

Source Domains of Smell Related Metaphorical Collocations: Study Based on Corpus of Contemporary American English

Linas Selmistraitis

Faculty of Human and Social Studies, Mykolas Romeris University
Ateities St. 20, LT-08303 Vilnius, Lithuania
Email: selmistraitis@mruni.eu
ORCID iD: <https://orcid.org/0000-0002-8612-3276>
Research interests: semantics, lexicology, morphology

Renata Boikova

Education Academy, Vytautas Magnus University
T. Ševčenkos St. 31, LT-03111 Vilnius, Lithuania
Email: renboikova@mailbox.org
ORCID iD: <https://orcid.org/0000-0001-8170-658X>
Research interests: conceptual metaphors, cognitive linguistics

Abstract. The paper discusses source domains of smell related metaphorical collocations. The research is limited to metaphorical collocations with pleasant smell denoting words *scent*, *fragrance*, *aroma*, and *perfume* in the Corpus of Contemporary American English (COCA). The scope of the research is 2187 concordance lines (CL) containing metaphorical collocations with the words *scent*, *fragrance*, *aroma*, and *perfume* from 3580 CL containing any word phrase with the target words. The research is based on identification and description of the source domains of the collected metaphorical collocations with pleasant smell words, relating the source domains to underlying conceptual metaphors and determining the frequency distribution of the identified source domains. The following source domains were identified in the research: OBJECT, SUBSTANCE, PHYSICAL FORCE, and FOOD. The analysis showed the frequency of source domains across all four groups forming smell related conceptual metaphors: OBJECT with 1833 instances of metaphorical collocations (84%), SUBSTANCE with 202 instances (9%), PHYSICAL FORCE with 130 instances (6%), and FOOD with 22 instances (1%). The present study contributes to the development of cognitive semantics and its findings demonstrate which meanings are prevalent in human mentality when pleasant smell related metaphorical collocations are used.

Keywords: cognitive linguistics; corpus linguistics; conceptual metaphor; source domain; COCA.

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Introduction

Metaphor is one of the centres of attention in cognitive linguistics. As Grady (2010, p. 188) observes, “If Cognitive Linguistics is the study of ways in which features of language reflect other aspects of human cognition, then metaphors provide one of the clearest illustrations of this relationship”. This statement appears to be true, since in cognitive linguistics, metaphor is considered to be not only a linguistic structure but a pattern and a result of a special process of conceptual association. However, not only metaphor itself is related to conceptualization, but the human mind is also thought to be metaphorical.

The aim of the current research is to investigate metaphorical collocations denoting pleasant smell to determine their source domains. The objectives of the research are as follows: to identify metaphorical collocations with the words *scent*, *fragrance*, *aroma*, and *perfume* in the Corpus of Contemporary American English (COCA); to identify and describe the source domains of the collected metaphorical collocations; to relate source domains to underlying conceptual metaphors; to determine the frequency distribution of the identified source domains.

The research is corpus-based. The qualitative approach was applied for the analysis of the metaphorical collocations in order to describe and establish their source domains and conceptual metaphors. The quantitative approach was employed for the determination of the frequency of the source domains.

The data for the research was retrieved from COCA, which is one of the most widely-used corpus. In March 2020 it was updated for the last time (with data up through Dec 2019). The COCA data of lexical items that collocate with another lexical item forming a collocation, i.e. collocates data, was updated in April 2020.

Since COCA shows unfiltered node/collocate pairs in the search results, it leads to some CL not containing collocations. The maximum number of available CL, that was present in the collocates search result, was analysed, and fitting CL with metaphorical collocations were selected for the study. Thus, the scope of the research is 2187 CL each of them containing metaphorical collocations with one of the words *scent*, *fragrance*, *aroma*, and *perfume* selected from the total of 3580 CL with the target words: 1759 metaphorical collocations with the word *scent* selected from 2651 CL; 108 metaphorical collocations with *fragrance* selected from 307 CL; 301 metaphorical collocations formed with *aroma* selected from 473 CL; 19 metaphorical collocations formed with *perfume* selected from 34 CL.

