RMs can be

paraphrastic, establishing a relationship between two connected discourses, and non-paraphrastic, wherever the RM separates two discourses by indicating that the content of one is critical in the continuation of the other. The taxonomy advanced by Gülich and Kotschi (1983) and Rossari (1994) rests on a number of sufficient features that help identify paraphrastic reformulations, the following two posing relevance for our research purpose:

- syntactic parallelism, established and identified between the source segment/expression/discourse and the paraphrased segment/expression/discourse;
- presence of paraphrastic reformulation markers.

Paraphrastic reformulation markers (PRMs) such as *namely, that is, in other words, let me explain, that means*, etc., express, or at least *suggest* (according to Gülich & Kotschi, 1995) equivalence. Often, the semantic equivalence of D1 and D2 is so obvious that the RM becomes somewhat redundant (7).

- (7) (D1) “Maritime occupations tend to have their own jargon, (D2) **that is**, specialized linguistic usages, including their own ways of using otherwise familiar forms.” (IRS-TML-19)

In fact, in short, actually, in any case, anyway, well, or rather and *as a matter of fact* among others are non-paraphrastic reformulation markers (NPRMs) that forefront a contrasting value emerging from two discourses (D1 and D2) constructed as alternate formulations (8). According to Rossari (1994, qtd. in Cuenca, 2003), the role of D2 is to perspectivize D1, namely “to perform an operation of change of enunciative perspective emanating from a retrointerpretation of the antecedent discourse movement” (8).

- (8) (D1) ““Americans prefer to act with the sanction and support of other countries if they can. But they’re strong enough to act alone if they must’, one of Bush’s policy advocates, Robert Kagan, declared for the Washington Post in 2002. (D2) **In fact**, this declaration indicates a preference for a policy of coalition, based on American power.” (ID-PLLP-19)

PRMs provide formal marking of paraphrastic links between source discourse and target (or paraphrased) discourse. The semantic properties of PRMs allow a paraphrasing relationship to be established even between discourses that do not maintain any semantic equivalence visible elsewhere (Rossari, 1994). However, in written specialized discourses in particular, such as academic scientific texts, reformulation emerges as the finite product that presents itself to the recipient. In our study, only PRMs will be examined, as NPRMs cannot indicate an equivalence operation in the sense that we would like to consider here. Furthermore, two essential features of PRMs will be pursued in our analysis: (a) connectivity; and (b) the non-truth-conditionality meaning where (a) refers to the capacity to link two (often conjoined) discourses (a discourse segment to a preceding longer stretch of discourse, a discourse segment to a speech act, or a discourse segment to a non-verbal context) and where (b) refers to the property of RMs to play exclusively a discourse organizing function and remain non-truth-conditional. Additionally, other emerging features

underlying the pragmatic meaning and use of PRMs, such as deictic anchorage and (re)structuring discursive mechanisms, will be examined in our corpus.

3. RESEARCH METHODOLOGY AND ANALYSIS

3.1. The Corpus

Literature reviews within the broader written academic discourse field are a complex environment of study because, text production and reformulation-wise, they rest on successive, different layers of text elaboration. Furthermore, the role of literature reviews, namely, to provide a foundation for doctoral students' research and demonstrate their knowledge of the field as well as the general academic features defining academic discourse at an advanced level, makes them a magnifying glass for understanding knowledge representation and construction. Our approach considers reformulation not only as an equivalence procedure which operates within the framework of action theory but also as a result of reformulating (rewinding) the reference discourse thereby producing a newly reworded version that comes out as a more satisfactory one (Gülich and Kotschi, 1995). In general, doctoral students' various degrees of competence regarding the subject matter of the philology field, their English text comprehension (as EFL learners) as well as their different abilities to understand and reformulate a text by summarizing, condensing, explaining, etc. may provide a good understanding of several discursive problems that arise in the reformulation process. Nonetheless, they fall outside the scope of our approach as our main interest is exclusively in the semantic and pragmatic distinctive values of the reformulation markers in non-English Ph.D. research.

The corpus consists of the literature reviews sections of 35 doctoral reports and 52 theses in the field of philology (available at: <https://bit.ly/305rVnR>) that were submitted by non-native English Ph.D. students. A total number of 125 literature reviews sections consisting of 128,753 words were extracted and analyzed.

