



A Corpus Analysis of Collocational Behaviors of Near-synonymous Adjectives*

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The present study explored the collocational behaviors of the two near-synonymous adjectives, *wide* and *broad* using a corpus analysis. The study examined similarities and differences of the two adjectives in terms of their overall usage patterns, semantic preferences, semantic prosodies, and nominal collocates. From the comparison of their collocational patterns, the study found that in terms of overall usage patterns, *wide* was more frequently used in the entire corpus and across all the genres. *Wide* was most frequently used in the genre of Magazine while *broad* was preferred in the Academic genre. Regarding semantic preference and semantic prosody, *broad* displayed more varied semantic preferences than *wide*, even though they both had neutral semantic prosody. Likewise, while the two adjectives shared many collocates, their collocational patterns were found to be different. It can be inferred from these findings that *broad* seems to have more diverse semantic usage than *wide*, even though they are seemingly similar and interchangeable. This implies that classroom teachers should help students develop an awareness of the differences in the usage and meaning of such synonyms and learn how to differentiate them.

Key words corpus analysis, COCA, collocational behaviors, near synonyms, near synonymous adjectives, semantic preference, semantic prosody

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I. INTRODUCTION

As Edmonds and Hirst (2002) put, a word can convey “a myriad of implications, connotations, and attitudes” as well as its literal meaning given in the dictionary (p. 105). The

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multiple meanings add difficulties to language users as they have to distinguish the meanings according to contexts and use them appropriately. The problems are even aggravated when they have to deal with near-synonyms as they are not completely interchangeable and differ in terms of meaning and usage. According to Xiao and McEnery (2006), near synonyms are lexical pairs “that have very similar cognitive or denotational meanings, but which may differ in collocational or prosodic behavior” (p. 108).

The differences create additional challenges on the part of language users in that they should choose the right word for a given situation. Particularly with the emergence of a machine translation system and a natural language generation system, it has become even more important to identify the differences in meaning. It is thus imperative that both language users and translation systems acquire knowledge of collocational properties of near synonyms (Edmonds, 2000; Edmonds & Hirst, 2002; Hatch & Brown, 1995; Inkpen & Hirst, 2002; Inkpen, 2007; van Jaarsveld & Drašković, 2003). Edmonds (2000) and Inkpen (2007) affirmed the necessity of acquiring knowledge of collocational properties of near synonyms not only for a good lexical choice but also for a proper interpretation of the synonyms. The knowledge enables language users to precisely convey their ideas and feelings, which can then lead to effective communication (Edmonds & Hirst, 2002; Hatch & Brown, 1995).

Despite the significance of near synonymy, it has received little attention in the field of linguistics or computational linguistics, compared to polysemy (Edmonds & Hirst, 2002; Inkpen & Hirst, 2002; Liu, 2010). Given that near synonymy is as complex and crucial as polysemy, it deserves special interest from teachers or researchers. While there are some studies on collocational properties of near synonyms (Hu, 2015; Liu, 2010; Liu & Espino, 2012; Partington, 2004; Stubbs, 1995; Taylor, 2003; Xiao & McEnery, 2006), most of them simply used corpus data to examine differences and similarities in the collocational behaviors and semantic prosodies of various sets of specific synonyms. These studies showed that the synonyms, although they may look similar in many aspects, varied according to contexts in terms of their semantic preferences or semantic prosodies.

There are not many studies that closely examined concordance lines of synonyms to identify the differences in light of their collocational behaviors. The synonyms investigated in their studies were usually limited to sets or some pairs. For instance, Liu (2010) used a set of five synonyms: *chief*, *main*, *major*, *primary*, and *principal*. Very few studies have studied the collocational behaviors of near synonym pairs like *broad* and *wide* across different genres of texts. Therefore, the present study intends to explore the differences and similarities of the two near-synonymous adjectives, *wide* and *broad* using a corpus analysis. The study aims to describe

usage patterns and collocational behaviors of the two near synonyms, focusing on their semantic preferences and prosodies.

II. LITERATURE REVIEW

Near-synonyms are defined as words that are close, but not exactly the same, in meaning (Edmonds & Hirst, 2002). Due to the subtle differences in meaning, they are “not fully intersubstitutable” (p. 107). In fact, they are known to “vary in their shades of denotation, connotation, implicature, emphasis, or register” (ibid.). Edmonds and Hirst (2002) took some examples to show how meanings of near-synonyms can vary: *lie*, *falsehood*, *untruth*, and *fib*. Although all these words seemingly have a similar denotation that something is far from truth, they are different in terms of fine-grained aspects of the denotation. Edmonds and Hirst (2002) accounted for the delicate meaning differences: A *lie* is an intentional act of deceiving, whereas an *untruth* may be told simply out of ignorance, and a *fib* is usually told out of good intention to save one’s face. They also suggested that the words have stylistic variation: a *fib* for casual, informal style, and *falsehood* for careful, formal style.

Edmonds and Hirst (2002) further presented four dimensions of near-synonymic variation, such as denotational variations, stylistic variations, expressive variations, and structural variations. They offered some examples of variation, as seen in Table 1.

(TABLE 1) Examples of Near-synonymic Variation (Edmonds & Hirst, 2002, p. 109)

Type of variation	Example
Abstract dimension	seep: drip
Emphasis	enemy: foe
Denotational, indirect	error: mistake
Denotational, fuzzy	woods: forest
Stylistic, formality	pissed: drunk: inebriated
Stylistic, force	ruin: annihilate
Expressed attitude	skinny: thin: slim: slender
Emotive	daddy: dad: father
Collocational	task: job
Selectional	pass away: die
Subcategorization	give: donate

According to Edmonds and Hirst (2002), denotational variations take place in many different forms. For instance, the words, *seep* and *drip* are distinctive in terms of abstract

features, such as continuous or intermittent as in the following example: *Wine (seeped vs. dripped) from the barrel*. The denotational meaning of two near synonyms can also differ depending on what is emphasized. For instance, *enemy* highlights antagonism, whereas *foe* emphasizes warfare. Meaning of words can also change “on a continuum of indirectness from suggestion to implication to denotation” (p. 110). For example, in the comparison of *slip* and *mistake*, the former has a stronger implication of inadvertence than the latter. Or the differences may not be manifest but fuzzy, as in the examples of *woods* and *forest*. The denotational variation of the words may be the function of size, wildness, and degree of civilizations.

Near synonyms can also display stylistic variation as seen in the examples of *pissed*, *drunk*, and *inebriated*. While the first one is informal, the last one is formal. Another example is *ruin* and *annihilate* which means “destroy utterly.” The latter is said with a more forceful style as it carries additional meaning of “utterly.” In addition, near synonyms vary according to the speakers’ affective attitude: positive or negative. For instance, the word, *skinny* carries derogatory meaning, whereas *thin* has neutral meaning. On the other hand, *slim* or *slender* with positive meaning is often used when speakers mean to compliment the person that the word modifies. Another example of expressive variation marks the degree of intimacy and indicates speakers’ emotive attitudes. For example, *daddy* is used to mark higher levels of intimacy, compared to *dad* or *father*.

The last type of synonymic variation is called structural variation. It involves variation due to the restrictions of structural elements or constituents, which may be collocational, selectional, or syntactic. An example of collocational variation is found in the following collocation: a *daunting* task. Here, the node word *daunting* is lexically restricted to the combination with *task*, so it collocates with *task*, not *job*. In contrast, the examples of *die* and *pass away* show how they semantically restrict what to come in the agent positions: *pass away* differs from *die*, in that it is used only with people, not animals or plants. Near synonyms also vary due to syntactic sub-categorizations, as in the case of *give* and *donate*. While *give* alternates the dative construction (e.g., I *gave* her some books; I *gave* some books to her), *donate* does not.

These variations make writing even more challenging, in that writers are supposed to differentiate the delicate meaning differences. Considering that “there are very few absolute synonyms,” it is imperative that we understand the fine-grained distinctions of near synonyms and select the most appropriate words for a given context (Inkpen & Hirst, 2006, p. 223). Words that are not used properly for the context may contain unintended or unwanted nuance, and thus become the cause of misunderstanding or communication breakdown.