As far as collocations are concerned with the regularity with which words occur near or next to each other, COCA collocates feature was used to identify the most frequent words to the left and the right of the node words *scent*, *fragrance*, *aroma*, and *perfume*. The collocates feature provides a list of nouns, adjectives, verbs, and adverbs that tend to appear together with the word searched. The collocates feature also covers singular and plural forms of nouns, all forms of adjectives (positive, comparative, superlative), adverbs, and verbs (plain, preterit, past participle, present participle). The nodes *scent*, *fragrance*, *aroma*, and *perfume* were entered into the [WORD] section in COCA and the query syntax

allowed to produce most frequent collocates list of the nodes. From the list of the most frequent collocates, collocations with *scent*, *fragrance*, *aroma*, and *perfume* were chosen. As far as these words are polysemantic, only collocations in which *scent*, *fragrance*, *aroma* and *perfume* function as smell denoting words were taken into consideration.

Prior to COCA collocations analysis, Oxford Collocation Dictionary of English (OCDE) was searched for collocations with the words *scent*, *fragrance*, *aroma*, and *perfume*. The collocations that were not identified in COCA collocations frequency list but were found in OCDE were manually searched in COCA and analysed to characterize as many as possible source domains of metaphorical collocations with smell related words.

The analysis of source domains and conceptual metaphors with target words was performed in this order: *scent*, *fragrance*, *aroma*, *perfume*. Conceptual metaphors are presented in descending order, which is determined by the number of metaphorical collocations grouped under every conceptual metaphor. In addition to the analysis and description of the metaphorical collocations, source domains, conceptual metaphors, and the possible context in which the analysed metaphorical collocations were used are described. Examples of usage of collocations in context are provided.

The present study contributes to the development of cognitive semantics, which is one of the modern research areas of linguistics. Its findings demonstrate conceptual domains of knowledge in human mentality related to smell denoting words.

The novelty of the present research lies in its focus on the semantic analysis of metaphorical collocations constructed with smell related concepts. Smell as the target domain, and its source domains were addressed by Kövecses (2020). However, the research did not cover other smell denoting synonymic words.

It is plausible that a number of limitations might have influenced the results obtained. First, the results obtained from COCA come mostly from the genre of fiction and magazines. This prevents us from assessing the context of metaphorical collocations that would be found in other genres. Second, the research also excludes metaphorical collocations that form synesthetic metaphors, i.e. metaphors that describe one sense perception in terms of another. Thus, collocations like *sweet scent*, *warm scent*, *gentle fragrance*, *soft fragrance* are excluded. Third, the corpus did not contain all possible word combinations; thus, some possible metaphorical collocations might be missing from this research.

1. Conceptual Metaphors: The Nexus of Cognitive and Corpus Linguistics

The fields of conceptual metaphor research encompass various aspects of the society life. Cibulskiene (2012), Kapranov (2015), Gibbs (2015), Schoor (2015), Musolff (2016), Degani (2018), Ghentulescu (2018), Greavu (2018), Zibin (2018), Chatti (2019), Kwon (2019), Smith (2019), Marissa (2020) address metaphors in political discourse. Conceptual metaphors of poetry, painting, cinema, music are analysed in Forceville and Rencken's (2013), Seskauskiene and Levandauskaite's (2013), Poppi and Kravanja's (2019), Rasse, Onysko and Citron's (2020) works. Health issues are addressed in Trčková's (2015), Lazard, Bamgbade, Sontag and Brown's (2016), Dobrić and Weder's (2016),

Sumanova's (2017), Coll-Florit and Climent's (2019) studies. Santa, Waitkuweit, and Erana (2017), Seskauskiene and Urbonaite (2018) study legal discourse metaphorisation. Conceptual metaphors in marketing are in the focus of Sundar and Noseworthy's (2014), Mulken, Hooft, and Nederstigt's (2014), Pérez-Hernández's (2019) research. Economy is conceptualised in works by Huili, Runtsova and Hongjun (2013), Popescu (2017), Romova and Varley (2017), Burgers and Ahrens (2020).

