Litotes in English research articles: disciplinary variation across life and social sciences

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ABSTRACT
This paper reports on an analysis of litotes in English research articles from two distant fields, life and social sciences. As a device for understatement, litotes denies the semantic opposite of what is meant to mitigate the literal content of the utterance. This feature makes litotes a useful means of academic communication which should remain cautious in tone and impartial. However, the results of the analysis reveal disciplinary variation in the frequency, structural types and syntactic functions of such constructions in the considered discipline-specific expert writing. The social sciences texts use twice as many litotes as the life sciences texts, and show a greater functional variation of litotes. There are also dissimilarities in the specific patterns by means of which the analysed structural types of litotes are realised.

KEYWORDS: academic discourse, disciplinary variation, litotes, research articles, understatement

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1. INTRODUCTION AND RESEARCH QUESTIONS

Disciplinary variation in academic discourse has only recently attracted serious attention of researchers who had been previously more focused on how academics in general convey scientific meanings. In essence, disciplines are intertwined in that they all are geared towards the systematic accumulation and organization of the monolith of human knowledge. Sharing the same basic aims and principles of scientific integrity, they often need to speak one voice to appear credible and professional. Yet, the specific phenomena around which each of them revolves are theoretically and methodologically diverse. Different perspectives on knowledge, dissimilar ways of interpreting the world and divergent research practices — all these aspects entail that the seeming uniformity of science gives way to the particularity of individual deliberations unique to the distinct fields. This, in turn, finds its reflection in how language is used to project the disciplinary identity of scholars. Therefore, as Tse and Hyland (2006: 178) aptly remark, discipline can indeed be considered as “an important source of variation in academic writing across a range of genres”.

Research into disciplinary differences is concerned with exploring a wealth of facets that together make up “the ability to engage in social, semiotic, and cognitive practices consistent with those of content experts” (Fang 2012: 19). Attention might be devoted to the very same issues that are of interest to any explorer of scientific
writing or speaking who considers it to be the prototypical model of academic discourse. What changes, however, is the perspective adopted on these phenomena. The aim is no longer to neutralise the disciplinary impact on genre features, citation practices or the use of self-referring pronouns by selecting texts representing a variety of distinct fields. Conversely, the purpose is to thoroughly study a given problem in texts from only one discipline, and then juxtapose the results with those obtained from an analysis of precisely the same problem, but conducted on texts from a totally different field. The effect is revealing indeed, since one gains an insight into “how disciplinary affiliation influences” the linguistic, textual and rhetorical choices of insiders to their respective fields (Tse and Hyland 2006: 198).

From among numerous communicative practices, the exploration of which may contribute to a better understanding of discipline-specific academic discourse, in this paper the focus is on litotes. Using it, a writer writes it is not irrational rather than it is rational, as the former is informationally weaker than the latter, that is, it “expresses an overt lack of commitment, and so implies a desire to suppress or conceal one’s true attitude” (Leech 1969: 170). Owing to these rhetorically mitigating properties, the device has the potential to be an inherent feature of academic communication. Unfortunately, so far litotes has been studied mostly by rhetoricians (e.g. see the overview by Horn 2017b and the study by Yuan 2017) and explorers of negation (e.g. Hoffmann 1987, Horn 1989, van der Wouden 1995 and 1996, de Swart 2010). Yet, it has been increasingly neglected by researchers of academic discourse, among whom particular interest in litotic constructions has been expressed by Łyda and Warchał (2011), who conducted a Polish-English contrastive analysis of litotes in biology and linguistics research papers. It seems that to date no other explorations of this kind have been offered. This may be due to the fact that in lieu of examining “single grammatical features”, researchers concentrate on “a collection of lexical and grammatical features that work together to create some type of functional result” (Gray 2015: 9).

The present study attempts to fill this gap by offering a cross-disciplinary insight into selected types of litotic constructions in English research articles (RAs) representing two disciplinary areas: life and social sciences. The specific research questions focus on potential differences in the use of litotes with respect to their: (1) frequency, (2) structural types, and (3) syntactic functions. Additionally, similarities regarding the above mentioned aspects are also highlighted.

2. LITOTES

According to the Oxford English Dictionary, litotes is “a figure of speech in which an affirmative is expressed by the negative of the contrary” and as such, it enables one to say less than is actually meant. This definition applies to sentences like

(1) Tom is not uncivilized,

in which litotes is linguistically marked by the negative particle not and the negative prefix un-. Still, by context of use the negative elements generate an affirmative
output that may be vaguely interpreted as ‘Tom is civilized’. Apart from such explicit uses of negative statements to affirm positive sentiments, the figure may also have more implicit realizations, for example,

(2) _He isn’t half a bad guy_  
(roughly, ‘he is a good guy’) or even  

(3) _Further advances were hardly possible_  
(roughly, ‘they were impossible’ or ‘not possible’). Hence, Horn (2017a: 162) comments that “the figure of litotes has a number of overlapping definitions”.

Worthy of mention is van der Wouden’s (1995: 2) distinction between understanding litotes as logical double negations, illustrated by (1) above, and as a synonym for understatement or meiosis, shown in (2). Among those who equate litotes with double negation is, for instance, de Swart (2010), whereas the view that litotes can be seen as meiosis is shared by Haverkate (1990) and Lanham (1991), and the opinion that litotes can be considered as understatement, which is actually equated with meiosis, is held by Horn (1989). On the contrary, Neuhaus (2016) argues that litotes and meiosis are distinct notions, whereas Yuan (2017: 253) claims that the figure is simply “often confused with meiosis and understatement”.