For this reason, many earlier studies have focused on identifying the sources of

near-synonym variation (Hu 2015; Liu 2010; Liu & Espino 2012; Partington 2004; Xiao & McEnery, 2006). For example, Liu (2010), and Liu and Espino (2012) constructed behavioral profiles of a set of synonymous adjectives (e.g., *chief*, *main*, *major*, *primary*, and *principal*) and a set of synonymous adverbs (e.g., *actually*, *genuinely*, *really*, and *truly*) respectively. They then analyzed the internal semantic structures of the sets of near-synonyms, particularly focusing on their distributional patterns. Specifically, their study investigated the types of nouns that the adverbs or adjectives modify, and reported that the behavioral profile approach was useful for studying the semantic and usage patterns of synonyms in a set.

There are also studies that used corpus data and the Internet search engines to explore the sources of near synonym variation. For instance, Taylor (2003), based on the analysis of corpus data from the one million word LOB (Lancaster-Oslo/Bergen) corpus showed some differences between the two synonymous adjectives *high* and *tall*. From the comparisons of the nouns the two adjectives collocate with, the study found the evidence of variation in terms of their distribution and usage. In other words, even though they both carry almost the same meaning when expressing the notion of spatial extent with such words as *buildings* or *trees*, *high* was found to be much more frequently used than *tall*. The usage of the two words was unique and distinctive from one another. For instance, *high* was rarely used with humans or animals, and *tall* was rarely used with certain topographical features (e.g., mountain), natural phenomena (e.g., waves), or non-spatial domains, such as temperature or number.

Studying near-synonyms from a bit different perspective, Xiao and McEnery (2006), Partington (2004), and Hu (2015) examined the collocations, semantic prosody and semantic preference of the synonyms. Semantic prosody refers to the “collocational meaning arising from the interaction between a given node and its typical collocates” (Xiao & McEnery, 2006, p. 105). Louw (2000) defined it as “a form of meaning which is established through the proximity of a consistent series of collocates” (p. 57). It describes how certain words that seem to bear neutral meaning can convey positive or negative meaning when occurring with particular collocates. It is used to express speakers’ or writers’ attitude (Louw, 2000). For instance, *largely* is different from *broadly* in that the former tends to co-occur more frequently with negative expressions, and the latter with positive words (Tognini-Bonelli, 2001).

The meaning is also constructed from the semantic features shared by collocates, which is often called as semantic preference. It refers to “a lexical set of frequently occurring collocates [sharing] some semantic features” (Stubbs, 2002, p. 449). Stubbs (2001) reported that *large* tends to co-occur with words from the same semantic set representing the meaning of quantity or size. Semantic preference and semantic prosody are important as they contribute to

constructing collocational meanings interdependently (Xiao & McEnery, 2006). They are distinctive, however. Semantic preference is the semantic sets of collocates, whereas semantic prosody focuses on affective meanings of a given node in relation to its collocates (Sinclair, 1998). In other words, while semantic prosody is “a feature of the node word,” semantic preference is “a feature of the collocates” (Xiao & McEnery, 2006, p. 107).

Paddington (2004) expanded Sinclair’s *Happen* group to include more words, such as *happen*, *set in*, *occur*, *come about*, and *take place*, and examined their collocational behaviors across two genres of texts: academic and newspapers. Paddington suggested the importance of identifying semantic prosody as it helps to correctly understand speakers’ or writers’ intended message and to accurately convey one’s own intended message. In a cross-linguistic analysis of English and Chinese near synonyms, Xiao and McEnery (2006) also focused on their collocational behaviors and semantic prosodies. Their study found that the collocational behaviors and semantic prosodies of three groups of English and Chinese near synonyms (cause group, consequence group, and price/cost group) were distinctive from one another. They explained that the differences between the two were due to morphological variation absent in Chinese, but present in English. They also cautioned that the words were not inter-substitutable, despite their seemingly similar denotational meanings.

More recently, Hu (2015) studied three pairs of synonymous adjectives including *initial/preliminary*, *subsequent/following*, and *adequate/sufficient* to find the differences between the synonyms in terms of their affective meanings and distributional patterns across some academic registers. Hu discovered that the usage patterns of the synonym pairs were different according to registers, despite some similarities in their collocates. The study indicated that a word may have different semantic prosodies when combined with different collocates or when used in specific contexts. For example, most collocates of *initial* were found to show neutral meaning while *shock* was used with collocates with negative meaning. But then in the context where those two were used together, *initial shock* displayed either neutral or even positive semantic prosody. From the findings of the study, Hu (2015) suggested that language users should carefully refer to the context as well as the meaning of collocates to be able to correctly process the meaning of synonyms.

From the survey of previous studies, it seems clear that the studies on near-synonyms have been limited to the examination of either synonyms in sets or several pairs of near synonyms at the same time. Earlier studies have either looked into a pair of synonyms (Taylor, 2003) or examined concordance lines (Hu, 2015). The scope of these studies are, however, not comprehensive. Taylor (2003), in the comparison of the two adjectives, *high* and *tall*, used a

small corpus compared to the COCA, and did not analyze their distribution patterns across genres. The scope of Hu's (2015) study was also limited, in that it focused on academic registers only. We, therefore, need studies that can unveil interesting aspects of collocation with more focused analysis and comparison. Such studies will be obviously useful for L2 learners as they can guide learners to understand the subtle difference in nuance and use them appropriately according to contexts or genres. Thus, the present study aims to explore the collocational behaviors of a pair of synonyms in depth, closely analyzing their concordance lines in order to identify differences and similarities between them.

III. METHOD

1. Research Questions

The research questions are as follows:

- 1) Are there differences between the two near synonyms (*broad* and *wide*) in terms of overall usage patterns?
- 2) Do the two words differ in terms of their semantic preferences and semantic prosodies?
- 3) Are they different in terms of the collocates they co-occur with?

2. Instrument

In order to answer the questions, the 560 million-word online Corpus of Contemporary American English (COCA, Davies, 2017) was used for data analysis. COCA is comprehensive and easy to access. In addition to those benefits, it contains contemporary language data and has a variety of user-friendly search functions.

Most of all, the 'show POS [part of speech]' function available in the COCA search engine makes it convenient to identify the use of certain parts of speech. With the availability of the POS function, this study focused on the two near synonyms functioning as adjectives.

3. Data

The near synonyms used for the study were *broad* and *wide*. They were selected for the following two reasons. First, it is obvious that the two words are 'near-synonyms' as various

dictionaries and grammar books show. According to the Oxford Dictionary of American English and the Oxford Learner's Thesaurus, they are synonymous in most of their denotational meanings, as shown in the following: (i) including a large number/amount or variety of people or things; (ii) measuring a lot from one side to the other or the distance between opposite sides of something. However, these reference books do not cover their usage differences in detail. For example, the Oxford Learner's Thesaurus simply states, "both words can be used to talk about smile," and thus a more close comparison of their usage is needed.

Another reason emerged from the L2 acquisition and learning perspective. The synonyms pose a lot of challenges to language learners because the distinction is so sophisticated. In fact, in some languages like Vietnamese or Korean, these synonyms have almost the same translations and can only be differentiated with the help of context and their collocates. Despite the problems they may incur to language learners, these two synonymous adjectives have not attracted much attention from researchers.

4. Unit of Analysis

This study aims to focus on the noun collocates of the two near-synonyms adjectives. According to Sinclair (1991), when node-collocate pairs are adjective-noun, they can occur in two forms: *ADJ-N* and *N-be-ADJ*. However, as the *ADJ-N* pattern is much more frequent (Stubbs, 2001), the scope of the analysis will be limited to the nouns on the right side of the adjectives. In other words, the present study set the right search span to two words (2R) in order to exclude the second nouns in the structure of [WIDE/BROAD] NOUN1 [OF] NOUN2 (in which Noun 1 is usually a collective noun with the meaning of 'range' or 'selection'). The second nouns should be taken out of consideration as Noun 2 can be said to collocate with Noun 1 instead of the adjective. For this reason, the study adopted the span of 0L: 2R. instead of the spans of 3:3 or 2:2 that are commonly used.

