Lexicogrammatical features of adverbs in advanced learner English

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This paper explores the use of -ly adverbs by Norwegian advanced learners of English compared to that of native speakers. The investigation is based on two corpora of novice academic English: VESPA and BAWE. It considers features of lexis (frequencies, style, meanings, collocational patterns) as well as of syntax, i.e. whether the adverbs function as adjuncts, disjuncts, conjuncts or modifiers in adjective or adverb phrases. The learners make few clear mistakes with adverbs, but there are important frequency differences between the corpora concerning lexical choice and semantic and syntactic functions. Learners overuse adverbs with modal meaning but underuse phrase-modifying adverbs. Most adjunct types are also underused. At several points, the native speakers prove to have a greater lexical repertoire.

Keywords: academic writing, adverbials, adverbs, BAWE, learner English, VESPA

1. Introduction

To the extent that the language of advanced learners differs from that of native speakers, their deviations typically “concern rather finer points of lexico-grammar and style” (Lorenz 1998: 53). The present study explores one such point, viz. the use of adverbs by Norwegian advanced learners of English as compared to native speakers. The investigation concerns lexical choice and lexical variation as well as the semantic and syntactic functions of adverbs.

The traditional class of adverbs is diverse and versatile. This may pose problems for a strict definition and delimitation of the class; “it is tempting to say simply that the adverb is an item that does not fit the definitions for other word classes” (Quirk et al., 1985: 438). Possibly for this reason, adverbs have been called the bête noire of English grammar (Francis Hoye, 2012: 1). Nevertheless, the many uses
to which adverbs are put make them a fascinating topic for the study of language use. A functional study of adverbs provides a snapshot, albeit partial, of linguistic proficiency and creativity. Adverb usage has been shown to vary across registers as well as language varieties (e.g., Biber et al., 1999: 545; Tottie, 2002: 168) and it can distinguish the language of learners from that of native speakers of English (e.g., Granger, 1998b; Granger & Rayson, 1998; de Haan & van der Haagen, 2013).

For practical reasons — delimitation of the data as well as searchability — the study focuses on one formal type of adverbs, namely those ending in \textit{-ly}. The corpora used both represent novice academic English: VESPA-NO is a corpus of L2 English produced by Norwegian learners, and BAWE represents L1 writing in English (see below for further details). The aim is to find out which \textit{-ly} adverbs are used by the two groups, and to what ends. The analysis will take into account features of lexis (frequencies, style, meanings) and syntax (i.e. whether the adverbs are used as adjuncts, disjuncts, conjuncts or as modifiers in adjective or adverb phrases). Specifically, the study seeks answers to the following questions:

- How frequent are \textit{-ly} adverbs in the two corpora, and what lexical items are employed?
- What are the syntactic and semantic functions of the \textit{-ly} adverbs? Are the same functions found in both corpora?
- Within each functional category of adverbs, what are the meanings expressed? How do the corpora compare?

The answers to these questions will provide clues to the overarching question: In which ways and to what extent do the linguistic patterns in the learner corpus differ from those found in the native speaker corpus? Though not a major point of the analysis, infelicitous uses in the learner corpus will also be discussed briefly.

2. Material and method

The material for this investigation comes from two corpora of academic student writing: VESPA (Varieties of English for Specific Purposes dAtabase) and BAWE (British Academic Written English Corpus); see Nesi & Gardner (2012). VESPA contains writing by advanced learners of English with a variety of L1 backgrounds; the Norwegian part of VESPA is being compiled at the University of Oslo.\textsuperscript{1} Contributors are MA students and BA students in their second or third year. BAWE “is a record of proficient university-level student writing at the turn

\footnote{1. See <http://www.uclouvain.be/en-cecl-vespa.html> and <http://www.hf.uio.no/ilos/english/services/vespa/>}
of the 21st century”.

It contains a range of disciplines, which is also the goal of the VESPA corpus, but so far the Norwegian part of this corpus spans only linguistics, literature and business. For the present study only the linguistics discipline has been investigated, with only Norwegian L1 writers represented from VESPA and English L1 writers from BAWE. The texts in both corpora are assignments written by university students taking various courses in (English) linguistics. The texts have been annotated so that corpus searches can ignore material not originally written by the students, such as linguistic examples and quotes from external sources (see Ebeling & Heubeck, 2007 for details of the annotation system). Excluding the passages thus annotated, VESPA contains 267,731 words, and BAWE 163,217.

Because “native-speaking students do not necessarily provide models that everyone would want to imitate” (Leech, 1998: xix), the British National Corpus (BNC) has also been consulted occasionally. While the BAWE writers are novice linguists, the published linguistics papers and books contained in the academic writing part of the BNC can be considered to represent a “target” standard for linguistics writing. The spoken part of the BNC has also been used to check whether learner usage is influenced by (informal) speech, as is often claimed (see e.g., Gilquin & Paquot, 2008).

WordSmith Tools 6 were used for searching in BAWE and VESPA. As neither corpus is PoS-tagged, searches were made for ‘*ly’. The overwhelming majority of hits were adverbs; the few that were not (e.g., apply, silly) were removed manually. The concordances were exported into a FileMaker database and annotated for syntactic and semantic features of the adverbs, as outlined below. Statistical comparisons were carried out by means of Log likelihood and chi square. The significance level was set at $p \leq 0.05$.

Quantitative differences between the learner corpus and the native speaker corpus will be discussed in terms of overuse and underuse. As Granger is always careful to point out (e.g., Granger 1998a: 18) these terms are intended as neutral, quantitative measures of linguistic differences, not as qualitative judgements on interlanguage performance. The native speaker reference corpus, consisting of novice academic writing, does not necessarily represent a learning target (cf. Leech, 1998: xix), but rather a yardstick for native language use among writers who are at a similar academic level as the learners.

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2. Quoted from <http://www.coventry.ac.uk/research/research-directory/art-design/british-academic-written-english-corpus-bawe/>
3. Syntactic and semantic functions of -ly adverbs

Adverbs have a variety of syntactic and pragmatic functions. At clause level they can function as adverbials, and at phrase level as head of an adverb phrase, modifier of adjectives (sharply critical), adverbs (surprisingly well), prepositions (right through), pronouns, predeterminers and numerals (almost everybody/fifty), and noun phrases (rather a mess); cf. Quirk et al. (1985: 438 ff). The following functions are recognized in the present study:

- adjunct adverbial (e.g., locally, phonologically, significantly)
- disjunct adverbial (e.g., briefly, probably, unexpectedly)
- conjunct adverbial (e.g., alternatively, finally, namely, secondly)
- focus adverb (e.g., mainly, only)
- approximator (e.g., approximately, roughly)
- modifier in adjective or adverb phrase (e.g., statistically significant, fairly soon)

The categories of adjunct, disjunct and conjunct are borrowed from Quirk et al. (1985: 503 ff). The categories of focus adverb and approximator have been added. Both of these categories have been extended beyond the syntactic function of adverbial to include phrase modifiers, as in (1).³

(1) …this pattern constitutes approximately 120 lines. (VESPA)

The label “other” (cf. Table 3) was used for -ly-adverbs that appeared in the place of an adjective,⁴ and for adverbs whose function could not be determined from the concordance line. With the exception of approximators, each adverb function was divided into a number of semantic subcategories, as outlined below.

ADJUNCT adverbials roughly denote the where, when, how and why of a proposition. They constitute the most frequent type of adverbials overall (Biber et al., 1999: 766). Typical examples of the meanings found in VESPA and BAWE (see further 5.2.2) are given in (2)–(6).

