

To be *bright* or to be *brilliant*:

A study of near synonyms

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Introduction

This paper is a corpus study of distributional and collocational patterns of a set of adjectival synonyms that are descendants of Romance and Germanic languages. The focus will be on defining each adjective (*brilliant*, *radiant*, and *bright*) and comparing the different contexts in which they are used by substituting one word with another, to dispute the current assumption that pairs (*brilliant* and *bright*, *brilliant* and *radiant*, *bright* and *radiant*) are absolute synonyms. Some synonyms can be used interchangeably in all contexts, making them absolute synonyms. However, they occur very rarely. Other synonyms come close in meaning but cannot be used interchangeably due to their distributional constraints.

This study will investigate the chosen set of synonymous adjectives to reveal if they are truly synonymous, thus they occur with the same collocates in both the literal and metaphorical contexts. The corpus-based behavioral profile (BP) approach is employed to account for the distributional characteristics of a linguistic expression to reveal its functional and semantic properties. Another step involves using the Corpus of Contemporary American English (COCA) program to retrieve all hits for the words of interest. This study reveals that adjectives *brilliant*, *radiant*, and *bright* are interchangeable only in certain literal expressions (e.g., brilliant/radiant/bright star) while being restricted to modifying the noun *smile* in the metaphorical sense.

Literature Review

Knowledge about synonymic differences is important in understanding how sets of synonyms work in terms of nuanced semantic meanings and usage patterns, even though synonyms are typically defined only in terms of their shared characteristics. According to Saeed (2009), “synonyms are different phonological words which have the same or very similar meanings” (p. 65). While absolute or exact synonyms are a rare case as a set of synonymous terms typically have different patterns of distribution, it is more common to come across synonymous sets or pairs of words that denote the same meaning but differ in characteristics of their usage (DiMarco, Graeme, & Manfred, 1993).

The corpus-based behavioral profiling approach makes the assumption that semantics of lexical items are not fully comprehensible without accounting for their behavioral profile (Gries & Divjak, 2009; Gries & Otani, 2010). A notion first proposed by Hanks (1996), the BP of a lexical

item is restricted to a particular set of complementation patterns and semantic roles. It has been extended by Gries and Divjak “to include a comprehensive inventory of elements co-occurring with a word within the confines of a simple clause or sentence in actual speech and writing” (2009, p. 51). The BP approach attempts to account for how distributional characteristics of a linguistic expression are formed to reveal its functional and semantic properties. Despite the limited number of corpus-based BP studies dealing with near-synonymous verbs (e.g., Eriksson, 2005; Gries and Divjak, 2009; Jansegers, Vanderschueren, & Enghels, 2015) and adjectives (Hoffman, 2014; Gries & Otani, 2010) they have demonstrated how this particular approach is useful in addressing some issues in cognitive semantics work, specifically which senses are most similar to one another, what differences there are, and the amount of senses to assume.

Methodology

The current study is based on a data set of thirty collocations and fifteen sentences. In the first step, the three adjectives are defined according to the Oxford English Dictionary (OED) Online. The second step involves using the Corpus of Contemporary American English (COCA) program to retrieve all hits for the words of interest. Following Hoffman (2014), I use COCA to retrieve raw frequency patterns of each adjective in my set. In the third step, the first ten yielded contexts are chosen for each target adjective and their frequency ranking is included to show the reader the BP of each collocation. For example, the collocation *radiant heat*, as ranked number one in the yielded results page, means the pair has the most entries compared to the other subsequent pairs. I have selected five sentences for each adjective to show the context of the senses they represent, either the literal or metaphorical. The fourth step is concerned with evaluating the collocations and example sentences by substituting one adjective with another.

My method also follows Divjak and Gries’ (2009) approach so as to figure out which elements in the network of senses are similar to each other, that they are “connected in such a way that the strength of the connection reflects the likelihood that the elements display similar behavior in other linguistic subdomains” (p. 61). The purpose of the present study is to reveal whether or not the set of synonyms function as absolute synonyms; if the select adjectives are near-synonyms, to evaluate their sense distinctions and distributional patterns in various domains.

