Degree Modifier Associations in the Michigan Corpus of Academic Spoken English

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Lee, Jungyull. (2018). Degree modifier associations in the Michigan Corpus of Academic Spoken English. *The Linguistic Association of Korea Journal, 26*(3), 25-49. From a semantic-analytic perspective, this paper investigates how degree modifiers associate with lexemes in the Michigan Corpus of Academic Spoken English. The corpus is utilized to explore diverse associations between degree modifiers and lexical items having positive, negative, and neutral connotations. The analysis of various lexemes in connection with degree modifiers identifies the relationship that accounts for the preferences governing the associations between degree modifiers and the lexemes; i.e., the strongest relationship seems to occur with respect to the frequencies of their associations. In this study, it is significant to note that variable lexemes other than ostensible lexemes are included in terms of *lexical variabilities*. In light of the corpus-based data on the nature of degree modifier associations proposed in this study, each degree modifier is shown to associate powerfully with distinct lexemes implying exceptional semantic preferences. The analysis of semantic preferences pertaining to degree modifiers suggests that each degree modifier preferentially selects distinctive types of lexemes; namely indications of degree modifiers may be noticeable in discourse.

Key Words: corpus, degree modifier, association (collocation), lexeme, lexical variability, semantic preference

1. Introduction

The selected degree modifiers, *absolutely, completely, dead, entirely, fully, perfectly, quite, totally,* and *utterly*, are analyzed in this study. These degree

modifiers have similar lexical meanings for emphasis and have similar syntactic functions as premodifiers, and most dictionaries claim that all nine of these degree modifiers are generally equal. Each degree modifier is used to emphasize that something is true or something is very great in extent, degree, or amount (e.g., *Cambridge International Dictionary of English*, 1995; *Collins Cobuild English Language Dictionary*, 1987). The degree modifiers' syntactic roles, when utilized with adjectives or verbs that express strong feelings or extreme qualities to mean *extremely*, are also equivalent. Although the degree modifiers seem to be similar in terms of their lexical meanings and syntactic features, their associations and semantic preferences of the nine degree modifiers do not appear to behave in identical ways. This study deals with definite associations of the degree modifiers and lexemes in the Michigan Corpus of Academic Spoken English (henceforth the MICASE). In order to look into semantic preferences with respect to each degree modifier, it is important to observe that all of the lexemes can be subjected to another reading by *lexical variabilities* (see more information in Section 4) rather than as ostensible lexemes, i.e., variable lexemes are provided indicating variability depending on context. The meaning of a substantial portion of lexemes can differ when utilizing contextualized analysis. This will be evidenced through the analysis considering *lexical variabilities* in this study. Certain degree modifiers may associate in natural way with lexemes implying positive, negative, or neutral meanings. This means that semantic preferences of the connections identified between the degree modifiers and lexemes seem to connote strong semantic linkages. The strength of these linkages tends to limit the flexibility of the lexemes occurring together with the degree modifiers. Their associations relevant to semantic preferences will be further revealed in Section 5. The results of the examination will be presented in a table for each of the paradigms with extracts of associated lexemes and their frequency.

2. Literature Review

2.1. What Are Collocations?

In this section, it is required to consider definitions of collocation. Many linguists have offered their discussions of collocations and meanings (Firth, 1957; Leech, 1974; Lorenz, 1999; Palmer, 1933; Sinclair, 1991; Sinclair, Jones, & Daley, 2004) as follows:

(a) "Meaning by collocation is an abstraction at the syntagmatic level and is not directly concerned with the conceptual or idea approach to the meaning of words. One of the meanings of *night* is its collocability with *dark*, and, of *dark*, of course, collocation with *night*." (Firth, 1957, p. 196)

(b) "Collocative meaning consists of the associations a word acquires on account of the meanings of words which tend to occur in its environment." (Leech, 1974, p. 20)

(c) Collocations between modifiers and adjectives lie at the heart of idiomaticity in English. (Lorenz, 1999)

(d) "Selection of common collocations ... exceeds by far the popular estimate of the number of single words contained in an everyday vocabulary." (Palmer, 1933, p. 13)

(e) "Collocation is the occurrence of two or more words within a short space of each other in a text. The usual measure of proximity is a maximum of four words intervening. Collocations can be dramatic and interesting because unexpected, or they can be important in the lexical structure of the language because of being frequently repeated."(Sinclair, 1991, p. 170)

(f) "Collocation is the co-occurrence of two items in a text within a specified environment." (Sinclair, Jones, & Daley, 2004, p. 10)

Divergent features of the collocations are emphasized by these definitions above. Intrinsically, collocations are typically employed to refer to associations of two particular single lexemes. Looking into the early studies suggests that associations between the degree modifiers and lexemes make it possible for both speaker and hearer to evaluate whether their collocations are apposite.

2.2. What Are Degree Modifiers[1])?

According to Paradis (1997), degree modifiers are elements modifying another element pertaining to degree. Quirk et al. (1985) describe degree modifiers as relevant to the assessment of a gradable constitutent. Allerton (1987) divides degree modifiers into four categories: scalar modifiers, telic modifiers, absolutive modifiers, and differential modifiers, which included comparative adjectives in his model. The selected degree modifiers are found in previous studies. The usage of the degree modifiers to modify particular lexemes has been delineated by Altenberg (1991), Greenbaum (1970), Kennedy (2003), Paradis (1997), and Quirk (1985). For instance, the degree modifiers denote the upper extreme (Quirk et al., 1985). According to Altenberg (1991), they are typically employed to modify *nonscalar* lexical items. Paradis (1997) states that they are not combined with gradable lexemes such as *interesting* and *nice*, but rather they link with nongradable or absolute lexemes such as *dead* and *excellent*. Kennedy (2003) defines that they maximally reinforce the sense of an adjective or verb.