The nouns were selected via two types of queries: (i) frequency (i.e. the nouns that the adjectives modify most frequently), and (ii) Mutual Information (MI) score. According to Church & Hanks (1990), MI score is considered to show collocational strength between two words. It compares "the probability of observing x [word] and y [word] together (the joint probability) with the probabilities of observing x and y independence (chance)" (p. 23). An MI score around 0 suggests that the two words do not collocate while a score of 3 or higher indicates that the two items frequently occur together. The MI score can complement the limitations of frequency analysis: Frequency analysis tends to focus on high frequency words

and undervalue low frequency words. The MI score, even though it has the shortcoming of privileging low frequency words, can thus help to compensate for the weakness of the frequency measure (Church, Gale, Hanks, Hindle & Moon, 1994). According to Church et al.'s (1994) and Liu's (2010) suggestion, both MI scores and frequency measure were used together to better identify adjective-noun co-occurrence.

For a more accurate analysis, some special cases of high frequency but non-collocate words were excluded from the unit of analysis. First, among collocates of *broad*, words used in idiomatic expressions, such as *daylight in broad daylight*, *brush in paint/sweep with a broad brush*, and *strokes in broad strokes*, were taken out of consideration. Similarly, with *wide*, such words as *berth* (in *give sth/sb a wide berth*) and *net* (in *cast a wide net*) were ruled out. Besides, the four words *Web*, *achievement*, *market* and *excision* were also excluded as they mostly appear in four fixed expressions (World-Wide-Web, Wide Range Achievement Test-Revised, Broad Market, and Wide Local Excision) as register-specialised terms. The word *receiver* was also removed from the collocate list of *wide* since *wide receiver* refers to a position title in a sport. Consequently, the finalized data comprised forty-five most frequent collocates with MI scores of higher than 3.

IV. RESULTS

1. Overall Usage Patterns

1) Overall Frequency Patterns

Table 2 summarizes the overall frequency patterns of the two synonyms across the five different genres: spoken, fiction, magazine, newspaper, and academic. It is obvious from the table that *wide* was found to be more frequently used than *broad* in each of the five genres as well as in the composite of all the genres. Specifically, *wide* was roughly twice more frequently used than *broad* in the entire corpus. The same comparison pattern was also noted in the genre of Newspaper.

(TABLE 2) Frequency Patterns of *Wide* and *Broad*, Overall and Across Genres

	Overall (per mil.)	Spoken (per mil.)	Fiction (per mil.)	Magazine (per mil.)	Newspaper (per mil.)	Academic (per mil.)
WIDE	98.19	29.0	173.3	108.7	81.5	92.9
BROAD	51.13	22.7	46.3	44.2	40.5	80.8

Interestingly, the largest difference between the *wide* and *broad* was found in the genre of Fiction with the frequency ratio of 3.74:1. In contrast, the least difference or deviation was observed in the Spoken (1.28 : 1) and Academic (1.28 : 1) genres. It is notable that *wide* is most frequently used in the genre of Fiction, whereas it was the Academic genre that *broad* was frequently used. They both were far more frequently used in the written texts than in the Spoken genre. The frequency information is useful in that it predicts the frequency patterns of the collocations of these two words. However, as it does not show anything about the meaning and usage patterns of the adjectives, it is not sufficient, and thus needs to be complemented with other types of information, such as semantic preferences and collocational behaviors of collocates.

2) Types of Nouns as Collocates of *Wide* and *Broad*

The collocates of the two words are listed in the appendix, along with their raw frequency, frequency per million, and MI score. Table 3 below lists the forty-five most frequent nominal collocates of *broad* and *wide*.

(TABLE 3) Nouns Collocating with *Wide* and *Broad*

WIDE	<u>smile, grin</u> , shoulder, avenue, swath, band, expanse, arc, window, corridor, belt, boulevard, bowl, brim, circle, eye, hip, lawn, margin, mouth, porch, screen, space, spatula, staircase, strip, field*, gap*, angle*, range, array, spectrum, variety, audience, discretion, appeal, acceptance, assortment, disparity, distribution, diversity, latitude, selection, shot, variation
BROAD	<u>chest, forehead, leaf, river, street, sweep, valley, area*, base*</u> , smile, grin, shoulder, avenue, swath, band, expanse, range, array, spectrum, variety, audience, discretion, appeal agreement, authority, category, , coalition, consensus, definition, goal, implication, interpretation, outline, pattern, perspective, power, principle, scale, scope, sense, support, term, theme, understanding, view

Notes: Word with * can be either an abstract noun or a concrete noun; underlined words are concrete nouns

As seen in the table, the underlined words are concrete nouns, and the words with the asterisk mark can be either concrete nouns or abstract nouns, depending on how they are used with the node word in real situations. Observations of concordance lines will explain why they are underlined or not. For instance, even though *gap* can be used as both an abstract and a concrete noun, it can be seen from the concordance lines that it was used mostly with abstract meaning, as shown in the example¹⁾ of *wide gap indicating 'difference' or 'inequality between two concepts'*.

1) Data cited herein has been extracted from the British National Corpus Online service, managed by Oxford University Computing Services on behalf of the BNC Consortium.

by the inadequacy of structural responses. Despite some efforts at accommodation, a wide gap persists between formal policies and actual practices concerning work-life conflicts. Although nearly all major
James), five assists, two blocks and one steal. Given the wide gap in their offensive responsibilities -- Leonard's 24.4 usage percentage is dwarfed by James'
being consistent with-albeit not a conclusive demonstration of-a model of decisionmaking where a persistently wide gap between the bottom and middle of the income distribution has a negative effect on the
27 months (EBC, 2009; ABI, 2010). Such a wide gap reveals that the Italian administrative process is very slow, but also points to profound
more than other forms of power. # Truth No. 3: There is a wide gap between your potential and applied civic power. Almost all Americans could do more to
Utah) across this 20-year span. More recently, 11 noted a similarly wide gap across states for students with autism using federally reported data from 2008. Kurth concluded
What was known was that the King's men had come and humed the wide gap in the circle when the Wizard had gone. Before that, a visitor must
of population. Its indigenous production is below the utilization level and there exists wide gap between production and utilization. Sesame crop is subjected to various abiotic and biotic stresses
and abroad -- understandably centers on reports of civilian casualties. There's a wide gap between U.S. assessments of such casualties and nongovernmental reports. Nevertheless, it is a
banks higher rates on the money they hold in reserve. # Despite the wide gap between the two sides, some doves and hawks agree on this: Congress has

(FIGURE 1) Examples of *Wide Gap*

On the other hand, Figure 2 and 3 show how *broad collocates with the words that function as both count nouns and abstract nouns, such as base and area.*

production. To oversimplify, it's governed by the Urge Pyramid. At the broad base of what people want are the primal urges: fear, sex, hunger
should know and be able to do in the arts. Standards with such a broad base of support can not be dismissed as self-serving quite as easily as standards developed
the world's urgent quest to live greener. # The momentum cuts across a broad base - from individual recycling to factory efficiency to trading in electronic trash. #
" # Fifty percent of the operating budget comes from contributions, principally from a broad base of small donors - the very people, she said, " who are
pleomorphic adenomas range in size from 0.5 to 7 cm, and most have a broad base (a few have a pedicled base). n5 These neoplasms have been
Literature Review Environmental Interpretation # Experts in environmental interpretation have yet to conceive of a broad base of program goals that would help the profession to facilitate behavior change (Hammit)
were all high-priced boats, because, obviously, you've got to have a broad base of high-priced sales in the United States in order to keep your overall cost
of the Eiffel Tower reveals that it slopes out from a narrow top to a broad base , so that even if Tom Everett Scott could have grabbed Delpy in the
own natural energy-conversion partner, the fuel cell. Together they interface intimately with the broad base of electrical technology already in place, and they can expand to propel cars
as a shock given the general lack of response to civil society organizations. The broad base of support and networks women activists developed were then used to pressure the government
that. And, look, what you want is a tax system with a broad base and lower rates rather than a narrow base and higher rates, which I
that contest elections in more than four states) are experiencing difficulty in establishing a broad base of national support. For example, although India has twenty-five states and some
order to have a functioning culture, you need a base. You need a broad base of supportive businesses, of supportive thinkers, and of supportive activities. That
from the National Rifle Association to the National Organization of Women? Its quite a broad base of opposition. POWELL: Not particularly. Frankly, I welcomed it.