Data Presentation and Analysis

Radiant

The OED entry for adjective *radiant* focuses on the concept of an exterior surface “shining brightly” or that an object is “sending out rays of light”. It is interesting to note that the OED definition uses *brightly* to define the degree of the shine. This definition can also be applied figuratively, as seen in Context Table 1 from COCA below, *radiant smile* or *radiant glow*. The OED entry specifically points out that the figurative sense of *radiant* depicts a person who is “glowingly happy, beaming with love or joy.” As such, a *radiant smile* projects the sense of a person possessing a smile that beams with joy. *Radiant* is a borrowing from classical Latin *radiare*, to radiate light, shine. Thus, when we refer to *radiant people*, the notion is of persons who are glowing with happiness, not of people who are necessarily radiating with great intelligence, as what synonyms *brilliant* and *bright* convey.

The OED also stresses the entry for *radiant* as “designed to emit radiant heat, especially for cooking or heating.” The COCA entries in Table 1 below illustrate this frequent use of *radiant* in the sense of emitting high temperature heat (i.e., *radiant heat(ing)*, *radiant barrier(s)*, *radiant energy*, *radiant floor*), which all involve a type of radiant heating system for a house or building. Neither *brilliant* nor *bright* would be acceptable as substitutes for collocation contexts (1, 3, 4, 6, 7, and 8) as these constructions are restricted to this particular usage.

Table 1 Context Freq

1		RADIANT HEAT	112
2		RADIANT SMILE	64
3		RADIANT BARRIER	55
4		RADIANT ENERGY	50
5		RADIANT SKIN	33
6		RADIANT HEATING	29
7		RADIANT BARRIERS	28
8		RADIANT FLOOR	19
9		RADIANT LIGHT	18

10	RADIANT GLOW	15
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- A. But **radiant heat** can go anywhere, even under hardwood and carpet.
 B. The starlight played across her features, giving her a soft **radiant glow**.
 C. It was her **radiant smile** that had caught my heart.
 D. Poppy turned her head, and her earrings sparkled in the soft, **radiant light**.
 E. Easy tips for healthy, **radiant skin** all winter long.

In Table 1 above, when the adjective *radiant* is used in the metaphorical context (i.e., *radiant smile*, *radiant skin*, *radiant glow*), it typically modifies nouns that involve objects with a surface, from where emitted are rays of light. Sentences B, C and E clearly illustrate how phrases *radiant glow*, *radiant smile*, and *radiant skin* all depict rays of light bouncing off the surface, where *radiant glow* equates *radiant skin*.

Brilliant

The OED entry for *brilliant* is that it depicts the notion of shining *brightly* as its central meaning, the same meaning as *radiant*. The lexical item *brilliant* entered the English lexicon in the late 1600s by way of French *brillant* shining, the present participle of verb *briller* to shine. Like *radiant*, it is also a Latinate word. The main difference between *radiant* and *brilliant* is that the former is never used to describe a person's intelligence (as mentioned in the prior definition) in ways that *brilliant* and *bright* are used, in their figurative sense. We can say *brilliant* people (as context 8 below illustrates) or substitute the adjective with synonym *bright*, to indicate people who display great intelligence. As the metaphorical correlation goes, INTELLIGENCE is LIGHT, being *brilliant* or *bright* indicates great intelligence. The OED entry for *brilliant* specifically points out the notion of persons who are "distinguished or celebrated" especially by talent and cleverness. The OED also stresses the adjective *brilliant* can be used to describe qualities and actions, to indicate they are of the distinguished kind, striking the imagination, or amazing.

Table 2 Context Freq

1	BRILLIANT IDEA	194
2	BRILLIANT MAN	110
3	BRILLIANT COLORS	105
4	BRILLIANT CAREER	94

5	BRILLIANT LIGHT	88
6	BRILLIANT MIND	73
7	BRILLIANT COLOR	65
8	BRILLIANT PEOPLE	58
9	BRILLIANT RED	58
10	BRILLIANT JOB	55

F. You're doing a **brilliant job** of getting all these different perspectives.

Metaphorical sense of brilliant, in which it modifies the noun job

G. Suddenly a **brilliant light** appears in the night sky.

H. That's what's so wonderful about right now -- all these **brilliant people** coming up with ways to improve life.

I. Mrs. Johnson and the show greatly impacted the fashion world by demonstrating that bright, **brilliant colors** can look wonderful on brown-skinned models.