Drawing upon previous studies of degree modifiers, the degree modifiers observed in this study are viewed as maximally increasing the extreme sense of certain lexical items.

2.3. Previous Studies on Degree Modifiers' Associations

This section first explores early studies on the nine degree modifiers in terms of their associations. Particularly notable in previous studies pertaining to a great deal of the degree modifiers are their associations. Many linguists have suggested that the degree modifiers show different preferences across registers and connected with different adjectives. For instance, Altenberg (1991) listed associations of the degree modifiers. With respect to associations of the degree modifiers from a brief review, Altenberg (1991), using the Lundon-Lund Corpus, investigated their associations, and found that *quite* was the sole degree modifier

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1) Biber (1988, p. 240) indicates that "the function of the lexical class of reinforcers is not only to indicate a certain degree, but they also indicate in positive terms, the reliability of the proposition." Holmes (1984, p. 48) pointes out that "reinforcers can be used for non-propositional functions in that they may convey both modal and affective meaning."

employed to reinforce *ly*-adverbs in his material. *Quite* was found with prepositional phrases as well. *Absolutely* collocated with inherently superlative adjectives having emotive force, and it was the only degree modifier strengthening negative terms. *Perfectly* seemed to collocate with words having positive or commendable qualities. *Totally* exclusively collocated with two adjectives such as *different* and *wrong*. *Fully* was found with two lexical items such as *automatic* and *understand*. *Dead* and *utterly* were found with one lexical item each such as *against* and *powerless*. *Entirely, completely, totally,* and *fully* highlighted the total relevance of the strengthened element. *Entirely* merely collocated with definite lexemes such as *financed, forgotten, happy,* and *new*. *Completely* collocated with certain lexical items (e.g., *free, mad, wrong, different* and *new*) (Altenberg 1991).

Kennedy (2003), using the British National Corpus (BNC) as the database, also examined their associations. In his study, he relied on the Mutual Information (MI)[2] measure, the statistical measure chosen to present the strength of associations between degree modifiers and adjectives. For instance, *absolutely* collocated with lexemes that were used hyperbolically; the adjectives had both positive and negative semantic associations; only *incredible* had a negative prefix; 23% of the associations had an *-ous* suffix; 15% had an *-ed* suffix. *Completely* was found with abrogation (e.g., *eliminated, wrecked*); 23% of the associations had a negative prefix; 10% had an *out-* or *over-* prefix; 78% had an *-ed* suffix. *Dead* was found particularly with positive lexemes; none of the associations had a negative prefix; only two had an *-ed* suffix. *Entirely* co-occurred with lexemes having positive or negative combinations; 18% of the lexemes had an *-able* or *-ible* suffix; 23% had an *-ed* suffix. *Fully* exclusively collocated with positive lexemes; 13% of the adjectives had an *-able* or *-ible* suffix; 78% had an *-ed* suffix. *Perfectly* exclusively combined with positive lexemes; 28% of the adjectives ended in *-able* or *-ible*; only 18% had an *-ed* suffix. *Totally* generally had negative collocations; 65% of the lexemes had a negative

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2) Values were the strength of the collocation as calculated by the MI measure. Kennedy (2003, p. 473) noted "the MI score is calculated with the following formula: MI= $\log^2 ((f(n, c) \times N) / (f(n) \times f(c))$, where $f(n, c)$ is the number of times the collocation occurs, $f(n)$ is the frequency of the amplifier, $f(c)$ is the frequency of the adjective or other word modified, and N is the number of words in the corpus."

prefix; 45% had an *-ed* suffix. *Utterly* mainly co-occurred with unfavorable lexemes (Kennedy, 2003).

Paradis (1997), utilizing the London-Lund Corpus, studied associations of adjectives and degree modifiers. Looking into the previous study of Paradis (1997), she noted that both limit adjectives and extreme adjectives associated with the degree modifiers.[3] For instance, *quite* was found with mostly neutral limit adjectives (e.g., *correct, normal, obvious, true, safe, sufficient, right, ordinary, convinced, relaxed*). *Absolutely* collocated with extreme adjectives more emotionally loaded than limit adjectives. *Completely* was generally found with limit adjectives (e.g., *wrong, free, important, empty, new, lost, indifferent*). *Perfectly* preferably collocated with limit adjectives (e.g., *true, obvious, logical, normal, capable, convinced, decent*). *Perfectly* was strange with negative morphemes (e.g., *illogical, unhappy, unjustified*). *Totally* generally connected with both limit and odd extreme adjectives (e.g., *different, wrong, impossible, right, unknown, lost, tortuous, bewildered*). *Totally*, in common with *completely*, also combined with negative adjectives and negative morphemes. *Entirely* was found with limit adjectives having a rather strong link with *new* and *different*. *Utterly* co-occurred with adjectives that have more indeterminate attributes (e.g., *powerless, trivial, vigilant, pointless, filthy, bewildered*). Similar to the findings obtained Altenberg (1991), Kennedy (2003), and Paradis (1997), where *absolutely* mapped onto positive lexemes and *utterly* collocated with negative lexemes. Tao (2007) exclusively examined collocations of *absolutely*, which was powerfully associated with positive lexemes and Greenbaum (1970) and Lee (2011, 2014) also stated similar claims that *absolutely* was found to collocate with positive lexemes and *utterly* was found to be associated with negative lexemes.