3.2. Methodology

The selection of literature reviews has been made on such basis as text type (descriptive discourse), genre (academic research), field (philology) as well as level of writer's expertise (advanced doctoral student). The 125 literature reviews have been read and codified and the paraphrastic markers have been manually counted. Additionally, any discourse containing a RM that could be reduced to a prototypical PRM – such as *that is* and *in other words* – has been identified, analyzed and included in a separate dataset that has been subsequently corroborated with the prototypical RMs counting results. Finally, all occurrences have been categorized in accordance with marker form, number of occurrences (including related frequencies), and their environments of use and the specific semantic and pragmatic functions have been analyzed relative to genre, text type and corpus field.

4. RESULTS AND DISCUSSIONS

Table 1 shows the forms and frequencies of the PRMs found in the selected corpus.

Table 1

Reformulation markers of Explanation

Reformulation Marker (RM) EXPLANATION	Occurrences	Frequency (£/10000)	
CLARIFICATION	<i>that is</i>	247	19.1
	<i>that is to say</i>	212	16.4
	<i>in other words</i>	209	16.2
	<i>in more technical terms</i>	142	11
	<i>technically speaking</i>	94	7.3
	<i>in plainer terms</i>	104	8
	<i>in simpler terms</i>	76	5.9
	<i>to put it more simply/differently</i>	238	18.4
	<i>i.e.</i>	364	28.2
	<i>that/this means</i>	221	17.1
	<i>I mean</i>	64	4.9
IDENTIFICATION	<i>namely</i>	175	13.5
	<i>viz.</i>	79	6.1

The table groups PRMs on the basis of their semantic properties following Del Saz Rubio's (2003) taxonomy which categorizes Explanation RMs into Clarification, Identification and Illustration subgroups. The Illustration subgroup – represented by the two typical RMs *for instance* and *for example* – was excluded from our analysis as these RMs are exclusively used to identify the content of D1 (or of some element of it) by means of an illustration and hence pose no relevance for the multifunctional nature of PRMs that forms the scope of our research. Within the class of Clarification RMs, *that is*, *i.e.* (*id est*), *that is to say*, as well as *in other words* are prototypical neutral RMs; *in plain words/in simpler terms* bespeak semantic simplicity (9) whereas alternatively, *technically speaking* and *in more technical terms* bespeak semantic complexity (10). Thus, the recharacterization of D1 requires a simpler explanation in (9) and a semantically more complex explanation in (10).

- (9) (D1) “Since this type of text represents ‘an abstract set of linguistic rules which operate on discrete units of vocabulary’ (Prichard 2002: 71), we aimed at rendering it ‘[...] more precise and systematic, aesthetically neutral and economical in expression’ (Gerzymisch-Arbogast 2008: 16). (D2) ***In simple words***, we considered the fact that the uttering of each sentence is or is part of an action within the framework of IMO conventions and IMO as a social institution.” (IRS-TML-19)
- (10) (D1) “Catford (1965) advances Jakobson’s idea of shifts in translation and introduces the notion of ‘shifts’ between the original text and its translated version. He offers a detailed description of lexical and grammatical shifts. Translation shifts are described as ‘departures from formal correspondence in the process of going from the SL to the TL’ (1965: 73). (D2) ***In more technical terms***, they are

classified into level shifts and category shifts – further to be separated into structure (changes in grammatical structure), class (changes in class), unit (changes in rank) and intra-system shifts (changes in number even when the languages involved share a similar number system).” (AM-SLT-18)

Despite the fact that *I mean* is typically replaced in academic writing by *that is* and despite the fact that it can also perform several non-reformulatory functions (see Fox Tree and Schrock, 2002, Beeching, 2016), we have opted to include *that/this means* and *I mean* within the Clarification subgroup because these RMs have also emerged in our analysis as performers of the reformulative function of clarification. The following instances (11-12) illustrate such uses:

- (11) (D1) “As appropriation transposes the cultural setting of the source text, the elements of transfer are appropriated suitably to the target culture’ (McFarlane, 31). (D2) ***This means [in other words]*** that appropriation makes dramatic changes, while adaptation holds the theme [...]” (MAN-ALW-17)
- (12) (D1) “The meanings of general language words may also change by their frequent association with other words. (D2) ***I mean, [this means], [in other words]***, they are no longer strictly identifiable in single words, but also in lexical patterns.” (ME-AFP-17)

Distribution-wise, *i.e.*, *that is* and *to put it more simply/differently* are the most frequently used RMs across our corpus. Their observed densities were calculated per 10,000 words and confirm the prevalence of Clarification RMs over Illustration RMs in academic literature reviews, this representing a first important observation in our study. Another observation concerns the frequency values that we have obtained which constitute the quantitative measures of the genre output spectrum and which are apt to describe both the distribution and function of RMs. These values provide a preliminary indication concerning the clarification function (of propositional content and conceptual knowledge alike) of RMs in advanced academic research.