(FIGURE 2) Examples of *Broad Base*

Web hits have spiked from places where languages related to Siletz are spoken, a broad area of the West on through Canada and into Alaska. That is the heartland
that then releases a number of sub-munitions from that. So it covers a very broad area , and it forces these mechanized formations to either go around, and it
the sport psychology and sports medicine journals. # One area of interest within this broad area is the psychological response to pain on the part of athletes. Meyers,
and its stated goal was to " project a credible size military force over a broad area of the Eastern Arctic. " It would last twelve days in all.
help foster the Internet. ARUN LAKHOTIA, COMPUTER SCIENCE PROFESSOR: This is a broad area where DARPA expects to set up the route. They have not told us
time that there was a Navel operation, but I suspected it because of the broad area in which the strandings were occurring COLLINS Tissues of these deep diving species show
I gestured toward a sheet wall that was solid concrete. Beyond it was a broad area of the square. The way the windows nearby were angled, they did
essays that follow have been prepared by two of the most notable scholars in this broad area : Evelyn Fox Keller, professor of the history and philosophy of science at
sciences becomes quite easy. # Collaboration between particular types of scientists within the same broad area can also be difficult. Within the biological sciences, in particular, there
2003). For instance, a 10 percent conservation target spread out across a broad area may help guard against chance events (e.g., a storm or disease that
your order of preference. Also, try to ensure that a question from each broad area appears in the top ten of the prioritized list. # We found that
outcomes in any of the areas of accounting. This provides AIS academics with a broad area for future research endeavors and JIS with an increasing array of potential submissions.
University. Gong Chen # The career of Gong Chen, P.E., spans a broad area of engineering research, development, and education in industry and academia. At
has promised a review of how the problem was able to cascade across such a broad area . In New York City, where tens of thousands of commuters were stranded

(FIGURE 3) Examples of *Broad Area*

The word *angle* defined as the space between two lines diverging from a common point, a viewpoint for something or an aspect of an events. It is clear from the definitions that the word can be used as either an abstract noun or a concrete noun. However, when collocating with *wide*, it is mostly used as count nouns to express the primary literal meaning as shown in the following concordance lines:

a tripod when you are up close whether using wide angle or telephoto. Take many views so you can choose the best clips when
the problems of the fixed focal length and fairly wide angle lenses of the Realist which offered none of the modern conveniences of zooming to
advantage of digital retouching. I found my 17-35mm wide angle zoom lens indispensable. The Nikon 105mm f-2.8 micro lens was perfect for portraits
tele-converter for those far-off birds. I like my wide angles wide; so to avoid losing anything to my digital camera's multiplier effect
they are visible. “ “ Ah, the wide angle scan of our phased array dish.. “ started Vesquith. “..
last month. This one is the opposite of wide angle - a telephoto lens to optically zoom in a little closer without losing precious
rapid fire monologue, camera has moved to a wide angle as Robert just sits and listens, letting her get it all off her

(FIGURE 4) Examples of *Wide Angle*

Unlike *angle*, however, *field* can be collocated with *wide* as a concrete noun (meaning an expanse of open ground) or an abstract noun (meaning a sphere of interest), as in the following concordance lines:

forging along through unmarked snow. They crossed a wide field , mounted a headland with the pine forest on their left and a
are probably those related by naturalists and biologists who had wide field experience, whose purpose was expressly to survey, describe, and collect
championships. The football was free-form and fun with the wider field of the CFL. The practices were gentle enough that half the players
that the three even more distant galaxies imaged by the Wide Field Camera 3 have redshift of about 10, which if confirmed would be
U11+ has an 8MP shooter, but still with a wide field of view. You got ta think something had to give in trimming
“Sir! “ Nuax called. But Bazel's wide field of vision already let him see what was on the screen: the sight of the yellow ears, once dispersed in the wide field , now compact and deep within the crib. With the barns full
through manifest, and, always, interacting within a wider field of forces. What does the idea of control in arts education mean
binoculars as well as small telescope/eyepiece combinations that give a wide field of view. # The single galaxy in our smallest scope range is
sand. He was becoming oriented to the lizard's wide field of vision, the hand-held camera effect of its paddling run, and
with unilateral contacts (constraints), which opened a wide field of practical applications not treated before, mainly for the automotive and mechanical

(FIGURE 5) Examples of *Wide Field*

The word lists in Table 3 above can reveal some interesting differences between *broad* and *wide*. It seems that among the collocates of *wide*, there are more concrete nouns than abstract nouns, whereas thirty one out of all the forty-five nominal collocates of *broad* are abstract nouns. In general, *wide* seems to be more frequently used than *broad*, although the latter was preferentially used for describing abstract concepts.

2. Collocational Behaviors

1) Semantic Preference

From the list of collocates of the two adjectives extracted from the corpus, the differences and similarities in their semantic preference and meaning were identified. *Wide* often goes with (1) concrete nouns denoting things/object or space/area which can be measured from one side to the other side (e.g., *avenue, belt, boulevard, lawn, porch, screen, spatula, staircase, window, hip, shoulder, space*) or (2) abstract nouns (i) which usually mean including a number of different types of something (e.g., *array, assortment, diversity, selection, circle, range, variety, spectrum*) (ii) which show quality or emotions (e.g., *acceptance, appeal, smile, grin*) (iii) which show power or ability (e.g., *discretion, latitude*).

Similarly, *broad* often goes with (1) concrete nouns denoting things/object or space/area that are horizontally measurable (e.g., *area, avenue, chest, forehead, leaf, river, shoulder, street, valley, smile, base, grin*) or (2) abstract nouns (i) which mean variety or diversity of something (e.g., *array, range, scope, spectrum*) (ii) which indicate quality or emotions (e.g., *appeal, consensus, support*) and (iii) which express power or ability as in *authority, discretion*. They, however, differ, in that the collocates of *broad* tend to denote (i) sense or understanding or opinion (e.g., *definition, view, understanding, term, theme, sense, interpretation, agreement*), and (ii) rule of organizing something such as *outline, pattern, principle, category*.

Obviously, the collocates of *broad* have more diverse semantic preferences than those of *wide*. While both *wide* and *broad*, in combination with concrete nouns, describe things that are big or large in terms of area or distance, with abstract nouns, they refer to something that affects or involves a large number of people or things, or which covers a lot of different subjects. In this case, they mean ‘of large-scale’ or ‘mass’.

2) Semantic Prosody

Below is the lists of the collocates of the two adjectival synonyms with semantic prosody

information. The underlined word like *gap* has negative meaning, whereas the words that are italicized and bold-faced carry positive meaning. The rest have neutral meaning.

Wide - *smile, grin*, shoulder, avenue, swath, band, expanse, range, array, spectrum, variety, audience, *discretion, appeal*, arc, window, corridor, belt, boulevard, bowl, brim, circle, eye, hip, lawn, margin, mouth, porch, screen, space, spatula, staircase, strip; field, *gap*, angle, *acceptance*, assortment, disparity, distribution, diversity, *latitude*; selection, shot, variation.

Broad - *smile, grin*, shoulder, avenue, swath, band, expanse, range, array, spectrum, variety, audience, *discretion, appeal*, chest, forehead, leaf, river, street, sweep, valley, area, base, *agreement, authority*, category, *coalition, consensus*, definition, goal, implication, interpretation, outline, pattern, perspective, *power*, principle, scale, scope, sense, *support*, term, theme, understanding, view.

In general, both *wide* and *broad* tend to occur more often with neutral words and sometimes with positive collocates. One can see that *broad* has some more positive collocates (*broad* with *smile, grin, discretion, appeal, agreement, authority, coalition, consensus, support, and power*) than *wide* (*wide* with *smile, grin, discretion, appeal, acceptance, latitude*). It is interesting to note the cases of *gap* and *disparity*. Even though they may seem to be synonymous, they differ in terms of semantic prosody. As indicated in the following concordance lines, the word *gap* seems to carry negative prosody as it denotes ‘inequality to be removed’.