I have investigated the previous studies of the degree modifiers. This paper will examine further whether or not the degree modifiers may have similar or different collocations. In addition, semantic preferences of the degree modifiers will be investigated as well. The issue concerning the discrepancies of their

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3) According to Paradis (1997, pp. 63-64), "Limit adjectives are not associated with a scale but are conceptualized in terms of 'either-or'. Limit adjectives are criterial and only marginally gradable. In contrast, Extreme adjectives are not conceptualized in terms of 'more or less', nor in terms of 'either-or', Extreme adjectives are marginally comparable, perfect in exclamatory expressions and conceptualized as the ultimate point on a scale."

associations between the previous findings and the present findings will be addressed in depth in Section 5.

3. Data and Methodology

3.1. Data Selection

The main data source for the present study comes from the MICASE, the largest balanced corpus of spoken American English. I have employed the MICASE to research both associations and semantic preferences in the degree modifiers. The MICASE is a collection of almost 1.8 million lexemes of transcribed speech from the University of Michigan in Ann Arbor, created by research workers and students at the University of Michigan English Language Institute. The MICASE includes data from broad-based speech events (containing classroom discussions, lectures, seminars, lab sections, and advising sessions). Academic events differ broadly in their content and intonation. The corpus contains speech events that range in length from 19 to 178 minutes, with lexeme counts varying from 2,805 words to 30,328 words. In the MICASE corpus, academic speech is defined as speech occurring in academic settings. In academic settings, speech acts such as personal anecdotes, confessions, and jokes, as well as intellectual justifications, explanations, and definitions can be found. The MICASE is designed to be proportionate, as much as possible, across some categories of academic speech events as well as across the major academic divisions within the university. Academic events in professional schools (e.g., law, business, medical, dental) are not included. The range of speech events contains interactive and monologic speech from the following groups: undergraduate and graduate students; junior faculty, senior faculty, administrative staff. In addition, an attempt is made to acquire nearly equivalent amounts of speech from female and male speakers within each academic division. Speech event attributes contain the type of event, the subject area of the event, the extent to which an event is interactive or monologic, as well as the educational level or academic role of the majority of participants. The MICASE is a useful tool for examining frequency and associations between the

degree modifiers and lexemes.

3.2. Data and Analysis

The analysis was conducted as follows. First, semantic preferences of the nine degree modifiers were analyzed on the basis of the investigation of the corpus with special reference to any existing differences among the degree modifiers. Second, harmonious and disharmonious associations of the degree modifiers were analyzed on the basis of the investigation of the corpus and a survey to clarify whether or not their associations were natural. In order to reconfirm whether or not their associations are natural or coherent, some instances were analyzed by 10 native speakers of American English, who made evaluative judgments as to the coherence of the given utterances involving a degree modifier.

Table 1 below illustrates the frequency with respect to associations of the degree modifiers. As has already been pointed out, it is notable that a large number of lexemes are exclusively examined for variable lexical items except for ostensible lexical items, and they are merely included in Table 1. Table 1 below displays the frequency of the degree modifiers' associations.

Table 1. Frequency of the Degree Modifiers' Associations in the MICASE

	Positive	Negative	Neutral	Total
Absolutely	44 (61%)	15 (21%)	13 (18%)	72 (100%)
Completely	49 (33%)	63 (42%)	37 (25%)	149 (100%)
Dead	2 (100%)	0 (0%)	0 (0%)	2 (100%)
Entirely	16 (35%)	24 (52%)	6 (13%)	46 (100%)
Fully	10 (34%)	13 (45%)	6 (21%)	29 (100%)
Perfectly	36 (67%)	12 (22%)	6 (11%)	54 (100%)
Quite	73 (26%)	147 (51%)	65 (23%)	285 (100%)
Totally	76 (51%)	44 (30%)	29 (19%)	149 (100%)
Utterly	0 (0%)	4 (80%)	1 (20%)	5 (100%)

Based on the MICASE, in the 1.8 million lexemes, a total of 72, 149, 2, 46, 29, 54, 285, 149, and 5 cases of *absolutely, completely, dead, entirely, fully, perfectly, quite, totally,* and *utterly* concerning associations are found respectively.

4. Lexical Variabilities

In this section, the discussion of intimate associations between the degree modifiers and lexemes furnishes us with the basis on which we may analyze them utilizing more distinguishing terms such as *lexical variabilities*, as proposed in this study prior to the beginning of exploring their actual associations. Ostensible lexical items have been exclusively investigated by most researchers in order to look into the collocations between the degree modifiers and lexical items in the past. For instance, certain types of collocations were conducted by Altenberg (1991), Greenbaum (1970), Kennedy (2003), Lee (2011, 2014), and Tao (2007). They attempted to analyze ostensible lexemes, without using variable contextual analysis in terms of lexemes. Thus, employing this method the degree modifiers cannot be rigorously categorized. It is to this issue, not addressed by previous studies, which this current investigation now turns. As the following discussion will suggest, distinctive uses can be further focused on by meticulously looking into the context in which they are embedded. Consider extracts (1)-(3):

(1) 1 S2: i'll just tell you what it is i'm trying to do... most of my life
      2   has been spent, solving problems. and many many years ago
      3   a, published mathematician and i, decided to see if we could,
      4   formalize this and put some rigor into the whole thing, and,
      5   to this end, we looked at what was available, and we actually
      6   found that there was nothing that would communicate, the
      7   problem or its solution, to the users. so what we did is we
     →8   evolved, a mechanism for ourselves, using, um, some *quite,*
     →9   *heavy* mathematical techniques but found that this was, no
     10   good because it really didn't satisfy the users' needs.
               (The MICASE) (Transcript ID: COL999MX059)