J. If she wanted to, Graciela could turn on a **brilliant smile** that could charm the coating off an M&M. (Collocation *brilliant smile*: rank 11 in COCA)

In Table 2 above, six out of ten collocation pairs illustrate the metaphorical context of *brilliant* as used to refer to human intellect (i.e., *brilliant man*, *brilliant mind*, *brilliant people*) or abstract concepts (i.e., *brilliant idea*, *brilliant career*, *brilliant job*). The other four uses of *brilliant* modify colors (rank 3,7, 9) and light (rank 5). In context (2), *brilliant man*, the adjective modifies the noun to convey the notion that this person is exceptionally intelligent or distinguished for possessing this intelligent quality. *Bright* is synonymous with *brilliant* in this case, thus, it can replace *brilliant* without altering the meaning of the original sentence. *Radiant*, on the other hand, would completely change the meaning into the notion of a man glowing with joy.

Bright

The OED entry explains the central meaning of adjective *bright* as shining or emitting, reflecting much light. *Bright* is a Common Germanic word and a cognate of Old English *beorht*, to shine. Its figurative sense depicts an object or person to be “lit up with happiness or hope” as in hopeful, encouraging, or cheering, as illustrated in sentences K, N, and O below. For example, in O, *But they both would have a **bright future** in politics if they decide to run again*, the context suggests that there is a hopeful future ahead for both politicians, that they would win, if they were to take part in another election. Furthermore, OED also stresses that *bright* is used in the metaphorical context to describe a person who displays great intelligence or one who is quick-witted, clever. In this specific sense, *bright* can be used interchangeably with *brilliant*.

Table 3 Context Freq

	Context	Freq
1	BRIGHT LIGHT	729
2	BRIGHT LIGHTS	675
3	BRIGHT RED	658
4	BRIGHT COLORS	654
5	BRIGHT SIDE	506
6	BRIGHT FUTURE	417
7	BRIGHT SPOT	406
8	BRIGHT GREEN	343
9	BRIGHT STARS	335
10	BRIGHT STAR	323

K. She'd been full of life, always laughing, and a **bright light** wherever she went. (*fig.*)

L. Behind us a big **bright light** moved through the trees, big as a house.

M. Later, as darkness falls in the evening, a **bright star** with an orange hue will appear hovering below the Moon.

N. She looks at the **bright side**: A smaller place is easier to clean. (*fig.*)

O. But they both would have a **bright future** in politics if they decide to run again. (*fig.*)

In Table 3 above, we see that the adjective *bright* is used many contexts. It is particularly striking to notice that *bright* has 729 entries in COCA, when it modifies noun *light*, compared to the 18 entries for collocation *radiant light* and 88 entries for collocation *brilliant light*. Overall, Table 3 yields the most entries for Germanic node *bright* in comparison to the two Latinate nodes, for which COCA retrieves only 112 entries for collocation pair *radiant heat*, its highest result, and 194 entries for *brilliant idea*. As Eriksson (2005) pointed out, “when investigating near-synonyms, the occurrence of collocations is very important, since it can be the only thing actually distinguishing the two nodes from each other in terms of grammatical definition” (p. 6). In her investigation of the verb pair synonyms *commence/begin* and *hate/detest*, Eriksson (2005) found that Romance verbs rarely occur compared to their Germanic near-synonyms, which entails that Germanic verbs are more commonly used while Romance verbs only appear in very specific contexts. This pattern is also revealed in the present study.

To test whether or not all three adjectives (*brilliant*, *radiant*, and *bright*) are absolute synonyms, one adjective is substituted over the other using sentences A-O from COCA. According to OED, the prototypical sense of both *brilliant* and *radiant* is of a light that is “shining brightly”, while *bright* is defined as emitting or reflecting much light. Based on these definitions, we may assume that all three items in this set behave more as absolute synonyms when used, in the literal

sense, to describe an object or situation where “much light” is being emitted. Such is the phenomenon pointed out by Divjak and Gries (2009) as “the association of one meaning with multiple forms,” as seen in the following sentences (p. 1).