To avoid confusion, in the present study the following approach has been adopted. Understatement is a superordinate term denoting a discourse strategy of minimizing the full force of the proposition. One of its subtypes is meiosis aimed “to lessen, weaken, or reduce the characteristics of a given entity to show its insignificance”, and another one is litotes, “which deploys double negative constructions, whereby the assertion of a positive feature is generated by denying the opposite or contrary of the word or expression which would otherwise be used” (Dynel, 2018: 208). It is particularly the last term that is focused on here, though references are also made to understatement.

Litotes, despite its long tradition (for an overview, see Horn 2017b), seems to have been unattended by researchers other than rhetoricians. This neglect is surprising, especially that it conventionally takes the form of a double negative and negation is an omnipresent linguistic phenomenon, which, however, in the case of litotes serves an inverse function, that of affirmation. Nevertheless, as Yuan (2017: 254) notes, litotes can be found “in texts of all domains and genres — literary and historical; philosophical and scientific; trivial and profound”. Numerous examples appear also in everyday exchanges, such as the encouragement it’s not hard addressed to a child scared of riding a bike or the answer it’s not bad given to the question about one’s likes and dislikes.

An important study of litotes has been offered by Hoffmann (1987), who emphasizes its argumentative functions but refers to it using the phrase _negation contrarii_, which stands for ‘negation of the opposite’. Worthy of mention is also Yuan’s (2017: 256–258) triple typology of litotes based on Aristotle’s study of opposition. First, there are contradictory litotes (4), or ‘mutually opposed’, which constitute a combination
of two negations, specifically, a negator (not, no, nor) and a word denoting the contradictory opposite: either a negator (usually not), a negative/privative preposition (e.g. without) or a negating affix (in-, un-, dis-, -less). Second, there are contrary litotes (5), or ‘conflicting/antagonistic’, which constitute a combination of a negation and an antonym, typically a negatively valenced adjective. Third, there are relative litotes (6), or ones involving ‘mutually defining antonyms’, which constitute a combination of a negation and correlation/meronymy.

(4) The study it not without its limitations.
(5) John is no fool.
(6) Not all explorers of the Pacific are sailors.

As a figure of pragmatic understatement, litotes “mitigates the negative force of the utterance by expressing the affirmative through the denial of its opposite” (Crespo-Fernández 2014: 16). Such juxtaposition of two negatively oriented lexical items in one sentence may serve different purposes, the interpretation of which, however, depends on context. Hence, it proves useful as a polite, though euphemistic, alternative to explicit criticism, as in She doesn’t excel at biology to imply ‘she is bad at it’. This rhetorical manoeuvre is possible owing to the fact that “affirmatives are used to admit propositions (…) into the common ground, while negatives are used to reject them”, and litotes seems to serve both purposes simultaneously (Lai 2012: 98). Indeed, the potentially adverse effect of new information that is implicitly conveyed through the affirmative reading of the construction is softened by explicit denial of its opposite, which transforms the whole into a mildly positive comment. Litotes also helps to direct attention to some detail by seemingly ignoring its attractiveness and emphasizing its opposite instead, as in Mary is not unwise to highlight her wisdom but in a somewhat restrained way. The modest courtesy and reserved enthusiasm with which litotes conveys meanings make the device valuable whenever a cautious tone is preferred over categorical statements.

Seemingly, a perfect context for the use of litotes is academic discourse, since one of its important conventions is the attempt to “withhold complete commitment to a proposition” (Hyland 2009: 75). Yet, it should be noted that litotes, especially in the form of double negative constructions, is marked by a certain degree of vagueness or even inexplicitness, causing that It is not unlikely may not be overtly understood as ‘It is probable that’, since it covers a range of possible interpretations from ‘rather likely’ to ‘extremely likely’. As van der Wouden (1997: 215) notes, “there is some uncertainty about the exact meaning of litotes”, which is reflected in the debate of rhetoricians, arguing for a strongly positive meaning of the device, and linguists, claiming its weaker, not accurately positive interpretation. This feature of litotes may prove useful in academic setting, which despite attempting “to be direct about the ‘position’ — the argument and reasons and claim” is often “shy, indirect, or even evasive about the texture of feelings or attitude that lie behind that proposition” (Elbow 1991: 145). However, litotes realised as double negatives can create confusion or ambiguity, which is involved in the process of decoding the meaning of negative statements. Therefore, it has been accepted that “sentences with two negative words are generally
not allowed in academic writing”, though as Birch (2014) adds, a loophole has been left for litotes upon the following condition: “unless the meaning is rhetorically positive”.

3. DISCIPLINARY DISCOURSES

Disciplinary discourse refers to the phenomenon about which Hyland (2000: 3) writes that “while disciplines may be defined by their writing, it is how they write rather than simply what they write that makes the crucial difference between them”. Each discipline is characterized by its own conventions and rhetorical practices that are unique to its community of knowledge gathering professionals who share the same theoretical and methodological background as well as norms, terminology and thematic contexts. Scholarly discourse is not uniform as the very nature of academic disciplines is dissimilar in that each revolves around different knowledge domains and intellectual dilemmas, and each has its distinctive cultural features resulting from the differing institutional and interactional powers. Therefore, each displays distinct “modes in which arguments are generated, developed, expressed and reported” (Becher and Trowler 2001: 46).