We can't keep driving a wider and wider gap between the few who are rich and the rest who are struggling to keep
conclusive demonstration of-a model of decision making where a persistently wide gap between the bottom and middle of the income distribution has a negative effect on
span. More recently, 11 noted a similarly wide gap across states for students with autism using federally reported data from 2008. Kurth
emphasis within the system on water and sanitation, wide gaps between mandated responsibilities and delivery capacity and a resulting inability to provide intellectual and
truly, it was always the loneliness, the wide gap she felt at the pit of her stomach, that made her feel so
but many have not, and there's a wider gap within the black community itself reflected in some of this polling data. KELI-GOFF#
of hard-drive space. The problem is that a wide gap exists between ultraportable performance and endurance. Every model that clocked a high score
of their prior exposure to computer skills. A wide gap was found in the grades of these six students and the remaining 12 students

(FIGURE 6) Examples of *Wide Gap*

Unlike the word *gap*, the collocate, *disparity* is used more often in neutral contexts such as

academic reports.

on the road. Take a look at the wide disparity in the Twins' ERA numbers for home and away: // - Overall
2005). Degree attainment rates reveal an equally wide disparity , with women earning 60% of associate's degrees and 57% of bachelor's
employ tracking as a strategy to deal with the wide disparity of learners within their schools and in an attempt to " save " the
was overhauled in 2003 in an effort to end wide disparities in the quality of legal services from county to county. The overhaul,
on state standardized tests taken this spring show a wide disparity in the way students are performing. # In several systems, students had
were. # Nationally, the survey showed a wider disparity in money spent for options based on the home price. In the past
in an introductory text, there is a wide disparity in the amount and quality of reading and comprehension that takes place, if
as major obstacles to cross-border trade. Given the wide disparities in tax systems within the E.C., the aim was to approximate rather than
matter? " Studies have shown that women with wide disparity in these indicators are likely to seek out fertility-controlling measures such as contraceptives and/or
the numbers that we use. There is a wide disparity between the two surveys. For example, since January of 2001, the
15 years. # The reason for such a wide disparity , coaches say, is this: Running is more instinctive, there are

(FIGURE 7) Examples of *Wide Disparity*

The following section presents the collocation patterns of the two synonymous adjectives in more detail to reveal some differences in the way they co-occur with the nominal collocates.

3. Collocations of *Broad* and *Wide*

1) *Broad* and *Wide* with Different Collocates

Table 4 below presents thirty-one collocates for each of the two synonyms: *broad* and *wide*. Although some of the nominal collocates in each cell were predicted to co-occur with both of the adjectives, their collocational behaviors were different from our general expectations. They had tendency to collocate selectively with one of the two node words. For instance, even though the word, *area* was expected to occur together with both *broad* and *wide*, it co-occurred more frequently with *broad*. Nominal collocates were removed from the list when their frequency of co-occurrence with one of the node word was too low. As *broad* and *wide* have high frequency in the corpus, the least frequent collocate in the list has a frequency 50. *Wide area* with the frequency of 25 was, therefore, eliminated from the list.

(TABLE 4) Different Nominal Collocates of *Broad* and *Wide*

WIDE	arc, window, corridor, belt, boulevard, bowl, brim, circle, eye, hip, lawn, margin, mouth, porch, screen, space, spatula, staircase, strip, field, gap, angle, acceptance, assortment, disparity, distribution, diversity, latitude, selection, shot, variation,
BROAD	chest, forehead, leaf, river, street, sweep, valley, area, base, agreement, authority, category, coalition, consensus, definition, goal, implication, interpretation, outline, pattern, perspective, power, principle, scale, scope, sense, support, term, theme, understanding, view'

It is interesting to note that some collocates, while they are synonymous with other collocates, have different meanings depending on the adjective they collocate with. Collocates like *acceptance* and *agreement* are intriguing examples because they carry different meaning, when collocated with *wide* and *broad* respectively. Specifically, *wide acceptance* denotes a kind of emotion of a large number of people, whereas *broad agreement* refers to a consensus. Likewise, *angle* and *view* are synonymous since both mean a way of thinking or understanding something. But then, depending on the node word they collocate with, their meaning varies. In other words, while *wide angle* means 'large vision' as in Figure 4, *broad view* is used with the connotational meaning of 'general opinion', as seen below.

what does that mean? The panel took a very broad view that all it needed to have authority to address Canadian restrictions was to
a broader perspective. Some of the songs take a broad view of what life is, not so much dealing with the specific issue
of digital photographs of the places, recording both the broad views and incidental details, such as the plant material, insects, and
I mean, I think they're keeping a- the broadest view they can, but I think to some degree they try to get
framing his second term? Joining us now for a broad view : Angela Glover Blackwell, founder and CEO of the advocacy group PolicyLink
The tied systems also allow engineers to get a broad view of the project that extends beyond their engineering piece. # Problem is
where they can walk away from the experience with a broader view of themselves, the subject and the world. Summer is also an
back our senior political analyst now to give us a broader view of the president's speech, Bill Schneider. Bill, the president
The aim was to find in their experiences a broader view that would help us recognize women from beyond the Denver metropolitan area --
them as fat. Sidebar" We will have a broader view of ourselves as a life form. " - JEFFREY GORDON, WASHINGTON

(FIGURE 8) Examples of *Broad View*

There seems to be a certain relationship between the node word and the collocate(s) and among the collocates themselves. Particularly notable is that despite the seemingly similar

meanings of the collocates, their meaning changes according to the node words they collocate with. In addition, collocational patterns may reflect the habitual use of language in a specific culture (Aisenstadt 1979, Mel'cuk 1998). For instance, although *street* and *boulevard* look quite similar in meaning (both are measured from one side to the other), in American English, *street* usually goes with *broad*, and *boulevard* with *wide*.

Some more observations can be made to prove this aspect of collocations. For example, in the Oxford Learner's Thesaurus, it is stated that *broad* rather than *wide* is often used to talk about parts of the body, but in fact, in American English, *wide*, instead of *broad*, can collocate with *hip* or *eye*. In other words, these collocations are derived from the habitual use of language. It can thus be inferred that in British English or other Englishes where the habit of using language is dissimilar from that of American English, the collocations may also be different. This suggests needs for further research on collocations across different varieties of English.

2) *Broad* and *Wide* with the Same Collocates

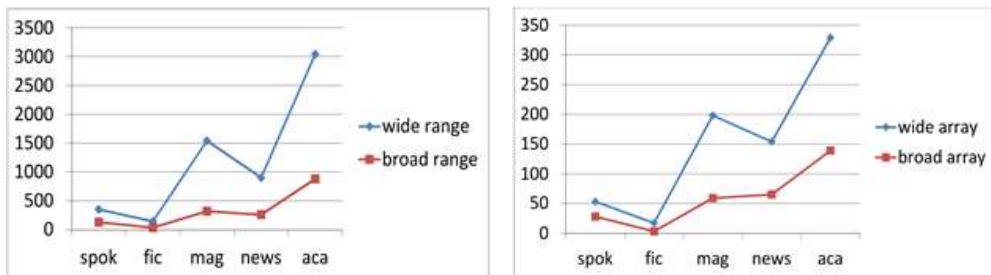
Table 5 presents fourteen out of forty-five collocates that can go with both *wide* and *broad*: *range*, *variety*, *array*, *spectrum*, *swath*, *audience*, *grin*, *shoulder*, *expanse*, *band*, *appeal*, *discretion*, and *avenue*. The table also reports MI scores and frequencies of collocates of the two synonyms. These two pieces of information allow us to obtain more details about the distributional patterns of collocations and their collocational behaviors. For instance, the collocation of *range* with *broad* versus *wide* seems to be marginally different by the MI scores. However, by referring to the frequency information, we can see that *range* is more frequently used with *wide* rather than *broad*.

(TABLE 5) Collocational Patterns of 14 Common Collocates of *Broad* and *Wide* Across Genres

Collocat e	Overall (MI score)	Genre (Frequency - per million)				
		Spoken	Fiction	Magazine	Newspaper	Academic
WIDE	8.57	351	142	1540	901	3042
BROAD						
WIDE	7.63	129	35	319	259	880
BROAD						
WIDE	8.42	53	17	198	154	329
BROAD						
WIDE	8.00	28	3	59	65	139
BROAD						
WIDE	8.62	195	80	982	424	1617
BROAD						
WIDE	3.26	16	2	9	11	29
BROAD						
WIDE	9.26	28	40	65	81	36
BROAD						
WIDE	9.48	20	22	44	51	15
BROAD						

WIDE	Audienc	4.46	30	13	48	51	66
BROAD	e	4.67	13	7	25	30	50
WIDE	Spectru	7.38	30	17	67	48	158
BROAD	m	9.09	60	16	153	80	238
WIDE	Shoulder	3.69	3	118	16	8	3
BROAD		6.83	25	501	80	57	17
WIDE	Grin	5.91	7	111	32	38	12
BROAD		5.88	4	57	17	20	4
WIDE	Smile	4.05	17	171	47	45	11
BROAD		5.02	14	156	52	62	13
WIDE	Expanse	8.00	5	68	29	20	11
BROAD		8.65	2	43	38	8	18
WIDE	Band	3.29	8	25	23	11	16
BROAD		4.36	17	14	27	9	24
WIDE	Avenue	3.84	8	30	8	8	8
BROAD		5.15	3	35	15	18	9
WIDE	Appeal	3.32	10	5	25	22	13
BROAD		5.32	30	8	36	41	41
WIDE	Discreti	6.53	9	3	7	17	29
BROAD	on	7.99	11	3	7	19	53