The context of extract (1) requires cautious consideration in order to analyze whether "some *quite, heavy* mathematical techniques" at line 8 and 9 connotes a positive, negative, or neutral sense. S2 uttered *quite heavy*, which is ostensibly neutral. It is seemingly difficult to grasp whether the lexemes may connote a

positive, negative, or neutral sense when the lexeme is looked at in isolation; i.e., the following utterances of S2 are significant clues, as in "but found that this was, no good because it really didn't satisfy the users' needs." Throughout the observation of S2 utterance at line 9 and 10, the speaker communicates a negative connotation with respect to "heavy mathematical techniques." Thus, even though *quite heavy* seems neutral on its own, a negative connotation is apparent when the context is closely considered.

(2)　1 S2:　you can call you can be in sort of constant email contact, [S6:
　　　2　　　mhm] you can, you know maybe some places even like watch
　　　3　　　Indian, television [S6: yeah] i mean in, in Chicago i used to get
　　　4　　　those Indian movies on T-V all the time which are <S6:
　　→5　　　LAUGH> *entirely incomprehensible* both in form and language
　　　6　　　um, uh, i mean they're they're incredibly interesting.
　　　　　　(The MICASE) (Transcript ID: OFC115SU060)

At line 5, the negative prefix *in-* ostensibly seems negative. However, it soon becomes explicit that the actual meaning can be fully interpreted with a positive implication if extract (2) is observed by thorough contextual analysis. Her following utterance at line 5 and 6 can be a significant clue in order to grasp whether the lexical items *entirely incomprehensible* connote a positive, negative, or neutral sense. As shown in (2) above, the speaker utters, as in "both in form and language um, uh, i mean they're they're incredibly interesting." Throughout the analysis of the speaker's utterance considering an important clue at line 5 and 6, the lexemes *entirely incomprehensible* may seem negative, but turn out to be positive.

(3)　1 S1:　uh at an early period of in the history of Romance linguistics as
　　　2　　　a scholarly discipline, this type of approach, uh had a great
　　　3　　　appeal. um, back around the turn of the century when historical
　　→4　　　linguistics still was *not* yet you know very a *fully s- full fledged*
　　→5　　　*sophisticated* uh discipline.
　　　　　　(The MICASE) (Transcript ID: LES355SU009)

At line 4 and 5, the positive lexeme *full fledged sophisticated* in association with *fully* is decontextualized, and can be interpreted in a positive sense without reference to its larger dialogic and sequential context. The meaning of the lexeme associated with the negator *not* at line 4, however, can be adjusted by the speaker as well. When the context is further analyzed, *fully full fledged sophisticated* connotes a negative meaning.

It is necessary to point out that the connotations in their associations between the degree modifiers and lexemes can be positive, negative, or neutral depending on different contexts. These observations suggest that the distinctive features of the degree modifiers can be further analyzed by noting that the meaning of the lexemes co-occurring with them is often indexical and contingent upon the context in which it is situated. Speakers make language changeable and adaptable to disparate and multiple purposes, i.e., positive, negative, and neutral lexemes can be adjusted by speakers. Therefore, the associations between the degree modifiers and lexemes can be variable depending on contextual considerations. So far this paper has investigated the nature of *lexical variabilities* in their associations. The next section turns to the examination of the degree modifiers in the MICASE, elaborating on semantic preferences with respect to associations between the degree modifiers and lexemes.

5. Associations and Semantic Preferences

This paper will clarify the degree modifiers' respective semantic preferences in their associations through *lexical variabilities*. An important element in accounting for diversities of semantic preferences is associations of the degree modifiers. The degree modifiers can collocate with multiple lexemes. Accordingly, this section demonstrates collocations and semantic preferences of the degree modifiers. Because the main aim of this paper is to elaborate on the associations between certain lexemes rather than between word classes, this paper makes an effort to analyze the distinct lexemes including adjectives and verbs associated with the degree modifiers. Thus, my data consists of the degree modifiers + lexemes (adjectives and verbs). The research of the multiple lexemes in association with the degree modifiers will establish the relationship that

explains the preference governing the associations between the degree modifiers and lexemes having positive, negative, and neutral connotations. My hypothesis is that each degree modifier preferentially adopts distinctive types of lexemes. It is significant to note that early studies did not pay attention to the frequency of intensifiers in terms of their associations in order to investigate semantic preferences of the degree modifiers. Hence, of particular interest in this area is the frequency of associations of the degree modifiers among lexemes implying positive, negative, and neutral meanings. The degree modifiers occur with lexemes implying positive, negative, and neutral meanings. Extracts (4) and (5) show positive associations of *absolutely*.

(4) →1 S1: i see your point yeah. no [S10: (xx) strength] you're *absolutely*
    →2   *right* in fact, uh, thi- uh this is a very Jamesean, denouement
    3   too in this sense, that Newman who's always been a a a a
    4   practical go-getter, a doer,
             (The MICASE) (Transcript ID: LES300SU103)

(5) 1S2:   you need to take one of the courses that has a four-oh-one or
    2   four-oh-two prerequisite physically if you're in Ann Arbor [S4:
    →3   okay] so that's, so one term abroad is *absolutely no problem*.
             (The MICASE) (Transcript ID: OFC280SU109)

At line 1 and 2 of extract (4), the adjective *right* is a lexeme implying a positive meaning. At line 3 of extract (5), the speaker utters *absolutely* in association with *no*. Although *no* ostensibly seems negative, in actuality it connotes a positive sense through *lexical variabilities*. *Absolutely* can also be associated with negative lexemes although the negative frequencies are very small in number. Consider extract (6).