In the type of academic communication in our corpus, the ample use of identification procedures points to the very mechanisms that doctoral students choose in presenting their knowledge to an expert readership. The function of these procedures bespeaks an illocutionary force (such as to persuade, analyze, describe, assess, characterize, etc.) that allows the Ph.D. student to address the difficulty of the D1 discourse by providing a collaborative treatment of these difficulties in D2. *Namely* (13) and *viz.* (short for *videlicet*) are part of the Identification subgroup typically used to insert a gloss or explanation. Although *Viz.* (14) is more formal than *namely*, they both operate as resources that help assign reference to a D1 constituent and thereby identify this constituent in a reformulated D2. In general, the two RMs perform mostly a structural reformulating function that results from a process in which the researcher reformulates (and modifies) the presented information in a readership-centered type of discourse (13–14).

- (13) (D1) “The interpretation of both questions, (D2) ***namely how well is my message being received?***, is by convention embedded under the two reduced constructions

- which only allow minimal variations (i.e. *how do you hear?* and *do you hear?* would also be possible), because they have become fixed phrases.” (IRS-TML-19)
- (14) (D1) “Besides, when choosing this strategy, the translator may face either the phenomenon of over-determination (conveying additional connotations non-existent in the original metaphor), or the opposite, (D2) *viz.* under-determination. Peter Newmark (1988) sets up a much more comprehensive list of procedures for translating metaphors, adapted to the type of the metaphor to be translated.” (IRS-TML-19)

In particular, the functional spectrum of *namely* was found in our corpus to be a significantly more extended one, owing much to the fact that the genre itself (literature reviews in academic research) and its general feature (knowledge presentation) facilitate a better communicative transparency within a more specialized type of discourse. Such a spectrum ranges from explanation (15), clarification (16) and specification (17), to elaboration (18), emphasis (19) and even reduction (20), as illustrated below.

Explanation

- (15) “Hyland (2005, 2008) considers metadiscourse to be the cover term for the self-reflective expressions used to negotiate interactional meanings in a text, *namely* to assist the writer (or speaker) to express a viewpoint and engage with readers as members of a particular community.” (NAM-MED-19)

Clarification

- (16) “Some writers have restricted the term to features of the rhetorical organization by including only those text elements which refer to the text itself (Bunton, 1999; Mauranen, 1993a, 1993b; Valero-Garces, 1996). Fairclough (1992) saw metadiscourse as a kind of ‘manifest intertextuality’, *namely* a discourse space where a writer interacts with his/her own text.” (VON-REM-18)

Specification

- (17) “Most writers have adopted a functional approach and sought to examine linguistic tokens, or metadiscourse makers, *namely* to classify them according to the functions they perform in a text (Lautamatti, 1978; Williams, 1981).” (NAM-MED-19)

Elaboration

- (18) “In order to distinguish between the different types of metaphors, Kövecses classifies them according to five different aspects, *namely* conventionality, cognitive function, nature, level of generality and complexity.” (DAD-MEF-18)

Emphasis

- (19) “Opposing Catford, Nida begins his definition by first pointing out what translating is not, *namely* ‘a process of matching surface rules of correspondence’. Then, he continues by describing it as ‘a more complex procedure involving analysis, transfer and restructuring’ (Nida, 1969: 80).” (DAD-MEF-18)

Reduction

- (20) “The purposes listed in Table 2 for each technique are the ones stated by its above-mentioned authors. In general, the purpose of a taxonomy falls in one of two categories: *namely*, facilitating human understanding and facilitating problem solving.” (SAD-OBF-21)

In all the above instances, *namely* is conditioned by the presence of a cataphoric element (see underlined elements) and serves as a discourse-structuring device.