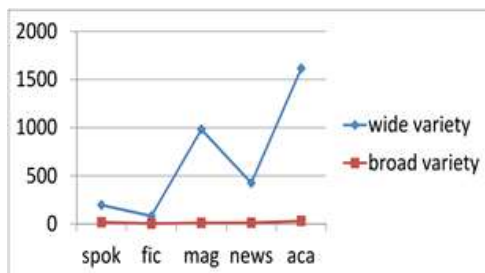
The collocation *wide range* was found to be more commonly used in every genre, compared to its counterpart: *broad range*. Their distributional patterns were, however, similar and consistent across the genres. Both were most frequent in Academic and least frequent in the genre of Fiction. Similar to the first pair of collocation above, *wide array* was found to be more frequent than *broad array* in every genre. They both appeared in the academic texts most frequently, and least frequently in the genre of fiction.



(FIGURE 9) Collocation Patterns with *Range and Array*

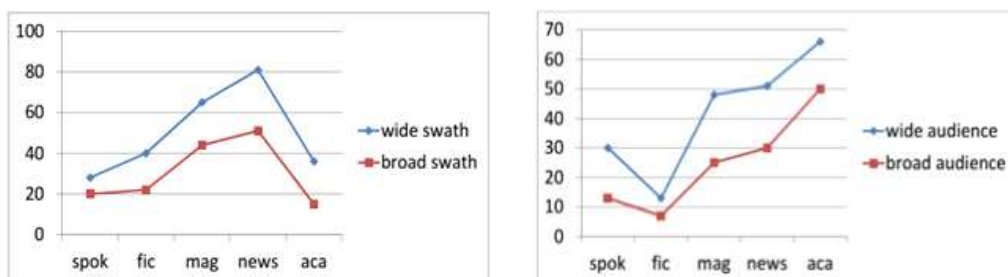
With regard to the word *variety*, both the MI score and the frequencies were much higher with *wide* than with *broad*. It seems that in American English, the collocation *wide variety* is much more frequent than *broad variety* in every genre. The most significant difference was attested in

the genre of Magazine where the frequency of the former was more than a hundred times higher than that of the latter. Across the genres, *wide variety* was most frequent in Academic with 1617 occurrences, in comparison with 29 occurrences of *broad variety* in the same genre.



(FIGURE 10) Collocation Patterns with *Variety*

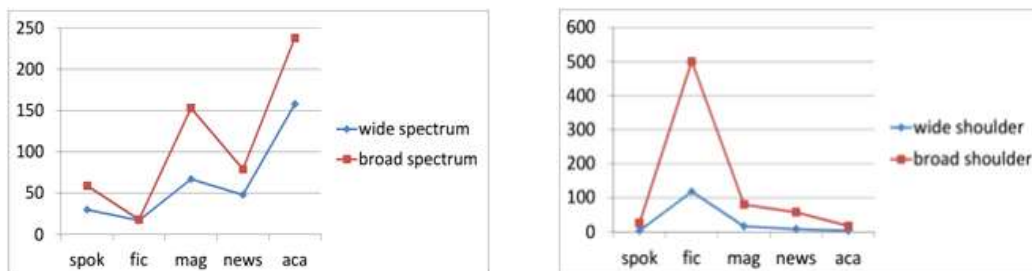
Like *range* and *array*, the MI scores for both *swath* and *audience* were marginally different. While the strength of collocation was not so much different for the two collocates as shown in the MI scores, the overall MI scores for both *swath* and *audience* were slightly higher with *broad* than with *wide*. Interestingly, the frequencies of collocates differed from the MI scores. Regardless of the genres, both *swath* and *audience* co-occurred more frequently with *wide* than with *broad*. In terms of the distribution patterns, both *broad swath* and *wide swath* were found most frequently in the genre of Newspaper. In case of *audience*, both *broad audience* and *wide audience* were most common in Academic and least common in the genre of Fiction.



(FIGURE 11) Collocation Patterns with *Swath and Audience*

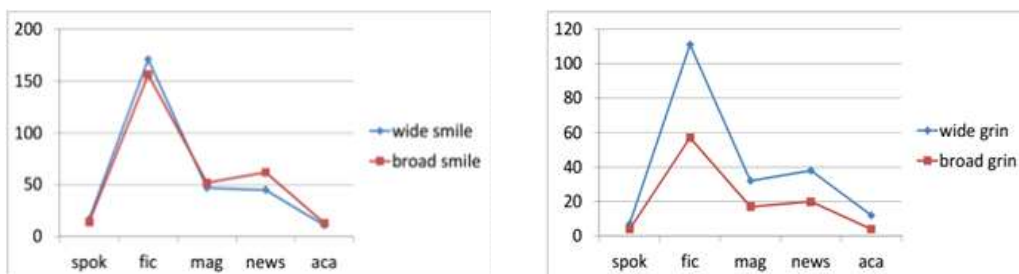
The word *spectrum* was similar to those two collocates (*swath* and *audience*) as it appeared more often with *broad* than with *wide* in all the genres except for Fiction. While the frequency of *broad spectrum* was almost double the frequency of *wide spectrum* in most of the genres, it was about the same in the genre of Fiction. Similar to *spectrum* collocations, *shoulder* goes more frequently with

broad than with *wide*. However, *shoulder* collocations did not seem to be very widely distributed across the genres as they were hardly found in the Spoken and Academic genre. Both *broad* and *wide* collocated most frequently with *shoulder* in the genre of Fiction. Especially, *broad shoulder* (501 occurrences) was much more frequently used than *wide shoulder* (118 occurrences). The occurrence of both collocations was a little higher in the genre of Magazine than in Newspaper.



(FIGURE 12) Collocation Patterns with *Spectrum* and *Shoulder*

It is notable that both *smile* and *grin*, however similar they may seem, displayed differences in their collocational behaviors, as in Figure 13. The MI score for *smile* was slightly higher with *broad* than with *wide*, although the reverse pattern was noted in all the genres in terms of the frequencies of the collocates. In contrast, the score for *grin* was slightly higher with *wide* than with *broad* and this pattern was consistent across all the genres. The collocations of *broad/wide smile* and *grin* were found to be most frequent in the genre of Fiction, whereas they were least frequent in Academic and Spoken.

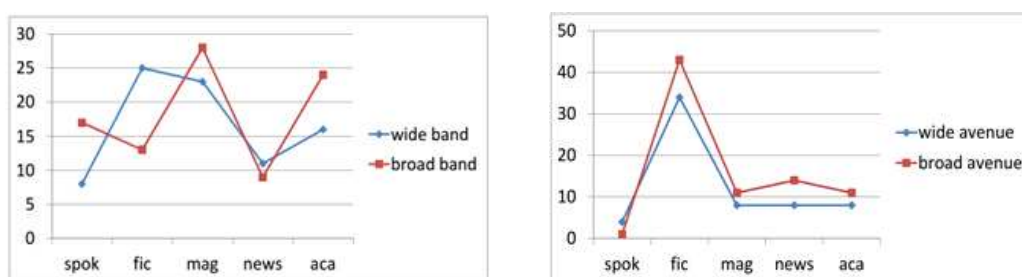


(FIGURE 13) Collocation Patterns with *Smile* and *Grin*

With regard to the word *band*, the collocational strength of *broad band* was found to be slightly higher than *wide band* in terms of MI score. This tendency was also observed in the Spoken, Academic, and Magazine genre although the differences were marginal. In terms of their

distribution in each genre, the collocation of *broad band* was more frequently used than *wide band* in the Academic genre, whereas in the genre of Fiction, *wide band* was more common than *broad band*.

Similar patterns were observed with the collocate, *avenue*. In terms of the MI score, the collocational strength for *broad avenue* was slightly higher than it was for *wide avenue*. This tendency was maintained in most of the genres, except for the Spoken genre. The frequency of occurrences of *broad avenue* (18) was slightly higher in Newspaper than in Magazine (15), and twice as much as in the Academic genre (9). In contrast, the frequency was found to be the lowest in the Spoken genre with only 3 occurrences.