Research into how the field-specific scholarly and social practices of writers are reflected in academic communication is not entirely new, yet, it has only recently become prominent, with a shift away from the general principles of the register. A detailed overview of studies on disciplinary discourse variation has been provided by Hyland (2006: 22–23), who groups them according to such issues of interest as argument, rhetorical moves, stance, engagement and speech. An updated account of such explorations can be found in Gray (2015), who takes special interest in studies investigating language use in academic research articles. Łyda and Warchał (2011: 196) extend this list by adding the few existing cross-disciplinary explorations of languages different than English (i.e. French and Norwegian). Still, it seems that recently disciplinary differences have become of interest also to academics investigating other languages, for instance, Persian (Rashidi and Shahab 2013), Spanish and Italian (see the edited collection by Gotti 2014) or Chinese (Mu et el. 2015).

The disciplines themselves and, consequently, their respective discourses have been traditionally divided into soft and hard (see e.g. Simonton 2009), where the first category comprises the humanities and social sciences, and the second, the natural sciences, with its sub-fields: the life (or biological) and physical sciences. This broad distinction results from the differing nature of selected aspects of these two domains of knowledge, such as precision, level of objectivity, methodological rigour or cumulativeness of development. Following Munro and Munro (2009: 1) and Hyland (2006: 34; 2009: 62–64), the hard disciplines (e.g. immunology, neuroscience, biology) are seen as tougher, more rigorous, experimental and quantitative in approach, but highly explanatory in nature, marked by empiricism, accuracy, objectivity, reliance on solid data and cumulativeness of knowledge. By comparison, the soft disciplines (e.g. psychology, economics, sociology) are considered as easier, less rigid, more stylistically elegant, but quite fuzzy, marked by lower validity, reliability and rigour, reiterative, interpretative and discursive in nature, qualitative and introspective in
approach. Additionally, Biber (1988) reports that natural science prose is much more abstract and impersonal than social science and humanities prose. Humanities prose is also more concerned with concrete events and participants, whereas experimental and empirical studies (i.e. natural sciences, social sciences) “depend less on the logical comparison of alternatives and the use of persuasive form” (Biber 1988: 194).

These characteristics, as Hyland (2016: 20) argues, cause that “each discipline draws on different lexical, grammatical, and rhetorical resources to create specialized knowledge”. Thus, the technicality of the hard sciences resulting from their explanatory nature is seen in frequent reference to specialist terms, definitions or classifications, and heavy use of highly informative noun phrases that become part of “syntactic relations of coexistence, revelation, or causation” (Fang 2012: 25). Empiricism is also manifested in heavy reliance on the scientific method, pragmatic approach and bibliographical references which take precedence over the writer’s authority, whose presence is less marked in the text, similarly as features of interaction with readers (see Hyland 2005; Fløttum et al. 2006). The vagueness of the soft sciences, in turn, arising from their interpretative nature, is observed in a stronger presence of indefinite pronoun subjects but also references to the author and reader, since the former needs to establish a credible authorial persona, which is not granted by the very nature of the research activities undertaken, and the latter has to be engaged in the discourse to be effectively persuaded of the validity of topic (see Bazerman 1981; Fløttum et al. 2006). Furthermore, introspection is visible through writer’s explicit engagement in the form of self-mentions, hedges, boosters and attitudinal lexis (see Hyland 2006 and 2017).

It is worth remembering, however, that disciplinary boundaries are constantly shifting, as some disciplines disappear, new emerge and interdisciplinary approaches come to the spotlight. Hyland (2009: 63) gives the example of the social sciences, which “have partly adopted methods of the [hard] sciences” and are thus sometimes placed in a middle position between the purely soft and purely hard sciences. Therefore, the soft-hard distinction should rather be seen as a continuum on which the specific scientific branches are either closer to or further from one of its two opposite ends, also in terms of the linguistic manifestations of their inherent characteristics.

4. MATERIAL AND METHOD

The analysis is based on two corpora of English research articles, each comprising 300 papers published in a collection of internationally recognised journals that were accessed through the Science Direct database. A text was included in the corpora if the affiliation of the first two authors allowed to identify their command of English as native-like. The Social Sciences corpus (SSC) comprises papers published in the years 2000–2007, where 150 come from psychology journals and 150 come from sociology journals. The total number of words in the corpus approximates 2.7 million. The Life Sciences corpus (LSC) comprises 121 RAs published in journals sub-classified as agricultural and biological sciences, 94 RAs from immunology and microbiology journals and 85 articles from neuroscience journals, all of them published in the years 2006–2007. The total number of words in the corpus is about 2.3 million.
The decision to concentrate on two disciplinary areas rather than on their selected branches was also carefully considered. Specifically, a preliminary search of the distinct branches that contributed their texts respectively to the Life or Social Sciences corpus revealed that the number of litotes found in each of them individually would be insufficient for a branch-specific analysis of the device. Admittedly, the results obtained for the SSC were promising: 37 items for psychology and 69 for sociology; however, those for the LSC were less spectacular: 24 for neuroscience, 14 for immunology, but only 8 for biology and 2 for agriculture, which ultimately called for considering broader disciplinary groups.

In turn, the decision which litotic constructions to examine was taken after consulting literature on the device (notably, Łyda and Warchał 2011; Yuan 2017) and on the semantics of English negative affixes (Hamawand 2007, 2009). Considering such aspects as searchability and fairly objective findability, the focus was on structures with two clear syntactic or morphological markers of negativity. Such litotes, as Yuan (2017: 258) notes, represent the contradictory type, which is characterized by double negation, “proves most uncontroversial”, is easy to distinguish from related figures (i.e. meiosis, irony, oxymoron) and “serves as a natural prototype of litotes”. Thus, the corpora were scanned with WordSmith Tools 6.0 (Scott 2012) for occurrences of the negator not in the context of the negative affixes a*, de*, dis*, il*, im*, in*, ir*, non*, un*, *less and the preposition without, with the context set at three words right of the search word. The results were examined manually for litotes and the findings recorded for the two corpora were compared.