The multi-functionality of PRMs is also reflected in the type of relationship established between D1 and D2, particularly between any source discourse segment or constituent of D1 and its treating formulation discourse of D2. The reformulation that takes place between any D1 constituent and D2 is a process which, according to Steuckhardt (2009), fixes a referential identity to which a paraphrastic semantic explanatory content is established. Following Del Saz Rubio’s approach (2015), we have set out to identify whether the purpose of PRMs can be to reformulate a *concept* (21), a *speech-act* (22–23), a *conclusion* (24), a *previous proposition* (25) and/or the semantic relations of *entailment* (26) and *presupposition* (27). The following occurrences illustrate the multi-functionality in our corpus of the prototypical RM *that is* (to say):

- (21) (D1) “The occupational area is classified into: pre-, simultaneous and post-experience, whereas the educational field is subdivided into pre, in, and post-study. However, some scholars are in support of the idea that EEP in Steevens’ diagram stands for EAP, (D2) *that is*, English for Academic Purposes, which may be covered by particular disciplines at higher levels of education [...]” (IRS-TML-19)

Here, in (21), ‘EAP’ points to a concept that is reformulated by means of *that is*. The concept and the D2 explanation illustrate that the two contents presented as alternative formulations are equivalent.

- (22) (D1) “Register has been given paramount importance in ESP research. According to Pauline Robinson (1991:20 apud. Croitoru 1996:90) ‘the problem with register (and even variety) is that it can lead to reification’, (D2) *that is*, a register of language is identified and described, and then referred to as a discreet set of linguistic choices, seen as quite separate from the rest of the language. Thus, we find for example, ‘the language of science, ‘the language of medicine’.” (IRS-TML-19)
- (23) (D1) “Perhaps, what the translator had in mind was to show us that the levels of language are interrelated in the use of a certain language; (D2) *namely, [that is]*, that the analysis into levels is purely methodological.” (IRS-TML-19)

The purpose of *that is* in (22) and (23) is to reformulate a speech act. In both examples, this is somewhat implied; while in (22) the “register can lead to reification” (D1) therefore by doing so a register is identified, described, seen, etc.” (D2), in (23), by showing that “levels of language are interrelated”, the author indicates that the analysis is [and hence remains] purely methodological. Equivalence-wise, while the RM in (22) *suggests* equivalence, in (23) it *creates* equivalence.

- (24) (D1) “Linguists (Jespersen 1964, Palmer 2001, Leech 2004) have defined Mood as the form of the verb which shows in what relation to reality the speaker places the action or the state expressed by the predicate. (D2) **That is (to say)**, mood is a grammatical category by means of which modality is expressed.” (AFS-GSIEAR-20)

In (24), **that is** foregrounds a conclusion in D2 that is derived from presenting a definition advanced by several theoreticians before. While both formulations are definitions, in D2 **that is** carries a conclusive, backward-pointing role that allows the writer to advance his/her own definition in a pragmatic turn-taking process.

- (25) (D1) “Lodge, Armstrong, Ellis and Shelton (1997 cited in Vilceanu 2005: 449), distinguish between two broad types of linguistic variations: inter-speaker variation (dialects) determined by the speaker and intra-speaker variation which is conditioned by the context of utterance. Hatim and Mason (1990: 39–40) distinguish between user-related variation and use related variation [...]. It is therefore, understandable that speakers have a native command of only one dialect, but they can have command of many different diatypes. (D2) [**That is**], **In other words**, dialects and contexts of utterance allow speakers to change their language according to who they are talking to, what they are talking about, where they are, etc.” (IRS-TML-19)

In (25), **that is** reformulates the previous proposition advanced by Lodge, Armstrong, Ellis and Shelton who “distinguish between two broad types of linguistic variations”. For clarification’s sake, the author selects the proposition as being worth emphasizing and chooses to omit the peripheral, redundant observations that follow. In this case, **that is** serves as a discourse-organizing RM.

- (26) (D1) “The analogy between a human’s chest and a *sea chest* immediately suggests that the latter is a container of something. (D2) [**That is**], **In other words**, the analogy expresses meaning by relying on our world knowledge.” (IRS-TML-19)

This instance illustrates the polyfunctionality of **that is** which, in D2, reformulates an entailment of D1.

- (27) (D1) “Although Leech (1971) considers that the contrast between the Subjunctive and the Indicative Moods has largely disappeared from present-day English grammar, the distinction of meaning which the subjunctive and the indicative used to express is still important within the language. (D2) **That is (to say)**, the grammatical distinction still lies between the two above mentioned moods.” (AFS-GSIEAR-20)

In (27), **that is** serves as a marker that reformulates a presupposition. The passage contains two presuppositions: [albeit the contrast has disappeared], a) “the distinction of meaning is still important” and b) “the grammatical distinction still lies...”. Both presuppositions are reformulated by **that is** from a pragmatic point of view.