(2) It is only recently that patterns have become accessible to researchers through the development of Corpus Linguistics. (BAWE — time)

(3) It is also interesting that the progressive is used more frequently in translations… (VESPA — frequency)

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³. All corpus examples are rendered in their original form, with no indication or correction of infelicitous usage. Some examples are not given in full. Omissions are marked with ‘…’.

⁴. The use of adjectives vs. -ly adverbs is a well-known difficulty for Norwegian learners because Norwegian does not consistently distinguish morphologically between adjectives and adverbs.
(4) … females, who tend to speak more cooperatively in order to show compassion and support. (BAWE — manner)

(5) … one child limits a certain process that another child may suppress entirely. (BAWE — degree)

(6) This essay will compare texts 1 and 2, explaining and illustrating how they differ linguistically. (VESPA — respect)

Adjunct meanings are defined as in Hasselgård (2010: 23ff), with manner adjuncts comprising instrument, means and method, and respect adjuncts being roughly paraphrasable by “with respect to X” (ibid.: 28). Frequency adjuncts were so numerous that they were listed separately from other time adjuncts, which refer to location or duration in time.

Disjuncts are adverbials with a modal or evaluative function (Quirk et al., 1985:615, Halliday, 2004:82). Four categories were identified: modality, evidentiality, comment and style. Comment disjuncts give the speaker’s value judgment of the content of the clause (Quirk et al. (1985: 615) refer to this as a type of content disjunct), and style disjuncts express “an implicit comment on language itself” (ibid.). The four types are exemplified in (7)–(10),

(7) …and this is certainly the case here. (VESPA — modality)

(8) …a computer could learn regular and irregular English past tenses, apparently extracting rules and regularities from the input… (BAWE — evidentiality)

(9) Strangely the FTA itself (3ii) is done baldly with no redressive action. (BAWE — comment)

(10) Simply put, Sinclair’s open-choice principle says that, when producing language, any word or phrase may be chosen freely, as long as it adheres to the rules of grammar. (VESPA — style)

Conjuncts provide links between sentences and serve as signposts for text structure. The semantic functions recognized in the present study borrow from both Quirk et al. (1985:634) and Halliday (2004:82), and are illustrated in (11)–(17).

(11) Additionally, cohesion is an important factor that plays an immense part in proper academic writing. (VESPA — addition)

(12) Consequently, overlaps or interruptions are infrequent. (BAWE — resultive)

(13) Conversely an Adjunct cannot be regarded as a participant because it is non-nuclear… (BAWE — contrastive)
Similarly, I have limited the word *stuff* to mean the noun, using the tagged version of the corpus. (VESPA — comparative)

Alternatively he or she could have used synonyms… (VESPA – variation)

*Firstly*, their inclusion in propositional statements has provided formal logic with the tools to progress from Propositional to Predicate Calculus. (BAWE — serial order)

They are often closely related, and can also both be divided into three types, *namely* noun, verb and clause substitution and -ellipsis. (VESPA — appositive)

**Focus adverbials** have been found to fit badly into the adjunct category (Hasselgård 2010: 300 f.) and are therefore a separate functional category here. Following Quirk et al. (1985: 604) two meanings of focus adverbs were distinguished: exclusives and particularizers. The former includes such adverbs as *exclusively, only,* and *merely,* and the latter e.g., *chiefly, especially, mainly,* and *notably.*

The meanings expressed by **modifiers** (of both adjectives and adverbs) were categorized as intensifiers, downtoners, hedges, and descriptors. Arguably, there are fuzzy borderlines between downtoners (e.g., *fairly, slightly*) and hedges (e.g., *apparently, relatively*); the former category is closer to degree modification and the latter to approximation. Descriptors are modifiers that add a specification of manner or kind to the adjectival or adverbial head; typical members of the class are *easily, grammatically, overtly, socially, statistically.*

**4. Previous studies of adverb usage in learner English**

A number of previous studies of adverbs in learner English concern their modifier use. In an elicitation study, Hasselgren (1994: 253 ff) found very different patterns of intensifiers between Norwegian learners of English and native speakers, with the learners making more extensive use of a restricted number of core vocabulary items. According to Granger, *-ly* adverbs functioning as modifiers are “a particularly rich category of collocation, involving as they do a complex interplay of semantic, lexical, and stylistic restrictions” (1998b: 147). Her study, based on ICLE material from several L1 backgrounds compared to the LOCNESS corpus, showed modifying *-ly* adverbs to be more frequent in the L1 material than in the learner

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5. Quirk et al. (1985: 566 ff) place focusing adverbials in a category called *subjuncts.* However, subjuncts seem too diverse a category to be useful, and besides, some types of subjuncts are not at all clearly distinguished from very similar adjuncts. See further Hasselgård (2010: 23).
material, accompanied by a higher type-token ratio for native speakers (ibid.: 148). Lorenz (1998) studied adverbial modification of adjectives in corpora representing German learners of English and found that the learners “tend to over-indulge in all degrees of adj[ective] int[ensifying] devices” (1998: 57) and generally gave an impression of overstatement.

Osborne’s (2008) investigation of adverb placement in learner English across a number of L1 backgrounds showed that this feature grouped learners according to typological distinctions between their L1s (e.g., Romance vs. Germanic). Even if transfer was evident in the adverb placement of the French learners, learners sometimes produced patterns that were ungrammatical in both their L1 and the target language.

Granger and Rayson (1998: 123) reported that adverbs were overused by French L1 learners compared to native speakers. However, the overuse was linked to a small number of lexical items, while -ly adverbs functioning as amplifiers, disjuncts, modal adverbs and time adverbs were underused (ibid: 128).


Ädel (2006) studied metadiscourse in English produced by Swedish learners. Interestingly for the purposes of the present study she finds that “serial order” conjuncts (e.g., secondly) were used slightly more in the British part of LOCNESS than in the learner corpus (2006: 103). In contrast, the code gloss namely was used slightly more by the Swedish learners (ibid: 113).

Contrastive studies of English and Norwegian (e.g., Hasselgård, 2014) have shown that adverbials are generally more frequent in Norwegian than in English, and also that Norwegian learners tend to use adverbials in their written English in the same way as in their written Norwegian (Hasselgård, 2009b).

The previous studies give rise to the following hypotheses for the present one:

- Norwegian learners will use more adverbs overall, judging from the higher frequency of adverbials in Norwegian than in English (Hasselgård, 2014), i.e. presuming that -ly adverbs represent a fair share of adverbials.6
- Native speakers will have a higher type-token ratio than learners in their use of -ly adverbs (cf. Granger, 1998b).

6. The hypothesis is supported by the fact that there are more adverbs (i.e. words tagged as ADV) in Norwegian than in English original texts in the non-fiction part of the English-Norwegian Parallel Corpus in equal amounts of text, see <http://www.hf.uio.no/ilos/english/services/omc/enpc/>.
- Learners will use more adverbs with modal/evaluative content, i.e. disjuncts (cf. Aijmer, 2002; Paquot et al., 2013).
- Learners will use fewer adverbs with a metadiscursive function (cf. Ādel, 2006).
- Learners will have a less varied repertoire of adverbs functioning as modifiers in adjective and adverb phrases (cf. Hasselgren, 1994; Granger, 1998b).

5. Corpus investigation

5.1 Word frequencies

A simple count of -ly adverbs in gives a higher total number of -ly adverbs in VESPA than in BAWE; however, this is only due to the larger corpus size. Normalized frequencies show that -ly adverbs are actually more frequent in BAWE, and the difference is significant (LL = 20.46, \( p < 0.0001 \)). The figures are given in Table 1.