As for the negative prefixes selected for analysis, the literature in the field adopts different approaches to them. Sometimes, il-, im- and ir- are considered as the allomorphs of the morpheme in- and mentioned as different variants of one prefix (see Quirk 1985; Hamawand 2009). In other sources, in-, il-, im- and ir- are listed as separate categories (see Łyda and Warchał 2011). This is also the case here, where the focus is on primary negative prefixes, which are “used to indicate the opposite of the base to which they are attached”, not on secondary negative prefixes (e.g. counter-, mal-, sub-), which “are not negative per se, but connote negation” (Hamawand 2009: 60, 72). Considering that litotes is a way to express the affirmative, examples such as not an antimicrobial tool cannot be seen as litotic, since the implication is definitely not that the tool is microbial.

5. RESULTS

The study concentrates on 11 litotic constructions of the contradictory type, which formed the basis of searching the corpora.

5.1 OVERALL FREQUENCY

Presence/absence analysis revealed a total of 152 investigated items: 104 for the Social Sciences corpus and 48 for the Life Sciences corpus. Table 1 shows the overall distribution of litotes in the two corpora, with their frequency being 2 times higher in the SSC than in the LSC. Even considering the difference in size between the cor-
pora, with the SSC being 1.17 times larger than the LSC, it still has to be noted that in the former corpus litotes occurs 1.9 times more often than in the latter.

It is noteworthy that a different number of litotes involving prefixation was attested in the SSC (8 cases) and the LSC (6 cases), and the overlapping ones were not all of the same type. The most common prefix in the material under investigation was un- (45 in SSC vs. 15 in LSC), whereas de- was totally absent. In the SSC, the second most frequent prefix was in- (21), and then im- (10), which were followed by a few examples of ir- (3), dis- (2) as well as a- (1), il- (1) and non- (1). In the LSC, the second most frequent prefix was non- (8), and then im- (6) and in- (6), which were followed by dis- (4) and isolated cases of a- (1). Il- and ir- were completely absent. It is worth adding that the prefixes un- and in-, which form mainly adjectives with “a deprecatory sense”, were used in 66 litotes (63.4%) in the SSC and only in 21 (43.7%) in the LSC (Horn 2017b: 86). This may suggest that social science prose tends to delegate responsibility for a more categorical interpretation of its claims to the reader. The litotes involving suffixation (-less) was found only in the SSC (2), whereas the string not without was quite common in both the SSC (18) and LSC (8).

<table>
<thead>
<tr>
<th>Litotes</th>
<th>Social Sciences</th>
<th>Life Sciences</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
</tr>
<tr>
<td>a*</td>
<td>1</td>
<td>0.9</td>
<td>1</td>
</tr>
<tr>
<td>de*</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>dis*</td>
<td>2</td>
<td>1.9</td>
<td>4</td>
</tr>
<tr>
<td>il*</td>
<td>1</td>
<td>0.9</td>
<td>—</td>
</tr>
<tr>
<td>im*</td>
<td>10</td>
<td>9.6</td>
<td>6</td>
</tr>
<tr>
<td>in*</td>
<td>21</td>
<td>20.1</td>
<td>6</td>
</tr>
<tr>
<td>ir*</td>
<td>3</td>
<td>2.8</td>
<td>—</td>
</tr>
<tr>
<td>non*</td>
<td>1</td>
<td>0.9</td>
<td>8</td>
</tr>
<tr>
<td>un*</td>
<td>45</td>
<td>43.2</td>
<td>15</td>
</tr>
<tr>
<td>*less</td>
<td>2</td>
<td>1.9</td>
<td>—</td>
</tr>
<tr>
<td>without</td>
<td>18</td>
<td>17.3</td>
<td>8</td>
</tr>
</tbody>
</table>

**Table 1.** Overall distribution of litotes in the corpora

5.2 STRUCTURAL TYPES

The 104 entries generated from the SSC can be assigned to five major structural types shown in Tables 2 and 3. Table 2 demonstrates that the most frequent was the not neg-ADJ type (71 cases) realising six patterns, the two most numerous being BE not (↔ADV) neg-ADJ (50) and if not (ADV) neg-ADJ (10). For ease of reference, the labels denoting the individual types of litotes presented in Tables 2–5 are preceded by numbers that are subsequently used in the summarizing Table 6.

1 If not stated otherwise in Tables 2, 3, 4 and 5, a specific example of litotes was attested one time in the corpora.
\section*{Table 2. Structural types of litotes in the SSC: not neg-ADJ}

The remaining structural types of litotes found in the SSC are listed in Table 3. As can be seen, the second most frequent type was not without N (18 cases) realising two patterns: BE not without (DET/ADJ) N (12) and not without (DET/ADJ/V-ing) N (6). Somewhat less popular was the not neg-ADV (10) type, followed by not neg-V (4), and not neg-N (1) realised by the pattern not ART neg-N.

As for the LSC, the 48 entries generated from the corpus can be assigned to five structural types shown in Tables 4 and 5. Table 4 details that the most productive was the not neg-ADJ type (29 cases) realising seven patterns, the two most numerous being BE not (↔ADV) neg-ADJ (13) and not (ART/DET/PREP) neg-ADJ N (8).