Interestingly, and somewhat contrary to our expectations in advanced academic research, for all their semantic simplicity, *to put it more simply/differently* (28) are among the most widely used RMs across our corpus. An explanation may reside in its double function: on the one hand, it is preceded in D1 by a more authoritative passage which must be conveyed as closely as possible in D2 (see 28 below). On the other, the presentational feature of academic research is doubled by the doctoral student's endeavour to clarify the content of the literature review in a cooperative effort in which the expert writer, *while creating a research niche* for himself, serves as an intermediary between D1 and the text's/discourse's ultimate beneficiary – the readership. Such a positioning of the writer, we claim, reflects the double function of RMs in the academic discourse: to indicate, on the one hand, that a specification (clarification, illustration) of the main argument will follow and, on the other, that this reformulation is at the same time dialogic (Bakhtin, 1981), more explanatory, thus necessary and beneficial to the readership. This observation is consistent with similar findings regarding the variety and diversity of textual expressions and pragmatic values of RMs in the humanities field (Šinkūnienė, 2019) and underscores an intra-disciplinary practice concerning communicative transparency and rhetorical argument construction (Blakemore, 2003).

- (28) (D1) “Other scholars, such as Cameron (2007) and Goatly (2007), contend that a social approach should be added to the cognitive study of metaphor, which would account for the research on metaphor conducted by applied linguists, discourse analysts and sociolinguists (Koller, 2004; 2005, Charteris-Black, 2004; Semino, 2008, Musolff and Zinken, 2009, etc.) from a number of different perspectives such as the discursive, contextual and pragmatic dimensions. Cameron (1999) posits that the emphasis on the cognitive approach, which basically reduces all metaphoric expressions to universal conceptual metaphors (in the *A is B* form), has neglected other important linguistic, cotextual, social and interactional aspects of language used in real discourse. (D1) ***To put it more differently***, a more complex cognitive approach is needed, one that reconsiders ‘a language focus in metaphor research’ (1999: 12).” (DD-TMEF-20)

Our corpus findings rank *i.e. (id est)* as the most frequently used RM in literature reviews. Synonymous with *that is* and *in other words* we would have expected *i.e.* to be less frequently used in philological academic texts, particularly because hard sciences disciplines are generally said to rely more heavily on the Latin RM *i.e.* than soft fields do (Šinkūnienė, 2019). An explanation may reside nonetheless in the very nature of literature reviews; researchers need literature reviews to build and demonstrate a strong theoretical stance for the advancement of their own research, which is why explanation of conceptual knowledge remains downright critical. In so being, by importing the scientific (re)formulator *i.e.*, the clarifying function it typically performs in hard sciences academic research is preserved in philological research along with an inferential use that allows the writer to elaborate on D1 (or a constituent of D1) and advance an explanation or conclusion that was either implied or could be obtained from D1. This is illustrated in (29) in which the explanation that was provided for ‘remediating’ clarifies both the term and the title content of the study quoted by the Ph. D. author:

- (29) (D1) “Bolter and Grusin propose in *Remediation: Understanding New Media* (2000) that all media work by ‘remediating,’ (D2) *i.e.* translating, refashioning, and reforming other media, both on the levels of content and form (Bolter, Grusin, 1995).” (MAN-ALW-17)

Generally, illustration procedures (Gülich and Kotschi, 1995; Ciapuscio, 2003) are used as pure formulation procedures or as part of reformulation processes, to introduce and/or perform the task of explanation. In (30), the illustration procedure via *namely* and *viz.* allows the expert writer to communicate specialized knowledge by making it more accessible for the readership and him/herself.

- (30) (D1) “On the other hand, the three categories identified by Fernando (1996), (D2) *namely* pure idioms, semi-idioms and literal idioms refer to multiword expressions – the only expressions which have in them the seed of an idiom – but using the very word ‘idiom’ for all the three of them seems to be an exaggeration.” (IM-ITT.20)

We notice from the above examples (22), (25), (28) and (30) that the main scope of PRMs is to clarify a concept. In other instances, such as (29) and (31), D2 is built on concretization resulting from the expert writer’s need to reformulate D1 to overcome and clarify any comprehension difficulties that may be arising from D1. Within this process, such conceptual anchorage mobilizes effective and clear academic knowledge which, by means of reifying abstraction, assists in the completion of the general illocutionary purpose of D2. This pragmatic purpose is readership-directed and allows the writer to describe and clarify content as in (29) and (31).