Table 1. Basic frequencies of -ly adverbs in VESPA and BAWE

<table>
<thead>
<tr>
<th></th>
<th>total -ly adv</th>
<th>types</th>
<th>TTR</th>
<th>hapax</th>
<th>-ly adv per 100,000 words</th>
</tr>
</thead>
<tbody>
<tr>
<td>VESPA</td>
<td>3747</td>
<td>327</td>
<td>8.73</td>
<td>116</td>
<td>1399</td>
</tr>
<tr>
<td>BAWE</td>
<td>2565</td>
<td>361</td>
<td>14.07</td>
<td>138</td>
<td>1572</td>
</tr>
</tbody>
</table>

Table 1 also gives the number of types and tokens and a type-token ratio (TTR), calculated in WordSmith on the basis of a list of all the -ly adverbs in the corpora. The number of types (in the sense of ‘different adverbs’) is higher in BAWE, leading to a higher type-token ratio. As a corollary, the number of hapaxes, i.e. adverbs occurring only once, is also higher in BAWE. The higher TTR in BAWE may reflect corpus size, but the fact that the smaller corpus contains more types lends support to the expected difference in vocabulary richness between learners and native speakers.

Table 2 lists the 20 most frequent -ly adverbs in both corpora with the number of tokens (raw frequencies) and the percentage of the total number of -ly adverbs taken up by each type. Adverbs occurring in both lists have been highlighted. While only is at the top of both lists, other shared adverbs have different ranks. Of those not shared, VESPA has three modal adverbs (probably, clearly, really) and the downtoners slightly and mostly. The only frequent adverb that seems due to

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7. Significance was calculated from raw frequencies using Paul Rayson’s log likelihood calculator at <http://ucrel.lancs.ac.uk/llwizard.html> with the critical values specified.
differences in topic between the corpora is directly: It collocates with translate in VESPA assignments about contrastive corpus studies. Among the adverbs that are unique to the top-20 BAWE list we also find modal adverbs (necessarily, possibly) and the downtoner relatively as well as the conjuncts firstly, consequently, and similarly and referential adverbs of time, manner and degree (previously, differently, fully).8

The most frequent -ly adverbs account for a higher percentage of the total number of ly-adverbs (tokens) in VESPA than in BAWE: For example, only accounts for 12.5% in VESPA and 10.6% in BAWE. The higher percentage in VESPA

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Table 2. The 20 most frequent -ly adverbs in VESPA and BAWE

<table>
<thead>
<tr>
<th>N</th>
<th>VESPA word</th>
<th>N</th>
<th>% of total</th>
<th>BAWE word</th>
<th>N</th>
<th>% of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>only</td>
<td>468</td>
<td>12.50</td>
<td>only</td>
<td>271</td>
<td>10.56</td>
</tr>
<tr>
<td>2</td>
<td>probably</td>
<td>145</td>
<td>3.87</td>
<td>generally</td>
<td>73</td>
<td>2.84</td>
</tr>
<tr>
<td>3</td>
<td>clearly</td>
<td>114</td>
<td>3.04</td>
<td>frequently</td>
<td>57</td>
<td>2.22</td>
</tr>
<tr>
<td>4</td>
<td>frequently</td>
<td>102</td>
<td>2.72</td>
<td>particularly</td>
<td>52</td>
<td>2.07</td>
</tr>
<tr>
<td>5</td>
<td>simply</td>
<td>99</td>
<td>2.64</td>
<td>actually</td>
<td>47</td>
<td>1.83</td>
</tr>
<tr>
<td>6</td>
<td>actually</td>
<td>82</td>
<td>2.19</td>
<td>previously</td>
<td>45</td>
<td>1.75</td>
</tr>
<tr>
<td>7</td>
<td>especially</td>
<td>82</td>
<td>2.19</td>
<td>mainly</td>
<td>40</td>
<td>1.56</td>
</tr>
<tr>
<td>8</td>
<td>usually</td>
<td>82</td>
<td>2.19</td>
<td>necessarily</td>
<td>40</td>
<td>1.56</td>
</tr>
<tr>
<td>9</td>
<td>directly</td>
<td>77</td>
<td>2.06</td>
<td>consequently</td>
<td>39</td>
<td>1.52</td>
</tr>
<tr>
<td>10</td>
<td>typically</td>
<td>74</td>
<td>1.98</td>
<td>relatively</td>
<td>39</td>
<td>1.52</td>
</tr>
<tr>
<td>11</td>
<td>easily</td>
<td>68</td>
<td>1.82</td>
<td>simply</td>
<td>39</td>
<td>1.52</td>
</tr>
<tr>
<td>12</td>
<td>mainly</td>
<td>65</td>
<td>1.74</td>
<td>finally</td>
<td>36</td>
<td>1.40</td>
</tr>
<tr>
<td>13</td>
<td>mostly</td>
<td>58</td>
<td>1.55</td>
<td>similarly</td>
<td>36</td>
<td>1.40</td>
</tr>
<tr>
<td>14</td>
<td>slightly</td>
<td>56</td>
<td>1.50</td>
<td>especially</td>
<td>34</td>
<td>1.33</td>
</tr>
<tr>
<td>15</td>
<td>namely</td>
<td>55</td>
<td>1.47</td>
<td>firstly</td>
<td>34</td>
<td>1.33</td>
</tr>
<tr>
<td>16</td>
<td>normally</td>
<td>55</td>
<td>1.47</td>
<td>differently</td>
<td>33</td>
<td>1.29</td>
</tr>
<tr>
<td>17</td>
<td>really</td>
<td>54</td>
<td>1.44</td>
<td>typically</td>
<td>32</td>
<td>1.25</td>
</tr>
<tr>
<td>18</td>
<td>generally</td>
<td>53</td>
<td>1.42</td>
<td>usually</td>
<td>32</td>
<td>1.25</td>
</tr>
<tr>
<td>19</td>
<td>finally</td>
<td>52</td>
<td>1.39</td>
<td>fully</td>
<td>31</td>
<td>1.21</td>
</tr>
<tr>
<td>20</td>
<td>particularly</td>
<td>50</td>
<td>1.34</td>
<td>possibly</td>
<td>29</td>
<td>1.13</td>
</tr>
</tbody>
</table>

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8. The frequency lists were expanded to include the top 60 -ly adverbs. Most of the “unique” adverbs in Table 2 were found between ranks 21 and 60 in the other corpus. However, mostly and namely are not in BAWE’s top 60, while fully is absent from VESPA’s top 60.
is consistent throughout the top 20 list. This indicates that learners have a greater tendency to stick to words they know well (cf. Hasselgren, 1994), while native speakers have a more varied vocabulary at their disposal.

Learners of English are often claimed to be insensitive to register conventions, with their writing being influenced by the informality of spontaneous speech (e.g., Gilquin & Paquot, 2008). For this reason the lists in Table 2 were compared to the 20 most frequent -ly adverbs from two registers in the BNC: “spoken” and “academic” (cf. Hasselgren, 1994). There is some degree of overlap between the top 20 -ly adverbs in these two registers: 11 out of 20 were shared, thus suggesting a core of generally high-frequency adverbs (actually, certainly, clearly, especially, only, particularly, probably, really, simply, usually). We may note, however, that the VESPA top 20 list shares 10 items with BNC spoken and 12 with BNC academic while the BAWE top 20 list shares only five items with BNC spoken and 11 with BNC academic. Most of the items shared between VESPA and BNC spoken are in the top half of the list in Table 2, and they are mostly from the list of items occurring in both speech and academic writing in the BNC. The comparison with BNC again indicates that the learners tend to rely on lexical items that are generally frequent (cf. Hasselgren, 1994; Granger, 1998b). Yet, the fact that the learners also share more than half of their top 20 list with BNC academic suggests that they are on their way to acquiring the norms of academic writing.