(6) →1 S1: i know, four days, i'm *absolutely freaked out* about this.
             (The MICASE) (Transcript ID: LES175SU079)

At line 1, *freaked out* connoting a negative meaning associates with *absolutely*. The findings of this study are in line with the findings of the early studies that look

at the same degree modifier (Kennedy, 2003; Lee, 2011, 2014; Paradis, 1997; Tao, 2007); *absolutely* associates with both positive and negative lexemes. *Absolutely* may associate with neutral lexical items. Consider extract (7).

(7)　1 S1:　this onion and the garlic are chopped very fine and placed in
　　　2　　　a little oil to fry, as soon they become transparent, the potatoes
　　　3　　　beans and chopped tomatoes are stirred in until the flavors
　　　4　　　meld now, that switch, from the narrative of what's going on
　→5　　　to a continuation of the recipe, is *absolutely typical* of this book.
　　　6　　　right? we get it, every chapter has that kind of switch in
　　　7　　　narration. (The MICASE) (Transcript ID: LEL300SU076)

At line 5, *typical* appears to be neither positive nor negative. There may, however, be an extreme degree in the case of the lexical item, i.e., it could have an extreme sense in its sequential contexts.

In addition to these associations including positive, negative, and neutral, *absolutely* frequently associates with superlative lexemes having emotive force. Consider extract (8).

(8)　1 S1:　um, maybe you can get some for class. uh so they put
　　　2　　　radioactive isotopes in a liquid. and you drink them. the way it
　→3　　　works on the brain, this is *absolutely amazing*.
　　　　　　(The MICASE) (Transcript ID: LES500SU102)

At line 3, the superlative lexeme *amazing* that is utilized hyperbolically and has emotive force associates with *absolutely*, which connotes a positive meaning. This observation is consonant with Altenberg (1991), Kennedy (2003), and Paradis (1997), who claimed that *absolutely* associated with superlative, hyperbolic, emotive lexemes. As analyzed in Table 1 above, there are more positive lexemes that associate more than twice as often with *absolutely* as with negative and neutral lexemes. There is a balance in the use of lexemes connoting positive, negative, and neutral meanings, i.e., *absolutely* strongly connotes positive semantic preferences and tendencies (e.g., total 61%) compared to negative and neutral cases (e.g., 21% and 18% respectively).

Completely may be found with positive, negative, and neutral suggestions. Extracts (9)-(11) show associations of *completely*.

(9) →1 S1: yeah oh i c- i *completely understand* what i what i'm, what i'm
        2   having difficulty with then, is to um
                 (The MICASE) (Transcript ID: OFC105SU068)

(10)   1 S1: wasn't it Sweden?
       →2 S3: it might've been Sweden i, i *completely can't remember*.
                 (The MICASE) (Transcript ID: LES320SU085)

(11)   1 S1: okay. because [S2: Speaker information restricted] i also
        2   know that i you know that uh, from having, turned in
        3   things to you before and and stuff like that i know that i
        4   could turn it in and after five times that you would still
       →5   have, <S2: LAUGH> comments which would, *completely*
       →6   *either*, (The MICASE) (Transcript ID: OFC105SU068)

At line 1 of extract (9), *completely* associates with *understand* having a positive connotation. Analogous to the findings given by Kennedy (2003), Lee (2011), and Paradis (1997), where *completely* was found to link with negative lexemes, this study is similar with their claims; *completely* combines with negative lexemes. Extract (10), for example, shows a negative association of *completely*. In contrast to early studies (Altenberg, 1991; Greenbaum, 1970; Kennedy, 2003), *completely* associates with neutral lexemes. Extract (11) presents a neutral connection of *completely*. Table 1 above presents the tokens and frequency concerning connections with *completely*. The results in Table 1 illustrate that *completely* associates with more negative lexemes than positive lexemes (e.g., total 42%). By contrast, positive and neutral lexical items account for a comparatively low number of tokens and percentages (e.g., total 33% and 25% respectively). Thus, this distribution suggests that *completely* implies negative semantic preferences and tendencies.

As shown in Table 1, *dead* as a degree modifier does not seem to occur frequently in the corpus. Extract (12) shows a positive association of *dead*.

(12)　　1 S1:　we can start off with nice hard numbers, the things we
　　　　　2　　　measured, right? easy, no doubt, and everybody knew the
　　　　　3　　　ages, really accurately right? no question in reading the
　→4　　　scales, *dead easy*.
　　　　　　　　(The MICASE) (Transcript ID: LAB175SU033)

Similar to the findings claimed by Kennedy (2003), where *dead* was found with lexemes having positive associations, *dead* associates with only two lexical items such as *easy* and *certain* having positive connotations in the MICASE. *Dead* may have positive semantic preferences and tendencies although the tokens of *dead* are quite small (e.g., total 100%).

In accordance with early studies of *entirely*, there seems to be differences in terms of its associations. For instance, particular lexical items such as *financed, forgotten, happy, new, agree, different, quite, automatic, unacceptable, different* and *true* were associated with *entirely* (Altenberg, 1991; Paradis, 1997). Unlike in the previous findings, however, lexemes having positive, negative, and neutral implications are found to associate with *entirely* in the current data. Consider extracts (13)-(15).