As Evans and Green (2006, p. 3) report, the cognitive aspect of linguistic field of study emerged out of dissatisfaction with the formal approaches to language, as well as the advancement of cognitive science. Cognitive linguistics, like traditional linguistics, focuses on the systematicity, structure, and functions of language; however, it also takes into account the aspect of cognition, i.e. the thought of the human mind. The cognitive commitment aims to implement the results from other disciplines related to cognition that are separate from traditional linguistics in the study of language.

The pioneers of Conceptual Metaphor Theory (CMT) are Lakoff and Johnson (1980). Before their work had been published, metaphor was mostly seen as a stylistic device of language and an element of rhetoric and literature. CMT initially was devised with the aim to identify "pervasive and systematic patterns in metaphorical expressions that were found to reflect mappings between conceptual domains of knowledge" (Amin, Jeppson and Haglund, 2015, p. 747). It distinguishes between metaphorical expressions, which are also called 'linguistic metaphors', and conceptual metaphors. Conceptual metaphors have a cognitive concept, which not necessarily appears in the actual text, but it "serves as a kind of a reference point for concrete statements, which occur in the discourse and exemplify the particular conceptual metaphor" (Romova and Varley, 2017, p. 81).

Conceptual metaphor is composed of two conceptual domains. The following formula is usually used to describe a conceptual metaphor: CONCEPTUAL DOMAIN A IS CONCEPTUAL DOMAIN B (Kövecses, 2010, p. 4). The formula uses small capital letters to show that it represents conceptuality and such wording is not found in language. The conceptual domain that we use to understand another conceptual domain is source domain, which corresponds to CONCEPTUAL DOMAIN B. The conceptual domain that is understood in terms of another conceptual domain is target domain and it corresponds to CONCEPTUAL DOMAIN A. Thus, the formula takes appearance TARGET DOMAIN IS SOURCE DOMAIN.

Some of the most widespread examples of conceptual metaphors are understanding of an argument in terms of war, life in terms of journeys, love in terms of journeys, theories in terms of buildings, ideas in terms of food, and social organizations in terms of plants. For example, our experience and knowledge about war help us understand the concept of arguments. This kind of conceptual metaphor structure is called cross-domain mapping (Evans and Green, 2006, p. 286).

Han (2014) reiterates ideas about cross-domain conceptual mapping and claims that conceptual metaphors are the base for everyday English. They come into existence "when its structure signals that the addressee has to move away their attention momentarily from the target domain of the utterance or even phrase to the source domain that is evoked by the metaphor-related expression" (Steen, 2015, p. 68). Metaphor usage helps the speaker

to render the ideas more efficiently by adding the perspective of an external source domain “that sets a common ground upon which speaker and audience can (re)consider certain aspects of the topic at hand” (Silvestre-López, 2020, p. 38).

Source domains are often grounded in a person’s emotional, physical, bodily experience of the concept, referring to the target domain. We use physical things that we have more experience with, like war, journeys, buildings, and food to understand concepts that are more abstract or actions like arguments, love, theories, and ideas. Since the majority of our experience comes from contact with the physical world, it is understandable that we will use it to comprehend abstract concepts. This is also why most of the time the formula TARGET DOMAIN IS SOURCE DOMAIN is irreversible.

Identification of source domains of conceptual metaphors is closely related to a surface expression, which can come in the form of collocations. The term collocation encompasses both the semantic and syntactic association between words. A lexical item that collocates with another and forms a collocation is called a collocate.

According to Crystal (1998, p. 105), the association of ideas has nothing to do with collocations, since, often, words that are able to collocate have no distinct connection or association between them. As an example, he provides collocations *green with jealousy* and *white coffee*. As it can be seen, there is no association between *green* and *jealousy*, because jealousy does not possess green colour, and white coffee does not literally look white.

Different criteria for the classification of collocations are applied. O’Dell and McCarthy (2008 p. 10) distinguish collocations according to their strength of association: strong, fixed, and weak (2008, p. 8). Collocations may also differ according to the grammatical types: verb + noun, noun + verb, noun + noun, adjective + noun, adverb + adjective, verb + adverb/prepositional phrase, and more complex collocations. Lindquist (2013, p. 73) provides two more collocation classifications: collocations in a window and adjacent collocations. Window collocation is a collocation where to the left or the right of the collocation keyword there are ‘windows’, i.e. linguistic elements that do not belong in the collocation. Adjacent collocation occurs when the collocation appears with no ‘windows’ (Lindquist, 2013, p. 78).