The other structural types of litotes found in the LSC are given in Table 5. As can be seen, the next two most popular types were not neg-V (7 cases) and not without N (8 cases), the latter realising two patterns: BE not (ADV) without (DET) N (7) and not V without N (1). The least productive types were not neg-ADV (2) and not neg-N (1) realising the pattern not (V) (ADV) neg-N.
2) not without N (18)  
2a) BE not without (DET/ADJ) N (12)  
are not without flaws  
are not without precedent  
is not without effect  
is not without its critics (2)  
is not without (its) limitations (3)  
is not without negative impacts  
is/are not without (its) problems (3)  
2c) not without (DET/ADJ/V-ing) N (6)  
not without experiences  
not without controversy  
not without difficulty  
not without any location cues  
not without elective affinity  
not without causing major controversy  

4) not neg-ADV (10)  
not infinitely  
not infrequently  
not insignificantly  
not uncommonly (2)  
not unexpectedly  
not unnaturally  
not indubitably  
not unambiguously  
not unequivocally  

5) not neg-V (4)  
should not be discounted  
may not disprove  
did/would not go unnoticed (2)  

3) not neg-N (1)  
3b) not ART neg-N  
not an inevitability  

TABLE 3. Other structural types of litotes in the SSC

1) not neg-ADJ (29)  
1a) not neg-ADJ (2)  
not dissimilar  
not unlike  

1c) BE not (↔ADV) neg-ADJ (13)  
are not inconceivable  
are not inconsistent  
are not invariant  
is/are not uncommon (3)  
is not ungrammatical  
is not unlikely  
is not implausible  
were not completely asymptomatic  
are not generally impaired  
are not inherently unsafe  
was certainly not impaired  

1d) not V neg-ADJ (1)  
are not considered ungrammatical  

1f) not (ART/DET/PREP) neg-ADJ N (8)  
not a non-specific effect  
not the uninfected fleas  
not implausible factor  
not some non-specific effect  
not during the non-numerical task  
not in non-facilitating inputs  
not to an implausible degree  
not after noncancelled [...] trials  

1g) ART not neg-ADJ N (1)  
a not-uncommon cause  

1h) BE not ART neg-ADJ N (1)  
was not a non-specific effect  

1l) not V (ART/DET) neg-ADJ N (4)  
does not provide an insurmountable barrier  
does not yet provide unequivocal evidence  
did not peck the non-aversive blue bead  
did not display any unusual levels  

TABLE 4. Structural types of litotes in the LSC: not neg-ADJ
Structural variation of litotes in the corpora is summarized in Table 6, which indicates that the most common structural type not neg-ADJ was used with greater frequency in the SSC (68.2%) than LSC (60.4%) and was realised differently in terms of the specific patterns and/or their frequency. The second most frequent structure in both corpora was the not without N type (17.3% vs. 16.6%), whereas the least popular was the not neg-N type (0.9% vs. 2%). However, the not neg-ADV type was more common in the SSC (9.6% vs. 4.1%), whereas the not neg-V was more popular in the LSC (14.5% vs. 3.8%).

**Table 5.** Other structural types of litotes in the LSC.

<table>
<thead>
<tr>
<th>Structural types of litotes</th>
<th>Social Sciences</th>
<th>Life Sciences</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) not neg-ADJ</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1a</td>
<td>not (CONJ²) neg-ADJ</td>
<td>5.6%</td>
</tr>
<tr>
<td>1b</td>
<td>if not (ADV) neg-ADJ</td>
<td>14%</td>
</tr>
<tr>
<td>1c</td>
<td>BE not (↔ADV) neg-ADJ</td>
<td>70.4%</td>
</tr>
<tr>
<td>1d</td>
<td>not V neg-ADJ</td>
<td>—</td>
</tr>
<tr>
<td>1e</td>
<td>not V (ADV/PRON/as) neg-ADJ</td>
<td>4.2%</td>
</tr>
<tr>
<td>1f</td>
<td>not (ART/DET/PREP³/ADV⁴) neg-ADJ N</td>
<td>5.6%</td>
</tr>
<tr>
<td>1g</td>
<td>ART not neg-ADJ N</td>
<td>—</td>
</tr>
<tr>
<td>1h</td>
<td>BE not ART neg-ADJ N</td>
<td>1.4%</td>
</tr>
<tr>
<td>1i</td>
<td>not V (ART/DET) neg-ADJ N</td>
<td>—</td>
</tr>
</tbody>
</table>

2 Absent in LSC.
3 Absent in SSC.
4 Absent in LSC.
As exemplified by the sentences below, patterns 1b (7) and 1e (8) were found only in the SSC. In turn, the LSC search produced occurrences of 1d (9), 1g (10) and 1i (11). Pattern 1c (12) was much more common in the SSC (70.4% vs. 44.8%), whereas 1h (13) was more frequent in the LSC (3.4% vs. 1.4%), similarly as 1a (example 14; 6.8% vs. 5.6%) and 1f (example 15; 27.5% vs. 5.6%), the specific realisations of which, however, were not quite the same in the two corpora, as detailed in the footnotes to Table 6.