(D) Poppy turned her head, and her earrings sparkled in the soft, {**radiant** | brilliant | bright} **light**.

(G) Suddenly a {**brilliant** | **bright** | **radiant**} **light** appears in the night sky.

(L) Behind us a big {**bright** | radiant | brilliant} **light** moved through the trees, big as a house.

To further test the claim that *brilliant*, *radiant*, and *bright* can be used with a different noun in the same literal context, we will look at all other collocations from the three tables and corresponding sentences. As seen in sentence M, *Later, as darkness falls in the evening, a **bright star** with an orange hue will appear hovering below the Moon*, the literal sense of *bright* can be substituted with either *brilliant* or *radiant*, given they are intuitively very similar to *bright*. As Hoffman (2014) stressed, absolute synonyms are composed of lexical items that can be used interchangeably in any given context. The same interchangeability phenomenon between all three adjectives is seen with the noun *colors*, ranked in Table 3 as number 4 (i.e., *bright colors*), number three in Table 2 (i.e., *brilliant colors*), and although not shown in Table 1 to save space, it is ranked as number 18 in COCA (i.e., *radiant colors*).

If the three synonyms are truly interchangeable then they must also be applicable in the metaphorical context. In the sentences below, it seems any of the target nodes can modify the noun *smile* without altering the original meaning of the sentence. The central meaning of all three adjectives, *shining (fig.)*, is being used here, to indicate the subject possesses a captivating, shining smile.

(B) It was her {**radiant** | **bright** | **brilliant**} **smile** that had caught my heart.

(J) If she wanted to, Graciela could turn on a {**brilliant** | **radiant** | **bright**} **smile** that could charm the coating off an M&M.

There are 64 entries for collocation *radiant smile*, while *brilliant smile* has 53 entries, and *bright smile* has 154 entries. The yielded results provide further evidence that Germanic *bright* is more commonly used than Latinate *brilliant* and *radiant*. However, as previously mentioned, Latin-derived words are usually preferred when referring to more specific contexts, as in sentences B and J. The collocation *brilliant smile* actually ranks as number 11 in COCA while *radiant smile* ranks as number two, in contrast to the number 18 ranking of *bright smile*, regardless of its much

higher 154 entries. The higher rankings of the Latinate words imply they are the preferred adjectives to modify the noun *smile*. Based on the evaluated contexts to date, we see that the three nodes are not absolute synonyms as they differ semantically when modifying certain nouns. According to DiMarco et al. (1993), absolute synonymy is when pairs of words are interchangeable in any context (p. 1). Sentences B and J explicitly illustrate how pairs *brilliant* and *radiant* can be interchangeable, but not *brilliant* and *bright* or *bright* and *radiant*. This is due to the fact that the use of *brilliant* and *radiant* connotes a much brighter smile than what a *bright smile* denotes.

When referring to the context of intelligent people, either *bright* or *brilliant* are typically used, as the collocation in H illustrates.

H. That's what's so wonderful about right now -- all these **brilliant people** coming up with ways to improve life.

Replacing *brilliant* with *bright* does not alter the original meaning of the sentence, which makes them a synonymous pair in this case. If *brilliant* is replaced with *radiant*, the sentence indicates a new meaning, which is in the context of “glowingly happy” people.

The interchangeability of *brilliant*, *radiant*, and *bright* loses its function when used in other metaphorical domains due to the different nouns they modify in this alternate construction. For instance, if we substitute *brilliant* with *radiant* in sentence F, *You're doing a **brilliant job** of getting all these different perspectives*, it would make the sentence sound strange. The collocation *radiant job* is highly marked as the figurative sense of *radiant* typically accepts objects with a surface as collocates, not abstract concepts like *idea* or *job*, which are typical collocates of the figurative sense of *brilliant*, as seen in the frequency rating in Table 1, rankings 1 and 10, respectively. Replacing *brilliant* with *bright* is also marked. In contemporary American English, we never say, *that is a bright job*, to indicate one is doing a “hopeful or encouraging” work. The context conveyed in F is of an amazing or impressive performance. Neither *radiant* nor *bright* conveys this sense.