A difference between a collocation and an idiom should be distinguished. Collocations are combinations of words in a language that happen very often and more frequently than would happen by chance, while idioms are groups of words whose meaning is different from the individual words. Deignan (2005, p. 197) paid attention to the usage of collocations in both literal and metaphorical ways. CMT researchers often employ collocations in conceptual metaphor research.

Application of possibilities provided by corpus linguistics extended the field of research in conceptual metaphors and collocations significantly, and linguists had “to revise their reservations against the Web and in fact increasingly turn to it as their prime source of language data” (Lampert, 2009, p. 155).

In modern studies, research of conceptual metaphors is usually based on corpora. Corpora may be used in research by employing two different methodologies: corpus-based and corpus-driven. The terms and the distinction between them were first introduced

by Tognini-Bonelli (2001). She claimed that corpus-based approach is used to examine an already existing linguistic theory and find supporting evidence. In this situation, the corpus is a source of proof or disproof for the researcher's hypothesis. On the other hand, corpus-driven approach regards the corpus as a source of theory. The researcher builds their hypothesis according to the evidence found in corpus.

Despite the benefits provided by corpus linguistics, researchers face multiple difficulties. Lindquist (2013, p. 119) mentions that it is not always easy to find metaphor in corpus, since most corpora do not come with explanations of metaphorical meaning. Deignan (2005, p. 85) also claims that human intuition for certain language units may not be sufficient to find or notice necessary data.

Lindquist (2013, p. 119) suggests three solutions to these problems: starting with the source domain, starting with the target domain, and starting from the manual analysis. Starting with the source domain means taking WAR from ARGUMENT IS WAR, choosing words associated with it, and searching for metaphors formed with those words. The method of starting with the target domain suggests that one should search for metaphors containing the word used to name the target domain, i.e. argument from ARGUMENT IS WAR (Lindquist, 2013, p. 121). Finally, starting from manual analysis, one needs to start from a small corpus and manually search for all or required metaphors (Lindquist, 2013, p. 124). Later, this data can be used to search a bigger corpus.

2. Source Domains

2.1. *Source domains of the target domain SCENT*

The metaphorical collocations with the target domain SCENT were grouped under three conceptual metaphors containing these source domains: OBJECT, SUBSTANCE, and PHYSICAL FORCE. The identified metaphorical collocations in COCA are used in different contexts which are further explained in the research.

SCENT IS AN OBJECT is the conceptual metaphor that resulted in the biggest number of metaphorical collocations collected for the word *scent* (1512 CL). The common feature of these metaphorical collocations is that *scent* receives the characteristics common for physical objects that can be touched or seen. The collected CL indicated that animate entities like people and animals, inanimate things like plants, flowers, food, clothes, materials, times of a day, liquids, body parts, and places can be the possessors of scent.

The metaphorical collocations that underlie this conceptual metaphor were further subdivided into three categories according to the semantic type of an object in the source domain: an unspecified object, a moving object, and a sharp object.

Eight metaphorical collocations were assigned to the source domain within **the first category** of unspecified objects: *have + sent*, *give of + scent*, *carry + scent*, *leave + scent*, *lose + scent*, *pick up + scent*, *heavy + scent*, *beautiful + scent*. Scent is metaphorised as an object that can be possessed, produced, held, carried, lost, left, picked up, can have weight, and can be aesthetically pleasing, e.g.:

- (1) For Dena, the cottage *has the scent* of family, of a warm bed recently abandoned [...].
- (2) The woman *gave off a scent* of patchouli oil that sent me back to my college years.
- (3) Despite this, the political air still *carries* the pungent *scent* of Bush fatigue, and the GOP base?
- (4) Bucks certainly *left their scent* when they urinated over their tarsal glands into a scrape.
- (5) You *lose the scent* or feel of a lover's presence, an old friend's voice, the [...].
- (6) A breeze came through the open door, and I *picked up the scent* of dogs.
- (7) A sudden heart attack wouldn't explain the *heavy scent* of blood.
- (8) Just taking a second to sit and smell a *beautiful scent* really makes all the difference in my day and allows me to go on mental [...].