5.2 Functions of -ly adverbs in VESPA and BAWE

5.2.1 Overview
The differences in lexical choice between the corpora suggest that there are also differences in the functions of -ly adverbs. This is indeed the case, as shown in Table 3. The adjunct function is most common in both corpora, followed at some distance by focus adverbs. The third most frequent function, however, is disjuncts in VESPA and modifiers of adjectives and adverbs in BAWE. The frequency differences relative to corpus size are highly significant for adjuncts, disjuncts, conjuncts and modifiers, while the differences between focus adverbs and approximators are not significant.

The distribution of functions relative to the number of -ly adverbs in each corpus changes the picture slightly. Figure 1 shows that BAWE uses proportionally more adjuncts, conjuncts and modifiers, while VESPA uses more disjuncts and focus adverbs. A chi square test measuring the frequency of each functional category against the total number of -ly adverbs in each corpus shows significant differences

9. Frequency lists from the BNC were extracted using the Brigham Young interface. The whole category of “academic” was used, not only linguistics.
between adjuncts \( (p < 0.0001) \), disjuncts \( (p < 0.0001) \), conjuncts \( (p < 0.05) \), and focus adverbs \( (p < 0.001) \). Differences in the category of approximators are not significant \( (p = 0.06) \). Approximators will thus not be discussed further in this paper, but the other functions will be examined in turn in the following sections.

### Table 3. Functions of -ly adverbs

<table>
<thead>
<tr>
<th>Function</th>
<th>VESPA N per 100,000</th>
<th>BAWE N per 100,000</th>
<th>LL</th>
<th>( p )-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adjunct</td>
<td>1348 504.0</td>
<td>1050 643.9</td>
<td>35.14</td>
<td>( p &lt; 0.0001 )</td>
</tr>
<tr>
<td>Disjunct</td>
<td>741 276.3</td>
<td>341 208.9</td>
<td>19.00</td>
<td>( p &lt; 0.0001 )</td>
</tr>
<tr>
<td>Conjunct</td>
<td>270 100.4</td>
<td>225 137.9</td>
<td>11.87</td>
<td>( p &lt; 0.001 )</td>
</tr>
<tr>
<td>Focus</td>
<td>905 337.9</td>
<td>529 324.1</td>
<td>0.58</td>
<td>( p &gt; 0.05 )</td>
</tr>
<tr>
<td>Approximator</td>
<td>31 11.6</td>
<td>27 16.5</td>
<td>1.82</td>
<td>( p &gt; 0.05 )</td>
</tr>
<tr>
<td>Modifier</td>
<td>444 165.8</td>
<td>392 240.2</td>
<td>28.25</td>
<td>( p &lt; 0.0001 )</td>
</tr>
<tr>
<td>Other</td>
<td>8 3.0</td>
<td>1 0.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>3747 2565</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Figure 1. Proportional representation of data from Table 3 (excluding “other”)

#### 5.2.2 Adjuncts

The most frequent function of -ly adverbs in both VESPA and BAWE is adjunct adverbial. While adjuncts may span a wide range of meanings (e.g., Hasselgård 2010: 39), the only ones frequently occurring in the present material were time, frequency, manner, degree and respect, as shown in Table 4. This is most likely due to the fact that not all adverbial meanings are typically expressed by -ly adverbs.

Relative to corpus size (log likelihood) the Norwegian learners underuse all the adjunct categories listed in Table 4 except frequency, which is overused. The underuse of manner and respect adjuncts is most likely an effect of the overall underuse of adjuncts described in 5.2.1, since the proportional distribution of these
categories (relative to the number of \textit{-ly} adjuncts in each corpus) is similar between the corpora. Thus, the chi square results given in Table 4 indicate significant differences between the corpora only with time and frequency adjuncts.

Apart from its underuse, the category of time adjuncts displays an interesting aspect of lexical choice between the corpora: VESPA has 21 types and 69 tokens while BAWE has 24 types and 139 tokens. The recurrent types are much the same. The corpora also use much the same lexical items to denote frequency: The five most frequent items are \textit{frequently}, \textit{usually}, \textit{commonly}, \textit{rarely}, \textit{typically} (BAWE) and \textit{frequently}, \textit{usually}, \textit{typically}, \textit{normally}, \textit{commonly} (VESPA). The great majority of the frequency adjuncts denote high frequency: The only ‘low-frequency’ adverb to recur in both corpora is \textit{rarely} (ranked 4 in BAWE and 6 in VESPA), while BAWE also has three occurrences of \textit{occasionally}, one \textit{infrequently} and one \textit{unusually}.

Manner adverbs are used with similar proportional frequencies in the two corpora. However, the corpora differ quite a lot as to lexical variation within this category. BAWE has 483 tokens and 164 types (TTR = 34.0) while VESPA has 631 tokens and 133 types (TTR = 21.0). The most favoured manner adverbs in VESPA are more frequent than those most favoured in BAWE. To illustrate, the three most frequent manner adjuncts in VESPA (\textit{directly}, \textit{easily}, \textit{correctly}) account for 27% of the total number of manner adjuncts in that corpus, but the top three ones in BAWE (\textit{differently}, \textit{successfully}, \textit{directly}) account for only 16%). This supports Hasselgren’s observation (1994:256) that learners native speakers tend to depend on a small(ish) number of core words while native speakers have a more differentiated vocabulary.

Native speakers similarly display greater lexical variation in their use of degree adjuncts realized by \textit{-ly} adverbs. The choice of degree adjuncts reveals another interesting difference between the corpora: While the ten most frequent

<table>
<thead>
<tr>
<th>adjunct meaning</th>
<th>VESPA</th>
<th>BAWE</th>
<th>(\chi^2)</th>
<th>(p)-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>time</td>
<td>69</td>
<td>5.1</td>
<td>139</td>
<td>13.2</td>
</tr>
<tr>
<td>frequency</td>
<td>404</td>
<td>30.0</td>
<td>194</td>
<td>18.5</td>
</tr>
<tr>
<td>manner</td>
<td>631</td>
<td>46.8</td>
<td>483</td>
<td>46.0</td>
</tr>
<tr>
<td>degree</td>
<td>128</td>
<td>9.5</td>
<td>126</td>
<td>12.0</td>
</tr>
<tr>
<td>respect</td>
<td>102</td>
<td>7.6</td>
<td>94</td>
<td>9.0</td>
</tr>
<tr>
<td>other (place, cause, viewpoint)</td>
<td>14</td>
<td>1.0</td>
<td>14</td>
<td>1.3</td>
</tr>
</tbody>
</table>

|                |       | 100  | 1050   | 100         |

Table 4. Meanings of \textit{-ly} adverbs functioning as adjuncts
degree adjuncts in BAWE all indicate high degree, the single most frequent item in VESPA is *partly* (30 occurrences in VESPA and only two in BAWE). *Slightly* is found as the fifth most frequent degree adjunct in VESPA (nine occurrences), and at rank 11 in BAWE (four occurrences). A further search for alternative low degree adjuncts (*in part, to some extent/degree*) gave similar results; i.e. *to some extent* was much more frequent in VESPA (20 vs. 3 instances), *to some degree* was only found in VESPA (3 instances) while *in part* occurred twice in either corpus. The explanation for the overuse of low-degree adjuncts must then be sought in the tendency for learners to hedge and modalize (e.g. Aijmer, 2002).

Example (18) illustrates the use of *partly* in VESPA, and (19) shows a degree adjunct in BAWE that is a more specialized collocate of the verb.