(FIGURE 14) Collocation Patterns with *Band and Avenue*

Similarly, the collocational strength of *appeal* and *discretion* appeared to be higher with *broad* than with *wide*. With the collocate *appeal*, the same tendency was noted in every genre. The distributional pattern of *wide appeal* and *broad appeal* was slightly different across genres, with the former most frequent in Magazine and Newspaper. In contrast, *broad appeal* was found to be most common in Newspaper and Academic texts. With regard to the word *discretion*, the two collocations displayed almost the same frequency in most of the genres except for the Academic genre. The frequency of *broad discretion* (53) in the Academic genre was nearly twice as much as that of *wide discretion*. It seems that the words *discretion* collocates more frequently with *broad* than with *wide* in the Academic genre.

As seen in the concordance lines, the two adjectival synonyms that appear to be interchangeable at first glance, display some differences in their collocational behaviors. To summarize some noteworthy observations from the concordance lines, out of fourteen collocates used with both broad and wide, the three words range, variety and array have stronger collocational bond with wide than with broad, as indicated in the high frequencies of their co-occurrence with wide. This difference seems to suggest that wide is preferentially used

to describe diversity because the three collocates have the same semantic preference of ‘variety’.

part of the article reviews the literature on a broader spectrum of gains, such as health, crime, and welfare reliance. This
the government collaborated with an umbrella organization representing a broad spectrum of Afro-Dutch groups, the Amsterdam-based 30 June/1 July Committee refused to join this
history, content has always been monetized across a broad spectrum , “ Nikesh Arora said, “ You could buy a journal for a \$1,000
(Mezo et al., 2008), a broad spectrum anthelmintic that is also active against nematodes in gastro intestinal tract which can have
study the issue. “ It would require a broad spectrum of the community to come together. We'll start the conversation and see
on fragrance. # * Look for a “ broad spectrum “ sunscreen, protecting against both UVB and UVA rays. # For a
We've said consistently the President has a broad spectrum of capabilities that he could call upon to respond under those circumstances
and poshest precincts, the Newark Museum courts a broad spectrum of visitors (admission is free). On a given day they may
very least, capable of being absorbed into the broad spectrum of social theory with no loss of societal understanding. Now it is again
or 30 years, since the widespread use of broad spectrum antibiotics, that C. difficile infection has become a prevalent illness. # Everyone

(FIGURE 15) Examples of *Broad Spectrum*

In contrast, the collocate *spectrum*, although it belongs to the semantic group of ‘variety’, behaved rather differently, favoring *broad* over *wide*. In other words, *broad spectrum* seems to be more commonly used than *wide spectrum* for several reasons. First, even though *spectrum* is synonymous with *range*, it is usually combined with *broad* to become a compound adjective meaning ‘widely effective’ when describing an instrument or medicine. Besides, *broad spectrum* is used in physics as a series of colors or light waves. Meanwhile, *wide spectrum* has only one meaning of ‘wide range’. Hence, when *spectrum* means ‘range’, *broad* and *wide* can co-occur with it interchangeably.

have been rising rapidly. The wildfires destroyed a wide spectrum of the city's housing inventory, from low-income mobile home parks, to
the president gets a, you know, the wide spectrum of views and judgments that he needs in order to be a good,
researchers at the University of Cincinnati are finding a wide spectrum of personality in a creature whose behavior was thought to be inflexible and hardwired
et al. 2016), which cover a wide spectrum of forestry journals, the reasonable level of detail for a single peer-reviewed publication
The congregation that April morning represented quite a wide spectrum of society. Cabinet ministers and City magnates filled the front few pews.
ranging from yellow-green to black-green, and a rather wide spectrum of white, from the most absolute brightness to the darkest gray, both
is gray dun, but they come in a wide spectrum of colors. Males are called jacks; females are known as jennets.
.# In addition to claiming expertise in a wide spectrum of engali folk musical styles, some Baul-Fakir musicians boast of their ability to
(Fontana & Lok, 2002). A wide spectrum of non-invasive methods ranging from serum assays to imaging techniques has been developed
The congregation that April morning represented quite a wide spectrum of society. Cabinet ministers and City magnates filled the front few pews.

(FIGURE 16) Examples of *Wide Spectrum*

These concordance data can complement the information given in the dictionaries. For instance, according to dictionaries, *broad* rather than *wide* denotes something ‘beautiful and attractive’, when they are used to describe objects or parts of the body (The American Heritage College Thesaurus 2004; The Concise Oxford American Thesaurus 2006; The Oxford Learner’s

After a second, the duo broke out in wide smiles . # Welcome to a whole new level of play, Bridges seemed to
Gran. “ # She gave me her widest smile . “ Yes, child. The best possible thing for you, I
bowl. Meows again. Bernie breaks into a wide smile . # BERNIE # Trix. You came back. Bernie shields his eyes
of my growth-my first baby picture, my first wide smile as I clutched a snuggly rabbit, my first birthday party. # I
days now. She was a blonde with a wide smile and huge blue eyes like a china doll, a young lawyer with a
fact, the wretch's mouth twitched in a wider smile . A sensual smile that sparked with recognition. He'd probably seen her
who it was, “ Brennehan recalls with a wide smile one recent afternoon while observing the installation of a major High Museum exhibition that
Wendy has long, blond hair, a wide smile and wardrobe of overalls and flowery dresses. She writes love poems and makes
Everybody cheers, and a wide smile spreads across Roy's face. Frowns follow as the Scouts realize they have
red-painted, puffed-to-the-max lips that curl slowly to a wide smile that reveals a generous overbite. # When Davis can finally comfortably smile,
a head start. He is smiling, the wide smile of a handsome man, eyes green as a jaguar's, sultry yet
the fish, and Holey-Fin accepts it with a wide smile and a twinkle of her eyes, soft and slanty. # “ Hello

(FIGURE 17) Examples of *Wide Smile*

Thesaurus, 2008). However, various examples from concordance lines indicate that *wide* can also be used to talk about beautiful things. In other words, both *wide smile* and *broad smile* are used with the meaning of happy smile; similarly, both *wide shoulder* and *broad shoulder* are used to refer to strong and attractive shoulders.

The cowboy was, at the very least, impressive. Tall and lean, with wide shoulders and slim hips, he had thick, dark hair neatly trimmed
Big brown beautiful arms. This is who I am. Wide shoulders . Wide straight shoulders . I don't need the pads they sew into blouses these days
spots of blue paint in different sizes and shapes. It fell to her very wide shoulders like hand-woven rope. # " Pleezee, " she said in an exaggerated
eyes film over with the hot relief of tears. On television, men with wide shoulders and narrow hips move like gods on Olym pus among the clouds. You
He assessed all men -- annoyed to find his toned body rivaled his brother's: wide shoulders , corded arms, and taut stomach, which sported a reddish hue.
so hard she bumps up against me, and I put my arm around her wide shoulders , linking her bulk with mine, two pears side by side on a
He had dark hair cut short and laser-green eyes, a forgettable face and dreamy wide shoulders . Great. A demon on my doorstep, I thought, and did
The guy was big, towering well over six feet, muscled, with wide shoulders . Freaking linebacker shoulders. # No way was he handsome. His face
's familiar face. But she could not find the blue macaw feathers and the wide shoulders of her hus-band-to-be. A sigh of relief slipped from her lips. He
phrase struck with particular impact, looking at him -- the resolute set of the wide shoulders and the memory of his graceful ferocity, " showing off " at swordplay
He diminished every other man in the room with his thick, muscular build and wide shoulders . His closely shaved head and beard made him look a few years older

(FIGURE 18) Examples of *Wide Shoulder*

Although *wide* may be interchangeable with *broad*, it should be noted that there is still a distinction in their preferential uses. For example, *broad shoulder* is more frequently used than *wide shoulder* in the entire corpus as well as in each of the genres. The word, *broad* also has stronger bond with *shoulder* than *wide* as the MI score of the former is much higher than that of the latter.

The findings from the study indicate that near synonyms that are seemingly identical or similar have preferences for certain collocates, as in the cases of *wide grin*, *broad shoulder*, and *wide variety*, and that their uses vary across different genres. A close analysis of concordance lines in addition to MI scores and frequency information can help us accurately understand the collocational behaviors.