The second category of OBJECT domain includes the metaphorical collocations where scent is metaphorized as a moving object. Six metaphorical collocations were assigned to this group: *scent + come*, *scent + drift*, *catch + scent*, *follow + scent*, *release + scent*, *scent + waft*. Overall, 623 CL contained these metaphorical collocations. The common feature of this category is that scent is described as an object that can move by itself, can be moved or followed, e.g.:

- (9) [...] the faint *scent came* from the owl deer having been near the stag.
- (10) The night *scent drifts* from 20 yards away through my bedroom window.
- (11) Our drones *followed the scent* of your body chemistry through the tunnels and reported back.
- (12) He *caught the scent* of a hot dog cart from down the street and gagged.
- (13) He'd let her splat the stiff foam between her palms and *release the scent* of amber wood into the air.
- (14) The teasing *scent* of a hare *wafted* on the thin breeze.

The third category includes metaphorical collocations where scent is metaphorized as a sharp object. Two metaphorical collocations were found in 113 CL: *pungent + scent*, *sharp + scent*, e.g.:

- (15) From my ridgetop perch in the dim twilight, surrounded by the *pungent scent* of desert rain clouds, I read the end of Abbey's essay [...].
- (16) The *sharp scent* of old souls trapped in the carpet and the peeling wallpaper.

SCENT IS SUBSTANCE is the conceptual metaphor that is related to two metaphorical collocations (66 tokens) formed with the word *scent*, and where the source domain is perceived as a substance: *fill with + scent*, *scent + fill*. The common feature of these metaphorical collocations is that scent is treated as a substance that can fill somebody or something, e.g.:

- (17) Queen Victoria kept her castle *filled with the scent*.
- (18) He groaned, and the *scent* of burning flesh *filled* the rainy evening.

SCENT IS A PHYSICAL FORCE is the conceptual metaphor found in 95 CL. The feature of this conceptual metaphor is that scent is conceptualised as something that has physical force. In the CL, only one metaphorical collocation was identified: *strong + scent*, e.g.:

- (19) I quickly pull on his sweater and am immediately hit by a *strong scent* that smells just like Mason.

2.2. Source domains of the target domain FRAGRANCE

The metaphorical collocations with the target domain FRAGRANCE were grouped under two conceptual metaphors containing these source domains: OBJECT and SUBSTANCE. 108 CL contained analysed metaphorical collocations.

Three metaphorical collocations were grouped under the conceptual metaphor **FRAGRANCE IS AN OBJECT** found in 84 CL: *have + fragrance*, *light + fragrance*, *heavy fragrance*. An object in these collocations is unspecified. Fragrance can be possessed by humans, plants, body parts, liquids, materials, and food. It can be considered as a possession or a thing having weight. Fragrance can fill air, places, and body parts, e.g.:

- (20) This magnolia *has* a wonderful *fragrance* and is maintenance free (always a bonus).
 (21) I used a combination of grapefruit and bergamot essential oils for a *light* and refreshing *fragrance*.
 (22) [...] sighted a blood-red lotus right under her. As if sucked down by its *heavy fragrance*, she dove into its heart.

The conceptual metaphor **FRAGRANCE IS A SUBSTANCE** (24 tokens) is similar to **SCENT IS A SUBSTANCE**, in which the target domain is regarded as a substance that can fill somebody or something. Only one metaphorical collocation was identified in 24 CL: *fragrance + fill*, e.g.:

- (23) The rich, fruity *fragrance filled* my nostrils.

2.3. Source domains of the target domain AROMA

Three hundred and one CL with *aroma* contained metaphorical collocations which underlie three conceptual metaphors where the source domains are OBJECT, PHYSICAL FORCE, FOOD, and SUBSTANCE.