(18) …nonetheless, I *partly* solved this problem in actual categorization by using the Frown corpus in stead of the LOCNESS corpus to double check the collocations. (VESPA)

(19) Both quick incidental learning and fast mapping have been studied *extensively*… (BAWE)

As stated above, the underuse of respect adjuncts in VESPA reflects the overall underuse of adjuncts by the Norwegian learners. The *-ly* adverbs functioning as respect adjuncts are of the same type in both corpora: They typically denote a linguistic or (other type of) theoretical perspective, such as *cognitively, grammatically, linguistically* (cf. example (6)), *pragmatically*.

### 5.2.3 Disjuncts

The frequency distribution of disjunct types realized by *-ly* adverbs is given in Table 5. The learners use modal and evidential disjuncts almost twice as often as native speakers (in terms of normalized frequencies). Proportionally, only the category of modality entails statistical significance. In contrast, native speakers use comment disjuncts significantly more often than the learners.

<table>
<thead>
<tr>
<th>disjunct meaning</th>
<th>VESPA</th>
<th></th>
<th></th>
<th>BAWE</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>per 100,000</td>
<td>%</td>
<td>N</td>
<td>per 100,000</td>
<td>%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>modality</td>
<td>551</td>
<td>205.7</td>
<td>74.4</td>
<td>216</td>
<td>132.3</td>
<td>63.3</td>
<td>13.203</td>
<td>p &lt; 0.001</td>
<td></td>
<td></td>
</tr>
<tr>
<td>evidentiality</td>
<td>27</td>
<td>10.1</td>
<td>3.6</td>
<td>8</td>
<td>4.9</td>
<td>2.3</td>
<td>0.876</td>
<td>p &gt; 0.05</td>
<td></td>
<td></td>
</tr>
<tr>
<td>comment</td>
<td>152</td>
<td>56.7</td>
<td>20.5</td>
<td>114</td>
<td>69.8</td>
<td>33.4</td>
<td>20.329</td>
<td>p &lt; 0.0001</td>
<td></td>
<td></td>
</tr>
<tr>
<td>style</td>
<td>11</td>
<td>4.1</td>
<td>1.5</td>
<td>3</td>
<td>1.8</td>
<td>0.9</td>
<td>0.279</td>
<td>p &gt; 0.05</td>
<td></td>
<td></td>
</tr>
<tr>
<td>741</td>
<td>100</td>
<td>341</td>
<td>99.9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The popularity of modal disjuncts among Norwegian learners can in fact be seen from the frequency list in Table 2, where *probably* and *clearly* rank as number 2 and 3 respectively in VESPA. Interestingly, the learners also use *easily* as a kind of modal marker, as shown in (20); this is probably due to the use of the Norwegian word *lett*, which corresponds to *easily* as a manner adverb (in contrast to ‘with difficulty’), but is also used in a wider sense indicating the likelihood for something to happen.

(20) …it is therefore hard to make any firm conclusion from the results, as statistics *easily* can be misleading depending on how they are presented.

(VESPA)

The lower frequency of comment adjuncts in VESPA is surprising in view of Paquot et al.’s (2013) finding that Norwegian learners are highly visible writers who seem keen on expressing their opinions. Yet, they do not display any particular fancy for comment disjunct adverbs ending in -*ly* as a vehicle for their opinions. A possible explanation is that Norwegian learners also tend to overuse extraposition as a way of expressing evaluation (e.g., Hasselgård, 2009a). As examples (21) and (22) show, the two constructions can be used in much the same type of contexts. Incidentally, *importantly* occurred only three times in VESPA, and one of them was infelicitous; see (23). Another erroneous attempt at using a comment disjunct is rendered in (24). Though the evidence is scant, the infelicitous examples and the slight underuse of comment disjuncts suggest that this is an area not fully mastered by the Norwegian learners.

(21) Finally, and *most importantly*, feedback was only supplied in the three additional micro-teaching sessions. (BAWE)

(22) First of all, *it is important* to link the title to the text itself. (VESPA)

(23) *More importantly*, perhaps, is the notion of “coherence in meaning”. (VESPA)

(24) The order of this structure is always Theme^Rheme, where Theme is the point of departure for the clause, and Rheme — *temptingly* defined negatively as Non-Theme… (VESPA)

Similar proportions of the disjuncts in both corpora denote evidentiality. There is, however, an interesting difference in the vocabulary used. The following occur in VESPA: *apparently* (9), *evidently* (4), *presumably* (8), *seemingly* (5), and *supposedly* (1). BAWE has six examples of *apparently*, one *presumably* and one *seemingly*. In this semantic area it is thus the learners who display the widest vocabulary. However, the usage in the linguistics subcorpus of the BNC (BNC-ling) resembles that in BAWE, with *apparently* occurring 147 times per million words (pmw), and
seemingly only 7. Evidently was also rare, while presumably had 72 hits pmw, thus showing some similarity with VESPA usage. Examples (25) and (26) show seemingly and apparently, respectively. It may be noted that the learners also use seemingly as a modifier, as in (27), while BAWE uses apparently in this function.

(25) Seemingly, many of the NICLE texts discuss the cause of women, and therefore this meaning of the word is overused. (VESPA)

(26) The respondents apparently interpret text language by relating shorthand to prior linguistic knowledge. (BAWE)

(27) For instance, a seemingly neutral word used in one context can be perceived negatively… (VESPA)

5.2.4 Conjuncts
Table 6 shows that four conjunct categories have significantly different frequencies between the corpora: Resultive, comparative and serial order conjuncts are used more in BAWE, and appositive conjuncts are used more in VESPA. The low frequency of contrastive conjuncts was unexpected, e.g., in comparison with Altenberg & Tapper (1998:86), but less so considering that the typical adverbs of contrast do not end in -ly (however is the most frequent contrastive connector in Altenberg & Tapper’s investigation).

Table 6. Meanings of -ly adverbs functioning as conjuncts

<table>
<thead>
<tr>
<th>conjunct meaning</th>
<th>VESPA</th>
<th>BAWE</th>
<th>χ²</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N per 100.000</td>
<td>%</td>
<td>N per 100.000</td>
<td>%</td>
</tr>
<tr>
<td>addition</td>
<td>20</td>
<td>7.5</td>
<td>7.4</td>
<td>8</td>
</tr>
<tr>
<td>resultive</td>
<td>22</td>
<td>8.2</td>
<td>8.2</td>
<td>39</td>
</tr>
<tr>
<td>contrast</td>
<td>1</td>
<td>0.4</td>
<td>0.4</td>
<td>6</td>
</tr>
<tr>
<td>comparative</td>
<td>16</td>
<td>6.0</td>
<td>5.9</td>
<td>41</td>
</tr>
<tr>
<td>variation</td>
<td>2</td>
<td>0.7</td>
<td>0.7</td>
<td>2</td>
</tr>
<tr>
<td>serial order</td>
<td>109</td>
<td>40.7</td>
<td>40.5</td>
<td>111</td>
</tr>
<tr>
<td>appositive</td>
<td>99</td>
<td>37.0</td>
<td>36.8</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>269</td>
<td>100.4</td>
<td>99.9</td>
<td>225</td>
</tr>
</tbody>
</table>

BAWE has the greater frequency of resultive conjuncts, but this meaning is realized by a single lexical item, viz. consequently, as in (12) above. This is also the most frequent resultive conjunct in VESPA, but accordingly also occurs; see (28). However, the learners do not always use accordingly with the sense of “as a result of something” (Macmillan Dictionary); sometimes it seems to mean “according
to X” instead, as shown in (29). Incidentally, when accordingly occurs in BAWE, it is used as a manner adjunct, i.e. “in a way that is suitable for the situation” (Macmillan), as in (30).