V. CONCLUSION

The study examined the collocational behaviors of the two near synonyms: *wide* and *broad* and revealed some interesting findings. In terms of overall usage patterns, firstly, *wide* is far more frequently used than *broad* not only in the entire corpus but also in every genre contained in COCA. A comparison of occurrence frequencies across genres shows that both adjectival synonyms in question are least often used in the Spoken genre. In contrast, it is the Academic genre where *broad* is most frequently noted; in the genre of Magazine, *wide* is most frequently witnessed. Secondly, *wide* is used more often to modify concrete nouns than abstract nouns, while *broad* shows an inverse combination pattern.

The two synonyms, *broad* and *wide* also have some divergences in their collocational behaviors and semantic prosody. In terms of semantic preference and meaning, *broad* is attested to have more diverse semantic preferences than *wide*. Both *broad* and *wide* tend to modify both concrete nouns denoting things that are flat in surface and measurable from one side to the other, and abstract nouns expressing quality, emotions, power/ability or large number/amount of thing/opinion. *Broad* is also habitually used with nouns denoting sense/understanding, but *wide* is not. In addition, *broad* has some aspects of meaning which *wide* does not possess; that is, *broad* denotes something ‘general’, not detailed but including most important or necessary points, as in the case of *broad sense*, *broad definition*, *broad principle*, etc. This finding supports Xiao and McEnery (2006), in that the semantic preferences of the collocates of near synonyms are different and near synonyms are not interchangeable in many cases. Regarding semantic prosody, in general, many of the collocates of the two adjectives tend to have neutral prosody, and *broad* has more positive collocates than *wide*. In contrast, only one word, *gap* carries negative prosody as a collocate of *wide gap*.

Findings from a close investigation into their collocational patterns also reveal some more differences in semantic and usage features. It is reported that in combination with the same collocates, the near-synonyms in question have some differences in terms of distributional patterns. Although *wide* is more frequently found in the entire corpus as well as in every genre (see Table 2), the frequency of its collocations, when compared to that of *broad*, may not be always higher. This is because some collocates have stronger bond with *broad*, and their combinations appear more frequently in some genres.

Interestingly, in comparison with *broad*, *wide* has stronger tendency to go with the nouns that have the meaning of ‘variety’, such as *range*, *array*, and *variety*, whereas in the Academic genre, *broad* has more uses. The analysis of the concordance lines reveals some more interesting

findings about the two synonyms. For example, according to the corpus data, both *broad* and *wide* are used to describe parts of body (e.g., *wide hip/eye/shoulder* vs. *broad chest/forehead/shoulder*), and they both can create beautiful, attractive or pleasant images (e.g. *broad/wide* with *smile/shoulder/avenue*). Another thing to note is that some nominal collocates like *angle* and *view*, even though they are synonymous, selectively collocate with one of the two node words to express different meaning, such as *wide angle* vs. *broad view*.

While the findings of this study are informative and useful for vocabulary instruction, they are limited as the study focused on only one pair of synonyms. Nevertheless, they have some pedagogical implications for language teachers. First of all, they can use corpus data to help their learners realize the differences between synonyms in terms of both semantic properties and usage patterns. They should draw learner attention to the collocational patterns of the words they are learning. Teachers can also guide their students to refer to concordance data as well as dictionaries. They can promote discovery learning by having their students observe and analyze the features of authentic language data.

Particularly, when teaching English to speakers of other languages, teachers should alert them to the possibility of miscommunication due to literal translation. Near synonyms in English can be translated as the same in other languages, which can cause a lot of trouble for learners, translators, and interpreters in choosing L1 equivalents of the synonyms. Thus, special caution is needed, and teachers should teach the meaning of the words in association with context. They should also introduce semantic prosodies and semantic preferences of synonyms in class to facilitate students' understanding of the delicate meaning differences. Awareness raising activities would help students attend to affective meaning of words and better identify subtle differences in nuance. Teachers should also carefully design fill-in-the-gap tasks with near synonyms to help students learn how to choose the most appropriate word for a given context.

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APPENDIX

Forty-five Most Frequent Collocates of *Wide* and *Broad*

WIDE	FREQ	PER MIL	MI	BROAD	FREQ	PER MIL	MI
[RANGE]	5976	11.49	8.57	[RANGE]	1622	3.12	7.63
[VARIETY]	3298	6.34	8.62	[SHOULDER]	680	1.31	6.83
[ARRAY]	751	1.44	8.42	[SPECTRUM]	547	1.05	9.09
[EYE]	528	1.02	3.60	[SUPPORT]	446	0.86	4.45
[MARGIN]	330	0.63	7.21	[CATEGORY]	395	0.76	6.76
[SPECTRUM]	320	0.62	7.38	[STREET]	312	0.60	4.34
[SMILE]	291	0.56	4.05	[SMILE]	297	0.57	5.02
[SWATH]	251	0.48	9.26	[ARRAY]	294	0.57	8.00
[MOUTH]	242	0.47	4.55	[AREA]	246	0.47	3.55
[SHOT]	226	0.43	4.53	[STROKE]	230	0.44	6.86
[VARIATION]	223	0.43	6.24	[CONSENSUS]	217	0.42	7.49
[FIELD]	216	0.42	3.18	[COALITION]	216	0.42	6.81
[AUDIENCE]	208	0.40	4.46	[TERM]	201	0.39	4.57
[ANGLE]	201	0.39	5.61	[POWER]	196	0.38	3.38
[GRIN]	200	0.38	5.91	[BASE]	190	0.37	3.59
[CIRCLE]	196	0.38	4.72	[OUTLINE]	185	0.36	7.06
[SELECTION]	192	0.37	5.45	[SENSE]	183	0.35	3.74
[SPACE]	174	0.33	3.11	[DEFINITION]	162	0.31	6.12
[WINDOW]	170	0.33	3.33	[APPEAL]	156	0.30	5.32
[SHOULDER]	148	0.28	3.69	[SWATH]	152	0.29	9.48
[GAP]	137	0.26	4.93	[AGREEMENT]	150	0.29	4.95
[EXPANSE]	133	0.26	8.00	[VIEW]	137	0.26	3.26
[ARC]	130	0.25	6.81	[AUDIENCE]	125	0.24	4.67
[LATITUDE]	117	0.23	7.82	[CHEST]	117	0.23	5.27
[PORCH]	113	0.22	5.38	[SCOPE]	112	0.22	6.34
[ASSORTMENT]	102	0.20	7.85	[EXPANSE]	109	0.21	8.65
[BELT]	96	0.18	4.74	[AUTHORITY]	107	0.21	4.07
[BOWL]	84	0.16	3.31	[GRIN]	102	0.20	5.88
[ACCEPTANCE]	83	0.16	5.34	[SWEEP]	97	0.19	5.63
[DIVERSITY]	83	0.16	4.50	[THEME]	97	0.19	5.04
[DISTRIBUTION]	83	0.16	4.44	[DISCRETION]	93	0.18	7.99
[SCREEN]	83	0.16	3.15	[GOAL]	93	0.18	3.53
[BAND]	83	0.16	3.29	[BAND]	91	0.18	4.36
[DISPARITY]	76	0.15	6.44	[FOREHEAD]	90	0.17	6.40
[APPEAL]	75	0.14	3.32	[INTERPRETATION]	80	0.15	5.31
[SPATULA]	73	0.14	8.10	[AVENUE]	80	0.15	5.15
[BOULEVARD]	72	0.14	6.15	[PRINCIPLE]	80	0.15	4.38
[BRIM]	71	0.14	7.11	[LEAF]	73	0.14	4.53
[HIP]	70	0.13	4.34	[VALLEY]	73	0.14	4.34

[DISCRETION]	65	0.13	6.53	[IMPLICATION]	71	0.14	5.13
[AVENUE]	62	0.12	3.84	[PERSPECTIVE]	71	0.14	4.20
[LAWN]	61	0.12	4.52	[RIVER]	69	0.13	3.24
[STRIP]	58	0.11	3.66	[UNDERSTANDING]	68	0.13	3.98
[STAIRCASE]	53	0.10	6.22	[VARIETY]	67	0.13	3.94
[CORRIDOR]	50	0.10	4.61	[PATTERN]	67	0.13	3.67

Applicable levels: secondary education, tertiary education

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