(7) The result is that it is difficult, if not impossible, to attribute a specific component of divergent final offers to optimism.
(8) Participants did not find it inconceivable to think of politicians as hard working and trustworthy, […]
(9) Although such sentences are not considered ungrammatical in adult Japanese or Turkish, they do sound unusual […]
(10) Human Clostridium difficile-associated disease (CDAD) is of unquestioned importance in humans, and has been a not-uncommon cause of enteric disease […]
(11) Hence, research does not yet provide unequivocal evidence of a patient benefit from HCP influenza immunization.
(12) Therefore, it is not implausible to propose that auditory processing, phonology, and reading performance are interrelated.
(13) This is not an unreasonable index of relative foregone earnings across countries.
(14) In most cases these types of definitions, while not inaccurate, leave the notion of dialectic too vague to be of much use.
(15) This was not a non-specific effect on metabolism, as glucose addition at these doses had no effect on IL-2 production.

Differences are also noticed in the realisation of the negative adjective in the not neg-ADJ type. In the LSC, it was realised by the following 7 prefixes: un- (12 cases), non- (7),

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**Table 6. Structural variation of litotes in the corpora**

<table>
<thead>
<tr>
<th>Structural types of litotes</th>
<th>Social Sciences</th>
<th>Life Sciences</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>No</td>
</tr>
<tr>
<td>2) not without N</td>
<td>17.3%</td>
<td>18</td>
</tr>
<tr>
<td>2a BE not (ADV) without (DET/ADJ) N</td>
<td>66.6%</td>
<td>12</td>
</tr>
<tr>
<td>2b not V without N</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2c not without (DET/ADJ/V-ing) N</td>
<td>33.3%</td>
<td>6</td>
</tr>
<tr>
<td>3) not neg-N</td>
<td>0.9%</td>
<td>1</td>
</tr>
<tr>
<td>3a not V ADV neg-N</td>
<td>-</td>
<td>100%</td>
</tr>
<tr>
<td>3b not ART neg-N</td>
<td>100%</td>
<td>1</td>
</tr>
<tr>
<td>4) not neg-ADV</td>
<td>9.6%</td>
<td>10</td>
</tr>
<tr>
<td>5) not neg-V</td>
<td>3.8%</td>
<td>4</td>
</tr>
</tbody>
</table>

---

5 Absent in SSC.
6 Absent in LSC.
in- (4) and its variant im- (4), a- (1), dis- (1). The SSC findings were more diversified, with 8 different prefixes: un- (37), in- (17) and its allomorphs: im- (10), ir- (2), il- (1) as well as a- (1), non- (1), a- or ir- (1), and the suffix -less (2). Although in both corpora negativity in the not neg-ADJ structural type was most commonly marked by the prefix un-, there were differences in the frequency and use of other markers of negativity, with no specimens of dis- in the SSC, and total absence of ir- and il- in the LSC.

The second most common structural type was not without N, used with comparable frequency in the SSC (17.3%) and LSC (16.6%). It was most often realised by pattern 2a (16–17), however, pattern 2b (18) occurred only in the LSC, whereas 2c (19), only in the SSC.

(16) However, such methods are not without flaws.
(17) Early life manipulations were not completely without effect, however.
(18) Unfortunately, this protection does not come without a cost; [...] 
(19) A concomitant phenomenon, not without elective affinity to the first one, took place in theological thought.

The structural type not neg-N was realised by pattern 3a (20) in the LSC (2%) and pattern 3b (21) in the SSC (0.9%). The not neg-ADV type (22) was realised by the same pattern in both corpora, yet there were differences in its frequency, which was higher in the SSC (9.6%) than in the LSC (4.1%). Finally, the not neg-V type (23), realised similarly in both corpora, was more common in the LSC (14.5%) than in the SSC (3.8%).

(20) [...] a study of this size could not prove such non-associations.
(21) [...] however with personal projects there is a possibility (not an inevitability) that change can occur.
(22) The respondent added, not insignificantly, that ‘confusion with Theology makes things worse’.
(23) The confusion in Warsaw did not go unnoticed in Brussels, which tended to view Warsaw as “mulish.”

5.3 SYNTACTIC FUNCTIONS

The functional variation of litotes was explored considering its syntactic functions in the sentence parts in which it appeared. The function ‘(within) Anticipatory-it structures’, where litotes serves as the adjectival subject complement, is considered separately as such structures “are emblematic of academic discourse” and may be thus seen as a distinct category in its own right (Dontcheva-Navratilova 2017: 20). Table 7 demonstrates those syntactic functions that were identified in both corpora, highlighting marked differences in this respect.

As exemplified by the sentences below, in the SSC litotes most commonly (38.4%) served as adjectival subject complements (24) that often described nouns related to study outcomes (e.g. results, findings), whereas in the LSC (33.3%), as modifiers. It should be mentioned that the category of modifiers encompasses various types of modification, for instance, of the nominal element of direct object NP (25) or subject-complement NP (26). Litotes functioning as prepositional subject complements (27)
and predicate verbs (28) were more common in the LSC (16.6% for the former function and 14.5% for the latter) than SSC (respectively, 11.5% and 3.8%). However, litotes functioning as adjuncts (29) and used within anticipatory-it structures (30) were more frequent in the SSC (respectively, 7.6% and 11.5%) than LSC (4.1% for both functions).