- (31) (D1) “[...] the free indirect speech alternative in (124) would not be ‘a reproduction of the original speech, but [...] a mere indirect rendering of the original’ (Leech & Short 1990:325), which counts for an ironic effect most often due to its allowing for a double perspective upon the text, (D2) *i.e.* that of the character and that of the speaker.” (AFS-GSIEAR-20)

Furthermore, the general assumption that D2 has a larger formative extension (for a larger discussion on discourse production, see Gülich and Kotschi, 1995) is challenged by our findings concerning the extension of D2, which is found to contain fewer denotatively relevant features than D1. Owing to its informative, explanatory and very often persuasive function such as that in (28), the treating discourse D1 should be structurally more complex than the reference expression D1, particularly in the case of the prototypical RMs *that is* and *in other words*; however emerging from our corpus results, in advanced academic research, D2 is *authority-oriented* rather than self-reliant, as the expert researcher serves as a knowledge transmitter and meaning decoder while reporting on previous authoritative state-of-the-art knowledge. That being the case, while this may point to the presentative, committing, informative and persuasive functions of any research discourse, we argue that, in the case of literature reviews, the process of smoothing formulation work emerges as characteristically one in which the D2 reformulation sequence(s) are often shorter and do not interfere with the general thematic development but rather operate as local endorsement for the literature reviews becoming therefore the main activity itself. Such a reformulation

discursive process is dynamic, essentially clarifying and prevails in literature reviews because the researcher is expected to explain terminology, build on prior as well as current knowledge, practices, or phenomena in his/her field. By claiming centrality, the writer invites the readership to acknowledge that his/her research is part of a lively, significant and well-established research area. Within this particular type of explanatory reformulation discourse, which is mostly *authority-based* and *readership-oriented*, prototypical PRMs, besides a clarification function, perform a discourse organizational role that keeps the discourse steady and controls the information flow in the academic narrative. Additionally, when reformulation is over-used and overly redundant in its D2 expression, it points to features concerning discourse production, rhetorical purposes and explanatory ability of non-English Ph.D. writers. More to the point, since in the type of advanced philological research approached in our corpus expert researchers are expected to possess an advanced level of philological knowledge and write as experienced and independent users of the English language, we argue that D2 reformulation sequences are constructed differently and on various levels of complexity that may vary with each researcher's ability to simplify complex knowledge and facilitate readership comprehension while clarifying their own. From a pragmatic, much less rhetorical, perspective, reformulation initiatives, underlying mechanisms and researchers' stance can enable us to better contemplate the positioning of both expert and non-expert doctoral writers in the reformulation discourse.

5. CONCLUSIONS

This study set out to examine the use and role of English paraphrastic reformulation markers in the literature reviews sections of a corpus comprising doctoral reports and theses submitted by non-English Ph.D. students. The present research looked mostly at prototypical reformulation markers to explore the function and distribution of RMs as specific occurrences in philological academic research. Such a specific genre, we hold, provides a significant and complex environment of RM usage not only because RMs can be investigated as results of successive discourse elaboration processes but because it is these very processes that can - and do - determine the prevalent clarification function and wide distribution of RMs.

The examination of RMs in the particular environment of study in which knowledge representation and construction differ from that of other genres led us to the conclusion that reformulation in literature reviews is another means of presenting specialized discourse variation in which both D1 and D2 expressions remain fundamentally conceptual and terminological. Reformulation is a strategy used in the problem-solving process of overcoming obstacles that are commonly emerging in written academic communication. Within such a relational process, prototypical PRMs were found to display different degrees of communicative transparency and to perform the function of clarification of explicit content in an *authority-based* and *readership-oriented* discourse reformulating strategy. Reformulation expressions were found to support the overall thematic exposition of the literature review and the RMs to operate as discourse endorsement for a collaborative process that facilitates knowledge comprehension and transmission to the ultimate discourse beneficiary – the Ph.D. specialized readership.

The examinations of several PRMs, particularly of those within the class of Clarification, allowed us to conclude that although the markers are structurally parallel and often identical or similar in a word-to-word translation, they are far from being functionally equivalent. Mobilized by the type of relationship established between D1 and D2, the multi-functionality of PRMs ranges from identification and specification to explanation (whether for readership or self). Within the general economy of the literature reviews sections of academic research, the distinctive role of PRMs is to accommodate the reader with a particular level of specialization and scientific background knowledge.

In trying to clarify the role of RMs, our study also suggests that there is no uniform notion of reformulation and that the semantic and pragmatic features of RMs and their interplay with the meanings expressed by the connected discourse segments may vary significantly across genres, fields and disciplines.

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