(28) Accordingly, one might conclude that this construction is just as formal, or informal, as the try to- infinitive construction when found in written texts. (VESPA)

(29) Tim Johns developed data-driven learning (DDL) (cf. Hunston, 2008), and he also uttered that: “research is too important to be left to the researchers” (Hunston 2008: 170). Accordingly, this is the foundation for today’s corpus research in the classroom… (VESPA)

(30) …we will change our speech accordingly. (BAWE)

In both VESPA and BAWE the most frequent lexical item by far functioning as a comparative conjunct is similarly, as illustrated in (14) above. Other items are correspondingly and equally (the latter occurs only in BAWE). Despite the frequency difference between the corpora, the actual usage is similar; the learners master the expression of this relation, only they do not use it as often as the native speakers. This is also the case for conjuncts of serial order, illustrated by (16) above, which is — predictably — followed by a sentence beginning with secondly.

Only three different -ly adverbs are used to mark apposition in both corpora. In VESPA, the most frequent one is namely (in 55 out of the 99 occurrences), while respectively is used 40 times and (more) specifically four times. In BAWE the frequencies are as follows: namely (6), respectively (11) and more specifically (1). The massive overuse of namely in VESPA can be plausibly attributed to its Norwegian cognate nemlig, which is much more frequent than namely in the English-Norwegian Parallel Corpus (29 vs. 2 occurrences in non-fiction and 30 vs. 1 in fiction, in similar amounts of original text). The corpus also shows that nemlig is frequently omitted in translation into English, but may be added in translations from English into Norwegian. This appositive relation is thus simply more frequently verbalized in Norwegian than in English. Other interesting correspondences include causal subordinate clauses with because, since, as and for, as illustrated by (31b). It does not seem, however, that the Norwegian learners use namely with a causal meaning, although they do use the word in slightly inappropriate contexts, as illustrated by (32).

10. As namely seems to be used in (32) in accordance with its definition in Macmillan Dictionary (“used for introducing more detailed information about a subject that you are discussing”), further study of the semantics and conditions of use for namely and nemlig is needed to explain the infelicity.
(31) a. Det fulgte nemlig “boreorm” (toredo worms) nordover med Golfstrømmen… (ENPC:KP1) (Lit: ‘there followed nemlig toredo worms northwards with the Gulf Stream…’)
b. That was very important this far south, because toredo worms were carried north with the Gulf Stream… (ENPC:KP1T)

(32) This seems to match the author’s intent, namely to make Morocco sound like an interesting destination. (VESPA)

One of the hypotheses presented above concerned the use of metadiscourse. The conjunct category seemed a relevant place to look for this, as “the basic function of metadiscourse is to guide the reader through the text” (Ädel, 2006: 20). The categories of serial order and apposition are found in Ädel’s framework as ‘phoric markers’ and ‘code glosses’, respectively (ibid: 98). Ädel’s frequencies for some individual lexical items can be compared to the present ones. She finds rather similar frequencies of first*, second* and third* between the Swedish learner corpus and the American part of LOCNESS, but slightly higher figures for the British part of LOCNESS (ibid.: 103), which mirrors the findings of the present study. Similarly, she finds slightly higher figures for namely among Swedish writers than among both groups of native speakers (ibid.: 113). The frequency differences observed in Table 6 concerning appositive conjuncts clearly have cross-linguistic explanations; this may also apply to other categories.

5.2.5 Focus adverbs

The slight overuse of -ly focus adverbs found in VESPA is significant only in relation to the number of -ly adverbs. Furthermore, Table 7 shows that the proportional distribution of exclusives and particularizers is similar.

Table 7. Meanings of -ly adverbs with a focusing function

<table>
<thead>
<tr>
<th>focus type</th>
<th>VESPA</th>
<th>BAWE</th>
<th>( \chi^2 )</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>exclusives</td>
<td>546</td>
<td>60.3</td>
<td>340</td>
<td>64.3</td>
</tr>
<tr>
<td>particularizers</td>
<td>359</td>
<td>39.7</td>
<td>189</td>
<td>35.7</td>
</tr>
<tr>
<td></td>
<td>905</td>
<td>100</td>
<td>529</td>
<td>100</td>
</tr>
</tbody>
</table>

Differences between the corpora concern lexical choice. Recall that the most frequent -ly adverb in both corpora is the exclusive only (Table 2). The particularizers especially, mainly and particularly are also among the top 20 -ly adverbs in both corpora. We may note that VESPA has more instances of especially than of particularly, while in BAWE it is the other way round. The usage in BAWE resembles that in BNC-ling, with particularly being twice as frequent as especially (303 vs.
150 instances pmw). By contrast, the spoken demographic part of the BNC (spontaneous conversation) uses especially more than twice as often as particularly (80 vs. 36 instances pmw). As also noted in connection with Table 2, the particularizer mostly, exemplified in (33), is much more common in VESPA than in BAWE, where its synonym mainly is more common than it is in VESPA.

(33) For this part I will mostly look at cohesive harmony… (VESPA)

In BNC-ling too, mainly is much more common than mostly, but in BNC conversation they are about equally frequent (mostly 18 pmw; mainly 16 pmw). It thus seems that the learners tend to favour focus adverbs that are less formal, not quite having acquired the formality norms of L1 academic writing.

5.2.6 Modifiers

As reported by e.g. Hasselgren (1994), Granger (1998b) and Lorenz (1998), the use of intensifying adverbs is an area of difference between learners and native speakers. In the present study, the use of -ly adverbs as modifiers in adjective and adverb phrases was significantly more widespread in BAWE than in VESPA. The corpora were alike in that the phrases modified by -ly adverbs were adjective-headed in about 95% of the cases. The distinction between adjective and adverb phrases will therefore not be taken into account in the present analysis. Table 8 shows distribution across the corpora of modifier meanings.

<table>
<thead>
<tr>
<th>Modifier Meaning</th>
<th>VESPA</th>
<th>BAWE</th>
<th>χ²</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>Intensifier</td>
<td>230</td>
<td>85.9</td>
<td>51.8</td>
<td>200</td>
</tr>
<tr>
<td>Downtoner</td>
<td>96</td>
<td>35.8</td>
<td>21.6</td>
<td>41</td>
</tr>
<tr>
<td>Hedge</td>
<td>49</td>
<td>18.3</td>
<td>11.0</td>
<td>57</td>
</tr>
<tr>
<td>Descriptor</td>
<td>69</td>
<td>25.8</td>
<td>15.5</td>
<td>94</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>444</td>
<td>165.8</td>
<td>99.9</td>
<td>392</td>
</tr>
</tbody>
</table>

The overall picture of modifiers is one of underuse in VESPA compared to BAWE. It is therefore interesting to note that downtoners are actually more frequent in VESPA, thus contradicting the tendency to overstatement observed for German learners by Lorenz (1998). The most frequent lexical items functioning as a downtoners in VESPA are fairly and slightly. Both are much less common in BAWE (cf. Table 9). The adjective that is most frequently modified by slightly in VESPA is different (8 times) followed by higher (5 times), stronger (4 times), and lower (twice); in addition slightly precedes more 9 times and less twice. In other words,
the majority of recurrent phrases with *slightly* as a modifier are comparative. An example is given in (34). The only recurrent phrases with the modifier *slightly* in BAWE, *slightly different* and *slightly less*, indicate a similar tendency. As (35) exemplifies, the learners may extend *slightly* to collocations where another downtoner, e.g., *relatively*, would have been more appropriate.