(13)　　　1 S1:　i don't know if you ever thought of that but, and then
　→2　　　drawing and plotting is an *entirely, different* form of
　　　　　3　　　graphical communication. which can be very efficient,
　　　　　　　　(The MICASE) (Transcript ID: LES165JG121)

At line 2, although the lexeme *different per se* may seem neutral, it can be positive with reference to its larger dialogic and sequential contexts, i.e., *entirely* can associate with *different* having a positive connotation.

(14)　　→1 S13:　uh, i think she wants job security because she's not *entirely*
　→2　　　*confident,* in keeping her position
　　　　　　　　(The MICASE) (Transcript ID: LEL185SU066)

The lexeme *confident* ostensibly seems positive at line 2. It, however, implies a

negative sense with the negator *not* in context. *Entirely* can also collocate with lexemes implying negative meanings.

(15)   1 S1:   even though part of it is parallel, and part of it's not
       2   parallel, if there's any part that's not parallel assuming the
       3   statistics show significance, this would be an interaction.
       4   even though it's part parallel part not parallel. because what
       5   you have to do is look at, the entire, compare the entire
       6   lines to each other. so if you've got three, levels of an
       7   independent variable or four or five, the lines have to be
     →8   *entirely parallel* the whole time, for there to be no interaction.
                (The MICASE) (Transcript ID: LAB500SU089)

In contrast with extracts (13) and (14), at line 8 of extract (15), the lexical item *parallel* in association with *entirely* seems to connote neither positive nor negative meaning on its contextual meaning. As can be seen in Table 1, *entirely* associates with more negative lexemes (e.g., total 52%) than positive and neutral lexemes (e.g., total 35% and 13% respectively). Almost half the number of lexemes that are modified by *entirely* are negatively loaded. The results in Table 1 suggest that *entirely* exhibits negative semantic preferences and sense.

Moving on to *fully*, the actual associations and semantic preferences of *fully* with the corpus are shown as well. In contrast with the findings of Altenberg (1991), and Kennedy (2003), where *fully* was recurrent with two lexemes only, *automatic* and *understand*, and was thought to have exclusively positive associations, this study shows a weaker tendency of association with positive lexemes that co-occur with various lexemes. Extracts (16)-(18) illustrate that *fully* associates with positive, negative, and neutral lexemes.

(16)   1 S1:   oh that's (the) well actually [S4: it's it's it's] it's it very it's
       2   very much the same thing it's very much the same thing i
       3   just wish to hell they'd give us credit for having something
     →4   so <SS: LAUGH> being so simple. i *fully understand* their
       5   complexity i don't understand why they can't understand

6 my simplicity. <SS: LAUGH>
   (The MICASE) (Transcript ID: DEF500SF016)

(17) 1 S4: oh well yeah yeah i mean you're gonna be raised by your
   2 parents and you're gonna kinda pick up on that but i think
  →3 he's still too young to really be like, you know, *fully*
  →4 *cognizant of,* you know capitalist ideas and what not.
    (The MICASE) (Transcript ID: SEM545MG083)

(18) 1 S1: so you don't have to worry about barrier boundaries when
  →2 you're looking at this. you want your well to be *fully*
  →3 *penetrating* cuz you're still gonna assume the Dupuit
   4 approximation is valid.
    (The MICASE) (Transcript ID: LES205JG124)

At line 4 of extract (16), *fully* associates with the positive lexeme *understand* and at line 2 and 3 of extract (18), *fully* is found to associate with the neutral lexeme *penetrating*. At line 3 and 4 of extract (17), the association (e.g., *fully cognizant of*) is considered a positive lexeme *per se* here. This can, however, be treated as a negative implicature through contexutualized analysis. Table 1 above shows the tokens and frequency with respect to associations of *fully*. The results display that *fully* associates with more lexemes implying negative meanings (e.g., total 45%) than lexemes connoting positive and neutral meanings (e.g., total 34% and 21% respectively). Accordingly, this distribution suggests that *fully* implies negative semantic preferences and tendencies.

  As for associations of *perfectly*, *perfectly* collocates with lexemes having positive, negative, and neutral implicatures. Consider extracts (19)-(21).

(19) →1 S5: well that that, that's *perfectly fine* i think that's, that's a good
   2 thing to do. (The MICASE) (Transcript ID: DEF420SF022)

(20) →1 S1: so Beethoven wasted, a year, working on a *perfectly atrocious*
   2 libretto, by Schikaneder called Vestas Feuer, the Vestal Fire.
    (The MICASE) (Transcript ID: LES420MG134)

(21) →1 S2: the mutations are *perfectly normal*. there is no difference
       2   between the knockout [S3: oh really?] and the wild type.
                (The MICASE) (Transcript ID: MTG400MX008)

As can be seen in extracts (19)-(21), *perfectly* can co-occur with lexemes having positive, negative, and neutral connotations such as *fine, atrocious,* and *normal*. Similar to the findings obtained by Altenberg (1991), Kennedy (2003), and Paradis (1997), where *perfectly* was found to associate with positive lexemes, as observed in Table 1 above, there is a balance in the use of lexemes implying positive, negative, and neutral meanings. Positive connections of *perfectly* hold a dominant position (i.e., 67% in total). Even though negative and neutral lexemes seem to appear only in rare cases (e.g., total 22% and 11% respectively), *perfectly* prefers lexemes having positive implications. Throughout this analysis, *perfectly* resolutely shuns lexemes connoting negative and neutral meanings. Therefore, *perfectly* has positive semantic preferences and tendencies.