(24) This situation is not unusual, even in an affluent society such as our own.
(25) Moreover, the participants’ qualitative explanations for their behaviour show seemingly rational and not inconsistent reasoning for the violations.
(26) Thus, MAMPs are not invariant generic components of microbial cells, but rather their abundance, […]
(27) These assumptions are not without precedent.
(28) In some cases even recovery from sleep deprivation did not uncover DSP-4 induced changes in respect to […]
(29) Additionally, in some US locations (e.g., Reno and Las Vegas), casinos not uncommonly offer consumers free alcohol […]
(30) It is not uncommon to observe other disorders occurring comorbid with sexual offending […]

Overall, a greater functional variation of litotes was observed in the SSC, where apart from the aforementioned syntactic functions, in the remaining 19.3% of the findings litotes performed six different roles. To mention the more numerous ones, it functioned as coordinate if-phrases introducing an idea with stronger meaning to emphasize some detail and draw the reader’s attention (9 cases; 31), disjuncts (4 cases; 32) and coordinate phrases introducing the idea of contrast (2 cases; 33). The LSC was less varied, as in the remaining 2.1% of the data litotes served only one function not detected in the SSC — that of direct object (1 case; 34).

(31) After 1 year, the age-specific incidence remains very low, if not nonexistent.
(32) Not unnaturally, most parishes chose to use paper rather than the dearer, […]
(33) These postcards were vulgar, even obscene, but not immoral.
(34) […] a study of this size could not prove such non-associations.
6. DISCUSSION

As evidenced above, there is disciplinary variation between life and social sciences in the use of litotes in English research articles, though a few similarities exist as well. The latter are not unexpected, since all the examined texts are essentially specimens of the same genre, the research paper. Even more importantly, they represent the same discourse type, namely, academic discourse that denotes “the ways of thinking and using language which exist in the academy” as a whole (Hyland 2009: 1). Yet, given that the knowledge domains around which these texts revolve are dissimilar, what takes precedence are the distinct disciplinary realities together with their unique lexical, grammatical and rhetorical means of expression.

Regarding the frequency of litotes considered in the present study, worthy of noting is its limited popularity in the material under investigation. This is surprising, since litotes in the form of a “double negative combined with understatement” is sometimes considered as “a syntactic commonplace of academic discourse” (Elbow 1991: 144). Generally, the analysis has shown that there are around twice as many litotes in the social as life sciences RAs. This correlates with Łyda and Warchał’s (2011) observation that the discourse of hard sciences, represented in their analysis by biology, is highly economical in its use of litotes in comparison with the discourse of soft sciences, represented by linguistics. Litotes is a “more intellectual figure”, as it “asserts more by saying less and because it requires more craft to tease audience’s intellect” (Freeman 2018: 97). Owing to its presence, writing is more seductive, which seems to be a desired quality for social science prose that usually cannot establish its credibility based on concrete evidence. Hence, it has a stronger desire to bring its often fuzzy and imprecise ideas to the reader’s notice while avoiding to name them directly. The social sciences RAs also show a clear preference for the prefix in-, which is definitely less popular in the life sciences RAs. The prefix “occupies the highest level on the scale of contrariness” and “is used mostly to evaluate properties of situations” as well as to “comment on people and their acts” (Hamawand 2009: 100, 135). These characteristics match the general affinity of social sciences with individuals and human groups. Another explanation can be that the negative prefix in-, as Quirk et al. (1985: 1540) argue, “combines with adjectives of French and Latin origin”. Thus, it might be the case that some of such words are less frequent in the life not social sciences, for instance, inconsistent: 17 tokens vs. 108, invariant: 16 vs. 46, incompatible: 8 vs. 22. By comparison, the life sciences RAs give preference to the prefix non-, which expresses “the mere absence of a quality” and is quite neutral in tone, but show no traces of il-, ir- and the suffix -less, all of which also denote a lack of something (de Oliveira 2004: 11).

Notwithstanding the above differences, the analysis reveals some similarities in the frequency of selected litotes in the life and social sciences RAs. In both disciplinary areas, considering that there was only one suffix tested, the most common litotic constructions are the ones involving prefixation, which has its field-specific realisations but indicates that adjectives are the typical lexical items involved in the second negation. There is a total absence of the negative prefix de-, which might be due to the fact that it more often “occurs with the reversative but not the negative
The most popular prefix is un-, probably because it is generally very productive, “occupies a medium level on the scale of contrariness” and “is used chiefly to evaluate properties of things” (Hamawand 2009: 100, 134). Finally, the prepositional litotes not without is also quite common and comparably frequent in both corpora of RAs, which is in contrast with the results reported by Łyda and Warchał (2011), who found that the pattern was totally absent in their hard sciences corpus.

As for the structural variation of litotes, the analysis has shown that all five major structural types distinguished in the study can be found in both the life and social sciences RAs. However, clear disciplinary differences are identified in the specific patterns by means of which these superordinate categories are realised as well as in the frequency with which some of them are employed. The two most common litotic constructions that enjoy comparable popularity in the two fields under analysis are not neg-ADJ and not without N. As regards the not neg-ADJ type, the negative adjective is directly preceded by an article, determiner or preposition only in the life sciences RAs. The social sciences RAs, in turn, exhibit a greater affinity for preceding the second negation with an adverb, pronoun or conjunction. Another striking disciplinary variation is the clear preference of social sciences writers for using the verb to be in front of not neg-ADJ, which is the case in more than two thirds of this type of litotes in the SSC and only in less than a half in the LSC. A possible explanation here might be that social science prose, which revolves around an introspective interpretation of the investigated phenomena, tends to be weaker in its ways of constructing meaning in comparison with the concrete, evidence-based explanations typical of life science prose. Following Bazerman (1981), in social sciences topics need to be fully identified and described, often through an accumulation of characteristics that come after the verb to be. As to the not without N string, using an adjective or determiner before the noun is definitely preferred in the context of social sciences, which also more frequently utilize the not neg-ADV structural type. The life sciences texts, in turn, favour the not neg-N and not neg-V types.