(34) Pseudo-coordination and noun phrase complements share a second place, with noun phrases being only *slightly more common*. (VESPA)

(35) The next candidate is a simple declarative clause, with a *slightly long* Subject. (VESPA)

As shown in Table 8 intensifiers account for just over half of the modifiers in both corpora. While VESPA has a greater proportion of downtoners, BAWE has more hedges and descriptors. Descriptive modifiers add circumstantial meaning to the phrase: For example, *grammatically* in (36) indicates in which respect the word is incorrect, while *instantly* in (37) indicates the time it takes to notice a difference.

(36) This is not a *grammatically correct* word… (VESPA)

(37) The *instantly noticeable* difference between the use of indefinite pronouns was the fact that the overall search found 21,589 hits for the females and only 14,371 for the males. (BAWE)

Table 9 gives an overview of the most frequent modifiers in both corpora with percentages of the total number of modifiers in each corpus. The most striking difference is that VESPA has three downtoners/hedges at the top of the list, while the BAWE list, though starting with the downtoner *relatively*, has four intensifiers showing high degree at ranks 2–5. The most frequent intensifier in BAWE, *extremely*, is much less frequent in VESPA (rank 15). Conversely, the two most frequent downtoners in VESPA, *fairly* and *slightly*, have much lower frequencies (and percentages) in BAWE. As noted for Table 2 above, the most frequent items take up a larger percentage of the total in VESPA, thus reflecting the learners’ greater tendency to recycle familiar vocabulary. 11

Table 9 also shows similarities between the corpora. As in BAWE, the most frequent intensifiers in VESPA denote high degree. We may further note that *particularly* has similar frequencies in BAWE and VESPA, although it was more frequent in BAWE when functioning as a focus adverb (Section 5.2.5).

11. Further support for this was found when searching for alternative intensifiers. The word *very* was much more frequent in VESPA than in BAWE, at 131.5 vs. 83.3 occurrences per 100,000 words (the concordance lines were not scrutinized for the syntactic and semantic functions of *very*). *Very* was also the most common intensifier found in the advanced learner writing analysed by de Haan and van der Haagen (2013)
Some items occur in the top 20 list of only one corpus. Those that are unique to VESPA are clearly, grammatically, especially, perfectly, considerably, seemingly, and overly. Of these clearly occurs twice in BAWE, especially three times, and considerably and overly four times each. The use of seemingly as a modifier in BAWE was commented on in Section 5.2.3; see example (20). The modifiers unique to BAWE’s top 20 are socially, fully, widely, closely, increasingly, potentially and incredibly. Of these, fully is found four times in VESPA, widely twice, and increasingly and incredibly are used once each.12

---

Table 9. The 20 most frequent -ly adverbs with modifier function in VESPA and BAWE*

<table>
<thead>
<tr>
<th>N</th>
<th>VESPA</th>
<th>BAWE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Word</td>
<td>Freq.</td>
</tr>
<tr>
<td>1</td>
<td>fairly</td>
<td>49</td>
</tr>
<tr>
<td>2</td>
<td>slightly</td>
<td>44</td>
</tr>
<tr>
<td>3</td>
<td>relatively</td>
<td>31</td>
</tr>
<tr>
<td>4</td>
<td>highly</td>
<td>29</td>
</tr>
<tr>
<td>5</td>
<td>particularly</td>
<td>28</td>
</tr>
<tr>
<td>6</td>
<td>completely</td>
<td>26</td>
</tr>
<tr>
<td>7</td>
<td>equally</td>
<td>15</td>
</tr>
<tr>
<td>8</td>
<td>clearly</td>
<td>14</td>
</tr>
<tr>
<td>9</td>
<td>grammatically</td>
<td>14</td>
</tr>
<tr>
<td>10</td>
<td>especially</td>
<td>13</td>
</tr>
<tr>
<td>11</td>
<td>perfectly</td>
<td>11</td>
</tr>
<tr>
<td>12</td>
<td>significantly</td>
<td>11</td>
</tr>
<tr>
<td>13</td>
<td>considerably</td>
<td>10</td>
</tr>
<tr>
<td>14</td>
<td>seemingly</td>
<td>10</td>
</tr>
<tr>
<td>15</td>
<td>extremely</td>
<td>9</td>
</tr>
<tr>
<td>16</td>
<td>easily</td>
<td>8</td>
</tr>
<tr>
<td>17</td>
<td>entirely</td>
<td>7</td>
</tr>
<tr>
<td>18</td>
<td>purely</td>
<td>7</td>
</tr>
<tr>
<td>19</td>
<td>overly</td>
<td>5</td>
</tr>
<tr>
<td>20</td>
<td>totally</td>
<td>5</td>
</tr>
</tbody>
</table>

* Downtoners and hedges in italics, intensifiers in bold, descriptors in normal type.

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12. Note that Table 9 reports on absolute frequencies, and VESPA is larger than BAWE (Section 2). Thus, items near the bottom of the VESPA list are not necessarily more frequent than recurrent -ly modifiers outside the BAWE top 20. For example, overly occurs 1.9 times in VESPA and 2.5 times in BAWE per 100,000 words.
There are only two descriptors in the top 20 list of each corpus. Grammatically typically collocates with correct, incorrect, acceptable, wrong, while the most frequent collocates of socially are acceptable/accepted. This simply reflects a difference in the content of the two corpora: a course in learner language analysis in VESPA and one in sociolinguistics in BAWE. In both corpora easily collocates with adjectives derived from verbs, such as understandable, noticeable.

6. A note on errors in the learner corpus

Of the 3747 -ly adverbs in VESPA, very few (about one per cent) have been considered to be used erroneously. In a few cases, the learner had used an -ly adverb instead of an adjective, as shown in (38). But most of the infelicities concern lexical choice, either because the chosen lexeme seems not to express the intended meaning, as in (39), where the writer probably meant especially, or because of inappropriate collocation, as in (40), where highly frequent or frequently recorded would have worked better.

(38) As one clearly sees from this table, 'should' is used in an overwhelmingly amount of the cases… (VESPA)

(39) I assume that the audience will be those of interest in literature generally and explicitly in fairytales. (VESPA)

(40) This analysis will move to conjunction adjunct tie, another type of cohesion, which is highly recorded in the text. (VESPA)

As noted above, the use of -ly adverbs is a teaching point in Norwegian EFL classes because Norwegian adverbs derived from adjectives do not differ morphologically from the adjective in the same systematic way as English ones. Incidentally, the typical Norwegian learner error would be to omit the -ly suffix (Johansson, 2008: 140), so (38) is an instance of hypercorrection. It was beyond the scope of the present study to look for examples of adjective forms used instead of adverbs.

7. Further discussion

The overview of lexicogrammatical features of -ly adverbs given in Section 5 has revealed some clear patterns of overuse or underuse of particular syntactic or semantic categories of adverbs among the learners. Two conspicuous cases of overuse concern frequency adjuncts and modal disjuncts. Interestingly, Halliday (2004) considers frequency (by the name of ‘usuality’) a category of modality.
Analogous to the modal category of probability, usuality belongs to the “space between yes and no”: it indicates “sometimes yes, sometimes no, with different degrees of oftenness attached” (2004: 147).\(^{13}\) This view of usuality may in fact offer an explanation of the observed overuse of frequency adjuncts in VESPA, as it patterns with the overuse of modality disjuncts (cf. Table 5). According to Halliday (ibid.) “even a high value modal […] is less determinate than a polar form […] In other words, you only say you are certain when you are not”.