When nouns are modified by metaphorical *radiant*, they are of abstract concepts, such as *beauty*, *love*, *joy*, and *warmth*¹. Conversely, these nouns do not yield as collocates with figurative

¹ In COCA, the following noun collocates are ranked as: 11 beauty, 16 love, 32 joy, and 48 warmth.

brilliant and *bright* in COCA. However, if we rely on OED's entry for the metaphorical usage of *brilliant*, our intuition may be used to express specifically, without sounding odd, *a brilliant beauty*, to refer to someone who is the type of beauty that is "very distinguished or celebrated," as well as to denote that one is both intelligent and beautiful. In addition, the collocation *bright beauty* also makes sense and does not sound awkward as this context denotes the type of beauty that is "cheering or encouraging," as well as to denote that one possesses both intelligence and beauty.

In sentence K, *She'd been full of life, always laughing, and a **bright light** wherever she went*, the use of metaphorical *bright* resembles the OED entry for metaphorical *radiant*. The sense projected in this case is of a person who represents hope because of her cheerful disposition. Thus, in this case, it is possible to substitute *bright* with *radiant* without changing the meaning of the sentence. Since *brilliant* does not have a specific entry in OED for the context of cheerful and hopeful people, we refrain from using it in the context of K. Notwithstanding the acceptable collocation of *brilliant light* in the literal sense, its placement within the context of K changes the entire meaning of the sentence to that of a woman embodying an intellectual or accomplished persona. As stressed by DiMarco et al. (1993), "if two words differ semantically (e.g., mist, fog), then substituting one for the other in a sentence or discourse will not necessarily preserve truth conditions; the denotations are not identical" (p. 1). The use of *brilliant* in this case semantically differs from *bright* and *radiant*, thus its substitution for *bright* in K will not preserve the sentence's truth conditions.

We have seen so far that the three adjectives are not absolute synonyms but behave more as near-synonyms upon closer inspection. To further check this claim, we take target nodes *brilliant* and *radiant* to see if either adjective can replace *bright* in the following metaphorical contexts:

(N) She looks at the {**bright | radiant | brilliant**} **side**: A smaller place is easier to clean.

(O) But they both would have a {**bright | radiant | brilliant**} **future** in politics if they decide to run again.

As we see in O, a collocation constraint occurs, where the context of the sentence restricts it from using one of the two Latinate adjectives, specifically the adjective *brilliant*. As previously evaluated, the context of *bright* in O conveys a hopeful future, which connotes that the two politicians would win the election were they to run again. Replacing *bright* with *radiant* also conveys a hopeful future in this context, even though *radiant future* is a rare occurrence compared

to *bright future*. COCA has 10 entries for the former while the latter has 900 entries. If we substitute *bright* with *brilliant*, notwithstanding the collocation *brilliant future* is acceptable (with 39 entries in COCA), the original meaning of the sentence is not preserved as the new meaning indicates a distinguished or exceptional future in politics, not necessarily a hopeful one.

In the context of N, *She looks at the bright side: A smaller place is easier to clean*, both Latinate adjectives are strongly rejected in modifying the noun *side*, even though a figurative meaning of the adjective *radiant* denotes hope. It simply sounds strange. This is supported in COCA, where *radiant side* yields 0 results, *brilliant side* 2 entries, and 1658 entries for *bright side*. If *bright* is replaced with *brilliant*, the original meaning (a positive outlook) is not preserved as the new meaning would suggest the object in the sentence (*side*) is clever or distinguished. This substitution also sounds strange.