Moving on to *quite*, *quite* also is found to collocate with diverse lexemes having positive, negative, and neutral implications in the MICASE. Consider extracts (22)-(24).

(22)   1 S1: okay so we have to watch our grammar today, i don't think
       2   i can do that. um i, i wanted to thank you guys for coming
     →3   out on the field trip i thought it was *quite interesting*
                (The MICASE) (Transcript ID: LES205JG124)

(23)   1 S1: this high frequency is definitely not due to the fact that this
     →2   allele confers any advantage. as a matter of fact it's *quite*
     →3   *disadvantageous*
                (The MICASE) (Transcript ID: LEL175JU154)

(24)   1 S1: but the Spanish is a la mesa y a la cama, una sola ve- sorry
       2   vez, se llama. which literally means to the table and to the
       3   bed one time only is one called. ah it seems to me that's
     →4   really *quite different*.
                (The MICASE) (Transcript ID: LEL300SU076)

In extracts (22)-(24), *quite* is found to associate with lexemes having positive, negative, and neutral meanings. However, the frequency in cases indicating semantic preferences of *quite* is shown in Table 1 above. As in the case of *entirely*, almost half the number of lexemes that are modified by *quite* are negatively loaded in the current analysis (e.g., total 51%). Looking into collocations of *quite*, *quite* frequently co-occurs with a negator *not*, as in (23) above. Although it associates with less positive and neutral lexemes than negative cases (e.g., total 26% and 23% respectively), these seem to connote extreme senses. *Quite* exhibits negative tendencies and unfavorable semantic preferences.

In light of the association of *totally*, *totally* collocates with lexemes having positive, negative, and neutral implications. Consider extracts (25)-(27).

(25) 1 S2:   but no this is this is *totally great* and um, you know since
      2   you've done this much work already and you've got five
     →3   days left to finish it, you're gonna be *totally fine*
              (The MICASE) (Transcript ID: OFC115SU060)

(26) 1 S6:   but it it, it they also assume, there's also an assumption i
      2   think sometimes because of that technical piece, that there's
      3   an intellect, difference, [S7: Speaker information restricted]
      4   between community-based nurses and like an I-C-U nurse
     →5   that's the most extreme, example which i think is *totally*
     →6   *ridiculous.* (The MICASE) (Transcript ID: STP450SG128)

(27) 1 S2:   you know cuz it most likely won't fit together, [S1: yeah]
      2   perfectly or something like that or like you know what we
     →3   wrote might be *totally different,* a *totally different* like scale or,
      4   way that you guys wrote. so, i don't know how we wanted
      5   to put it together but, i guess if we have
              (The MICASE) (Transcript ID: SGR565SU144)

As mentioned in Section 2, with respect to the previous studies, *totally* frequently connected with lexemes implying negative meanings and it only appeared with the adjectives *different* and *wrong* (Altenberg, 1991; Kennedy, 2003;

Paradis, 1997). However, *totally* is primarily found to collocate with lexemes having positive implications in this current analysis. Even though it can associate with lexemes having positive, negative, and neutral implications, there also tends to be a balance relevant to positive, negative, and neutral lexemes. As in the case of *absolutely*, almost half the number of lexemes modifying by *totally* are positively loaded (e.g., total 51%). Hence, the results of Table 1 suggest that *totally* implies positive semantic preferences. From the point of view of associations pertaining to *completely* and *totally*, there seems to be a noticeable discordance between the two degree modifiers against early studies. In contrast to the findings of Altenberg (1991), Kennedy (2003), and Paradis (1997), where *completely* was in close competition with *totally* in that the two mainly associated with negative lexemes, the findings of this study suggest that these two do not connote similar semantic preferences in that *completely* powerfully connects with lexemes implying negative meanings, while *totally* collocates with lexemes having positive connotations. Ergo, *completely* does not seem to be in line with *totally*.

As for collocations of *utterly*, it does not seem to associate with lexemes having positive connotations in the MICASE. However, it co-occurs with lexemes having negative implications. Neutral associations of *utterly* solely connect with *anonymous* as in example (29) below. Consider extracts (28) and (29).

(28)　　1 S1:　that would be the victory in the battle. because nobody else
　　　　　2　　　could stand up to the people, who were involved. um, he is
　　　→3　　　also *utterly ruthless*.
　　　　　　　　(The MICASE) (Transcript ID: LEL215SU150)

(29)　　1 S1:　by the way we are, especially uh indebted to him for
　　　　　2　　　coming back to the University of Michigan so qu- so
　　　　　3　　　quickly, after having been awarded the Nobel Prize. Teeny
　　　→4　　　said that it was odd, being in, his house, in Holland, *utterly*
　　　→5　　　*anonymous* on one day
　　　　　　　　(The MICASE) (Transcript ID: COL485MX069)

The findings of this study are in line with earlier findings (Altenberg, 1991; Kennedy, 2003; Paradis, 1997); which showed that *utterly* had negative associations. As shown in Table 1 above, *utterly* connotes negative semantic preferences (e.g., total 80%).

Throughout my observations with respect to associations of degree modifiers, as the degree modifiers are reiterated in succession in their collocations, the surface structures of them come to be stronger, and it becomes possible to allow them to connote their own semantic preferences. Thus, this linguistic phenomenon links semantic preferences of the degree modifiers to their connections, where *absolutely, dead, perfectly,* and *totally* associate with lexemes having positive connotations; i.e., they have positive semantic preferences and tendencies, while *completely, entirely, fully, quite,* and *utterly* associate with lexemes having negative implications; i.e., they have negative semantic preferences and tendencies. Therefore, the role of the degree modifiers may be to intensify the semantic force of the lexemes to which they are attached.