The results have also revealed that both the type and distribution of syntactic functions that litotes serves vary across disciplinary boundaries. Overall, functional variation is more marked in the social sciences RAs, which can be considered as a manifestation of a greater stylistic elegance of the soft disciplines prose. Here litotes fulfils twelve different roles in the sentences in which it occurs. This is around twice as many as in the life sciences RAs, with only seven distinct functions of the device, among which only litotes functioning as direct object can be considered as discourse-specific. In turn, litotes in the function of disjuncts, coordinate phrases introducing the idea of contrast and coordinate if-phrase seem to be a feature of the discourse of social sciences. Particularly noticeable is the last syntactic function of litotes, which enables gradation by introducing “a word or expression with stronger meaning, rather than by overtly marking it as a degree of comparison” (Zlateva 2002: 112). Considering that the soft disciplines are reiterative, as they more often re-cross and reinterpret what is already known, such a gradual passing from one shade of meaning to another helps to elaborate a context and construct a seemingly fresh discursive framework for arguing an introspective standpoint.
Disciplinary differences are also observed in the distribution of the six overlapping functions of litotes. Attributive modifiers and predicate verbs are more popular in the life sciences RAs, which, according to Gray (2015: 172), may result from the interest that disciplines such as biology or physics take in “describing items in detail” as well as in presenting “concrete, measurable aspects of the physical world”. However, the frequency with which litotes occurs in subject-complement position, especially if adjectival in form, of clauses whose two nominal elements are in a relation of co-reference is higher in the social sciences RAs (50% vs. 29.1%). This matches earlier findings for the disciplinary area, and specifically for linguistics (Łyda and Warchał 2011), indicating that soft sciences do not operate on well-established facts but rather on phenomena that first need to be identified and then substantiated with arguments which neither explicitly reject a position nor suggest it is correct. Moreover, the soft sciences texts investigated here, more than the hard sciences ones, show a disposition to litotic anticipatory-it structures, which contrasts with the results of Hewings and Hewings (2001) but corroborates those of Łyda and Warchał (2011). It-clauses, including the ones with adjective complementation found in the analyzed material, “are a feature of academic writing which functions to both express opinions and to comment on and evaluate propositions in a way that allows the writer to remain in the background” (Hewings and Hewings 2002: 368). Indeed, such ideas are seen as depersonalized, detached from the writer, more objective and therefore less open to negotiation (Hewings and Hewings 2001). However, Dontcheva-Navratilova (2017: 20) argues that in academic discourse the views conveyed by it-clauses are “typically attributed to the author of the text as the source of knowledge and opinion conveyed by the discourse”, therefore the clauses perform “an interpersonal function since they contribute to the construal of the authorial voice of the writer and thus enhance the perception of discourse coherence based on the continuity of the mental representation of this discourse participant”.

Before closing the present discussion of litotes in English research articles, it is worth adding one final comment. Indeed, although the semantic features of the elements involved in the second negation are not the main concern here, some tentative generalisations are possible. The discourse of social sciences shows a slight inclination to words referring to POSSIBILITY, e.g. impossible, unlikely (7.5% of the data), which is totally absent in the discourse of life sciences that thus appears as more definite about the meanings conveyed by litotes. Yet, in the life sciences RAs there is a weak tendency towards the NORMALITY cluster (9.4% of the data), represented by uncommon, not-uncommon, unusual and unexpectedly, which nevertheless is more marked in the social sciences RAs (21.7% of the data).

Inevitably, the present study has its limitations. First, attention has been devoted to only one type of litotes which proved relatively unproblematic to detect with the chosen corpus analytic tool. Second, although the functional variation of litotes was analysed, in future explorations the adopted perspective may be broadened to include the role of litotes within the IMRD sections of an academic article. Third, the size of the corpora proved insufficient to obtain a list of litotes that would be numerous enough to identify clear semantic trends exhibited by the second negation. Despite these shortcomings, the conducted analysis offers some important disciplinary
insights into the use of litotes in English research articles. The results are even more compelling when one considers that litotes, especially in the form of a double negative, has “become a way to display the disciplinary background of academic writers”, offering them “a precision of ideas” and confirming that such “linguistic features become their means of expression and worldview” (Ploisawaschai 2015: 217). Nevertheless, further studies are welcome to fill the mentioned gaps and offer new information on this interesting figure of speech.

7. CONCLUSION

This paper has given a cross-disciplinary account of the frequency, structural types and syntactic functions of selected litotes in English research articles from the fields of life and social sciences. The results have evidenced that despite certain similarities in the use of litotic constructions, such as their restrained occurrence in the investigated material, it is definitely the discourse of social sciences that is more reliant on the device and also more versatile in the range of purposes for which it employs litotes. The rhetorical potential offered by these constructions is as well exploited by the discourse of life sciences, which however prefers somewhat different realisation patterns of the basic litotic forms. Hence, it can be concluded that the analysed patterns of language have evolved to satisfy the needs of academic writers in general, but essentially also to meet the requirements of specific disciplines. Therefore, those aspiring to become content experts should remember that “what counts as knowing a discipline is the ability to participate successfully in the discourses of that discipline” (Hasan 1996: 398). Since litotes offers a precision of ideas that is one of its kind, as it is linguistically marked by a negative but reads as an affirmative, the belief is held that the presented findings will be useful for developing disciplinary literacy appropriate to the respective scientific settings considered in the present study.

REFERENCES


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