Table 4	RADIANT	BRILLIANT	BRIGHT
HEAT	Ö	X	X
SMILE	Ö	Ö	Ö
BARRIER	Ö	X	X
ENERGY	Ö	Ö	Ö
SKIN	Ö	X	Ö
HEATING	Ö	X	X
FLOOR	Ö	X	X
LIGHT	Ö	Ö	Ö
GLOW	Ö	Ö	Ö
IDEA	X	Ö	Ö
MAN	Ö	Ö	Ö
COLORS	Ö	Ö	Ö
CAREER	X	Ö	Ö
MIND	X	Ö	Ö
PEOPLE	Ö	Ö	Ö
RED	Ö	Ö	Ö

JOB	X	Ö	X
SIDE	X	Ö	Ö
SPOT	X	Ö	Ö
GREEN	Ö	Ö	Ö
STAR	Ö	Ö	Ö

Based on my intuitive understanding of the definitions provided by OED and the varying contexts retrieved in COCA, I have evaluated all thirty contexts and fifteen sentences to conclude that *bright* and *brilliant* behave more as near-synonyms than the pairs *radiant* and *brilliant* or *bright* and *radiant*. In Table 4 above, the columns marked with red checks indicate the type of nouns that can be modified by either *bright* or *brilliant*. For example, when *bright* modifies the noun *career* it conveys the meaning of a favorable or hopeful event, where one expects progression in their career path. On the other hand, a *brilliant career* denotes an amazing, distinguished career. However, of all three possible collocations, only two contexts allow the pairs to be interchangeable, when they modify a person's intelligence, as in {brilliant | bright} idea or {brilliant | bright} mind.

The present study reveals that none of the three pairs constitute as absolute synonyms as they tend to differ semantically when used in any context, whether the literal or metaphorical. It is also found that adjective *brilliant* is used in a much more specific context than *bright* when describing a person's intelligence or abilities.

Interpretation

When using the corpus-based behavioral profile method, one must not only look at the target words and their collocates, but also at the verbs, subjects, and objects in the available sentential clauses. The current study of near-synonymous adjectives *brilliant*, *bright* and *radiant* must be taken into account as a starting point for further examination of the set. It should also be considered that the BP approach for evaluating collocational pairs and distributional patterns is highly valuable, as shown in this study. Examining how the adjectives modify their noun collocates in the first ten contexts allows the analyst to set parameters for objective interpretation. Even though the selected fifteen sentences included in the analysis contained some elements of subjectivity, as it is crucial to select a data set that best represents the context of the near-synonyms, a significant part of the

analysis has been an entirely objective process. The findings from the present study support Eriksson's (2005) findings on the phenomenon that lexical items descending from the Germanic language are used more commonly while those that are of Latinate origins are used rarely and in more specific contexts.

Conclusion

Findings in the present study dispute the original assumption that pairs *brilliant* and *bright*, *brilliant* and *radiant* constitute as absolute synonyms since the chosen pairs cannot be used interchangeably in both literal and figurative contexts. When *brilliant*, *radiant* and *bright* are interchangeable, they are restricted in their literal usage wherein they modify nouns such as star(s), light(s), color(s), or certain colors like red and green. Upon closer inspection, the three adjectives can be used interchangeably in the metaphorical context to describe a person's smile. However, the contextual semantics of each collocational pair gets fuzzy. For example, a *radiant smile* can denote the "happy" smile of someone, or it can entail one's shiny, pearly white set of teeth. *Brilliant smile* can only denote the latter meaning encompassed in *radiant*, while *bright smile* denotes the same contexts as *radiant*.

Brilliant, *radiant* and *bright* evidently behave more as near-synonymous adjectives. As explicitly shown in Table 4, it is the pair *brilliant* and *bright* that are closer to each other than the other pairs. This study of the three adjectival near-synonyms must be considered for future research to include a larger data than the thirty contexts and fifteen sentences evaluated. The findings are relevant to studies (e.g., Berez and Gries, 2008; DiMarco et al, 1993; Divjak & Gries, 2009; Eriksson (2005); Hoffman (2014); Traba, 2016) in which demonstrate that the case of absolute synonyms is a rare and an exceptional event, and that what is more common is the occurrence of near-synonyms. It verifies findings from previous studies, specifically that dictionary definitions of synonyms are too limited to gain an understanding of their semantic differences. Thus, it is crucial to examine the target word's vicinity to determine the lexical item's function and value. The behavioral profile method has been very valuable in analyzing the chosen data, in addition to the aid of the OED definitions, to discover how the senses of each lexical item can subtly differ under specific contexts.

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