The preceding analysis suggests two aspects of the degree modifiers concerning their associations. First, there tends to be natural and unnatural associations between the degree modifiers and lexemes. Second, restrictions pertaining to certain attitudes conveyed by lexemes in association with the degree modifiers may occur in discourse. For instance, connected collocations with respect to *completely, entirely, fully,* and *utterly* tend to be unnatural, as they seem to connect with superlative lexemes of high degree having positive implications (e.g., *?completely ?entirely ?fully ?utterly incredible/gorgeous/amazing*). *Absolutely, perfectly,* and *totally* can convey positive attitudes adjoining both superlative and hyperbolic lexemes. *Utterly* does not connect with verbs having positive meanings (e.g., *?utterly love/agree/believe*), i.e., *utterly* resolutely shuns lexemes having positive implications.[4]

_____

4) In order to reconfirm whether or not degree modifier associations are natural or coherent, some examples were analyzed by 10 native speakers of American English, who made evaluative judgments as to the coherence of the given utterances involving a degree modifier. A survey was administered to have the subjects look at practical usages of the degree modifiers among native speakers of American English. The survey was conducted to reconfirm whether or not associations of the degree modifiers were apposite. For instance, examples of their associations that were observed to be unnatural or incoherent were marked by the specific symbol ?. The contents of the survey are described in Appendix.

As for associations and semantic preferences of the degree modifiers with corpus data based upon an analysis of token from the MICASE, there has been an appreciable concurrence and unconformity between the current analysis and previous analysis. This observation raises questions with respect to why there are dissimilarities between them. First of all, this study assumes that Altenberg (1991), Kennedy (2003), Lee (2011, 2014), and Paradis (2003) were focused on the London-Lund Corpus and the British National Corpus respectively, including within them written as well as spoken data. By contrast, this study is based on an American corpus, which solely includes spoken data as opposed to written data. It is important to note that the degree modifiers are mainly employed in spoken discourse, i.e., spoken data could be more reasonable than written data in order to look into their associations and semantic preferences. Second, the previous linguists did not pay much attention to *lexical variabilities* when observing semantic preferences of degree modifiers; i.e., they exclusively contained ostensible lexemes in their data analysis. The larger scope is observed to decide the overall implicit meaning as positive, negative, and neutral in this study. Therefore, the differences between the previous study and the current study could be accounted for with respect to divergent classes of data.

6. Conclusion

Overall, this paper has elaborated on both associations and semantic preferences of degree modifiers in the MICASE. The preceding observations suggest that the high frequency of recurrent lexeme associations in the corpus has been relevant to their distinct semantic preferences; namely they behave differently in terms of the range of categories of lexemes that they associate with. Their connections vary greatly in positive, negative, and neutral connotations. A significant number of terms that associate with *absolutely, dead, perfectly,* and *totally* are emotionally loaded with more positive lexemes. By contrast, *completely, entirely, fully, quite,* and *utterly* generally associate with negative lexemes. It has been claimed in this current study that indications of the degree modifiers are noticeable in discourse. For instance, *absolutely, completely, quite, totally,* and *utterly* do not seem to stand out as feeble degree and non-demanding lexemes.

Therefore, *absolutely, completely, quite, totally,* and *utterly* seem to be more powerful degree modifiers preferred by more colorful lexemes. In the case of semantic preferences of the total degree modifiers, *absolutely, dead, perfectly,* and *totally* seem to have positive semantic preferences and tendencies, whereas *completely, entirely, fully, quite,* and *utterly* tend to have negative semantic preferences and tendencies since the function of the degree modifiers is to intensify the semantic force of the lexemes to which they are attached.

Throughout the observations of their associations, this study has attempted to address inquiries with respect to why there have been differences between the early studies and the current study. First, the previous studies were focused on the London-Lund Corpus and the British National Corpus related to British English, which contained both written and spoken data, whereas the current study is based on the MICASE relevant to American English, which only includes spoken data. Second, the previous studies did not pay attention to *lexical variabilities* pertaining to larger dialogic and sequential contexts in order to observe semantic preferences of the degree modifiers. However, the larger scope has been analyzed to decide the overall implicit meaning as positive, negative, and neutral in contrast with the previous studies in this study.

It is hoped that this paper, examining divergent collocations and semantic preferences of the degree modifiers, will provide the readers with more nuanced guidance. The degree modifiers may differ according to the speaker's age, gender, social class, and regional dialect. Their diverse sociolinguistic variables require more systematic study in the MICASE in the future.

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Appendix

Choose well-matched or possible degree modifiers among *absolutely, completely, dead, entirely, fully, perfectly, quite, totally, utterly* from 1 to 6. If possible, you can choose as many answers as possible.

(1) (*absolutely, completely, dead, entirely, fully, perfectly, quite, totally, utterly*) incredible

(2) (*absolutely, completely, dead, entirely, fully, perfectly, quite, totally, utterly*) gorgeous

(3) (*absolutely, completely, dead, entirely, fully, perfectly, quite, totally, utterly*) amazing

(4) (*absolutely, completely, dead, entirely, fully, perfectly, quite, totally, utterly*) love

(5) (*absolutely, completely, dead, entirely, fully, perfectly, quite, totally, utterly*) agree

(6) (*absolutely, completely, dead, entirely, fully, perfectly, quite, totally, utterly*) believe

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