The learners’ overuse of modal disjuncts was not unexpected, since Aijmer (2002) and Hasselgård (2009a) found that Swedish and Norwegian learners of English overuse modal expressions in argumentative writing. Furthermore, Løken (2007: 319) showed that adverbs expressing probability are more frequent in Norwegian than in English (while epistemic probability is more often expressed by modal auxiliaries in English), so the overuse of modal disjuncts displayed in Table 5 may well be due to transfer. However, as the present investigation does not look into other expressions of modality, this remains a hypothesis for future studies.

Clear cases of underuse concerned all types of adjuncts except frequency. The underuse of time adverbs in VESPA (cf. Table 4) was unexpected on the basis of contrastive studies, which show time adverbials to be more frequent in Norwegian than in English (Hasselgård, 2014). Some of the difference between the corpora may be related to topic: Many time adverbs in BAWE come from papers on child language development, a topic that is not represented in VESPA. A metadiscursive use of the time adverb previously, illustrated by (41), is also more common in BAWE, while VESPA writers prefer the spatial above in the same function, as in (42).

\begin{itemize}
  \item[(41)] As mentioned previously, repetition influences type-token scores massively… (BAWE)
  \item[(42)] As mentioned above, I have a category labelled other… (VESPA)
  \item[(43)] The term modality was originally derived from traditional modal logic… (BAWE)
\end{itemize}

Other uses of time adjuncts, too, seem to concern writing style. For example, originally is much more frequent in BAWE: It is typically used by British students engaging with the literature, as shown in (43). This style of writing is not found much with the Norwegian learners.

\(^{13}\) Note that frequently, as exemplified in (3), has a specialized use in corpus linguistics papers, of which VESPA contains more than BAWE.
Degree adjuncts were underused relative to corpus size but not in relation to the number of adjuncts. However, there were interesting differences in the preferred semantic types. Far from tending towards overstatement (Lorenz, 1998), the learners had fewer adjuncts showing high degree and more showing low degree. The pattern of degree adjuncts is thus similar to that of modifiers, where downtoners are more frequent in VESPA than in BAWE (see 5.2.6), which makes sense, given the similarities in semantics and realization between these two functional groups. The frequent use of downtoners and low-degree adjuncts, along with the overuse of modal disjuncts, creates an impression of a more hedged style in learner writing.

Conjuncts were also underused by the learners, particularly comparative and resultive ones. To check if the learners’ underuse of resultive conjuncts is due simply to the underuse of consequently, I searched in both corpora for therefore, thus, and sentence-initial so (which was assumed to be predominantly resultive). The learners overused sentence-initial so, but not enough to make up for a significant underuse of therefore and thus. The Norwegian learners’ underuse of resultive conjuncts is in agreement with Altenberg & Tapper’s finding for Swedish learners (1998:91). Appositive conjuncts, in contrast, were more frequent in VESPA, mainly due to the overuse of namely. This overuse was linked to the much higher frequency of the Norwegian cognate nemlig (Section 5.2.4). Ädel (2006) found a similar, though less massive, overuse of namely with Swedish learners, who have the same cognate nåmlig in their L1. Contrastive data suggest that the relation conveyed by nemlig is less frequently verbalized in English than in Norwegian. The learners may be unaware of this, or may not know how to express this relation by other means.

The decision to restrict the study to -ly adverbs obviously places important limitations on the findings: Many adverbial meanings are commonly expressed by other types of adverbs, and the meanings of many -ly adverbs can also be expressed by other forms (e.g., only/just, frequently/often, generally / in general). Ideally, such alternatives should have been included in the investigation. However, as neither corpus is tagged or parsed, alternative expressions could only have been found by close reading of all the texts or by means of additional searches for synonyms, both of which would have required inordinate amounts of time and effort given the breadth of functions and meanings investigated. A more detailed study of single semantic categories of adverbs or adverbials, however, would do well to cast the net beyond -ly adverbs.
8. Concluding remarks

This paper has explored the use of -ly adverbs in two corpora of novice academic English to compare advanced learners of English to native speakers. In spite of clear limitations in its scope, the study has uncovered a number of differences between the two writer groups.

It was hypothesized that adverbs would be more frequent in VESPA. However, the investigation showed the opposite patterns. A breakdown of the adverbs into syntactic and semantic classes showed, however, that the underuse is not consistent: The learners overuse frequency adjuncts, disjuncts (particularly those with modal meaning), appositive conjuncts, focus adverbs and downtoners. With the exception of appositive conjuncts, the common denominator for these groups is hedging: They all represent ways of avoiding categorical (or polar) statements. Frequency adjuncts and modal disjuncts make a proposition less determinate, even when they denote high-value frequency or probability. Obviously, the use of downtoners also reduces the force of a proposition. The question of whether these phenomena should be linked to a higher degree of writer uncertainty among learners than among native speakers, or whether it is due to the influence of informal speech on learner English, needs to be investigated in a more comprehensive study of modality and hedging in this type of material.

Adverbs functioning as modifiers of adjectives and adverbs showed important differences in frequency (with the learners underusing all the functional types except downtoners) as well as lexical choice. Native speakers use a wider repertoire of adverbs as modifiers, while learners have a greater tendency to recycle familiar vocabulary. This finding was expected on the basis of previous studies by Granger (1998b) and Hasselgren (1994). The smaller vocabulary of learners was also evident in the overall type-token ratio of -ly adverbs observed in Section 5.1. Learners particularly underused the descriptive/referential function of modifiers. This may be related to a lower degree of phrase complexity in learner English, a tendency which was observed for a set of noun phrases investigated by Hasselgård (2012), and thus points to another topic worthy of further research.

The learners were expected to use fewer adverbs functioning as metadiscourse than the native speakers; this turned out to be the case, except for the ‘code gloss’ namely, which was far more frequent in VESPA. Conjuncts of serial order were more frequent in BAWE, as was the adverb previously as part of the metadiscursive as mentioned previously, to which VESPA writers prefer as mentioned above. Importantly, metadiscourse is realized by a much wider set of expressions than -ly adverbs (cf. Ädel, 2006); thus -ly adverbs can tell only a part of that story.

In contrast to many previous studies of learner English (particularly those based on ICLE), the present study did not reveal a clear influence of informal
speech, except possibly in the overuse of modal adverbs. This could be due to the assumed greater proficiency of these learners than of those represented in ICLE, and not least to the fact that VESPA texts represent disciplinary writing rather than argumentation of general topics. However, there were some indications that learners prefer to stick to more general vocabulary, while the native speakers seem to be making more use of academic and specialized lexical items.

The investigation of -ly adverb usage did not reveal many errors in the learner corpus, which is most likely another effect of the proficiency of VESPA writers. There were some instances of adjective/adverb confusion, as illustrated by (38). However, most of the errors were due either to the wrong lexical choice (e.g., precedingly for previously or consequently for consistently). In addition there were some non-native-like collocations (e.g., adhere strongly to rules, a substantially high density, directly explicit, a typically good idea).

As the present study has mainly been exploratory, it has many potential follow-ups. Topics worthy of further research include phrase complexity (with particular focus on descriptive modifiers), expressions of modality, hedging and metadiscourse. Clearly, the study should also be extended to include adverbs other than those ending in -ly. However, for this, tagged corpora are needed.

Finally, despite its limitation to one type of adverbs only, the study has some potential applications in the teaching of academic English, particularly as regards vocabulary variation, collocation and phrase complexity. The latter applies particularly to the use of descriptive modifiers. Learners also seem to need more knowledge on the (non-)use of modal markers, comment disjuncts, and the expression of conjunctive relations.

Corpora used

The British Academic Written English Corpus (BAWE): http://www.coventry.ac.uk/research/research-directory/art-design/british-academic-written-english-corpus-bawe/
The English-Norwegian Parallel Corpus (ENPC): http://www.hf.uio.no/ilos/english/services/omc/enpc/
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