Two hundred and twenty seven instances of three metaphorical collocations of the conceptual metaphor **AROMA IS AN OBJECT** were identified in CL: *have + aroma*, *aroma + waft*, *pungent + aroma*. The aroma can be possessed by plants, smoke, processes, liquids, food, places, and body parts. The things that can be filled with aroma are places and body parts.

The metaphorical collocations were subdivided into three categories according to the semantic type of an object: an unspecified object, a moving object, and a sharp object.

The first category includes 89 cases of one metaphorical collocation *have + aroma* where aroma is metaphorized as an unspecified object with the features of a physical object. In these collocations, aroma is treated as a possession of an object, e.g.:

- (24) Fresh tips: Nuts should *have* a mild *aroma* and fresh taste.

The **second category** includes 72 instances of one metaphorical collocation *aroma* + *waft* where *aroma* is metaphorized as a moving object that can move by its own means or can be moved by external forces, e.g.:

- (25) The bird has been in the oven long enough to send its *aroma wafting* through the house, and now the gathered clan sits at the table.

The **third category** includes 66 instances of one metaphorical collocation where *aroma* is metaphorized as a sharp object. In *pungent* + *aroma* metaphorical collocations, similarly to the instance with scent, *aroma* is described as something tasting and smelling sharp. For example:

- (26) Saffron stains her fingers orange and adds a *pungent lobster aroma*.

AROMA IS A PHYSICAL FORCE is the conceptual metaphor formed with the target domain *aroma*. 32 instances of one metaphorical collocation *strong* + *aroma* were found. The following example illustrates this conceptualization:

- (27) The whole thing, says Danforth, has a very definite and *strong aroma* to it.

AROMA IS FOOD is the conceptual metaphor related to three metaphorical collocations: *savor* + *aroma*, *appetizing* + *aroma*, *mouth-watering/mouthwatering* + *aroma* (22 tokens). The distinctive quality of this conceptual metaphor is that *aroma* is conceptualised as food, which is tasty, e.g.

- (28) He entered the old half-timbered house, pausing for a moment to *savour* the lingering *aroma* of fattened carp poached in a pungent vinegar sauce.
(29) She carried a large clay bowl from which came an *appetizing aroma* both sweet and spicy.
(30) Maps that are populated by the *mouth-watering aroma* of frying samosas at the corner tea-stall [...].

AROMA IS SUBSTANCE is the conceptual metaphor, which is related to 20 tokens of one metaphorical collocation: *fill with* + *aroma*. The characteristic feature of this conceptual metaphor, the same as with scent, is that *aroma* is something that can be put into an empty space or it can fill a space, e.g.:

- (31) The whole house was *filled with the aroma* of baking bread.

2.4. Source domains of the target domain **PERFUME**

Nineteen CL contained metaphorical collocations with the target domain **PERFUME**, which underlie three conceptual metaphors with the source domains **OBJECT**, **SUBSTANCE**, and **PHYSICAL FORCE**.

PERFUME IS AN OBJECT is the conceptual metaphor the source domain of which is further subdivided into two categories according to the semantic type of an object: an unspecified object, and a moving object. Perfume acts as a substance and fills a parlour, office, cabin, air, body parts, and other places. Perfume can be of plants, liquids, and abstract concepts.

The first category includes one metaphorical collocation (six tokens) where perfume is metaphorized as an unspecified object: *give off + perfume*. In the same way as with *scent*, *fragrance*, and *aroma*, the feature of this category is that *perfume* is conceptualised as a physical object that can be touched or seen and can be produced or transferred by somebody or something from one place to another, e.g.:

- (32) [...] creamy, and wilted in their pink foil-covered pots. They *gave off* a powerful *perfume*.

The second category contains one metaphorical collocation (four tokens) where perfume is metaphorized as a moving object: *release + perfume*. In the metaphorical collocation perfume is an object that can be given free movement by somebody or something, e.g.:

- (33) [...] include plants such as mock orange, butterfly bush and honeysuckle that *release* their *perfume* in the evening.

PERFUME IS A SUBSTANCE is the conceptual metaphor, which underlies one metaphorical collocation in six CL: *perfume + fill*. Similar to the cases with *scent* and *fragrance*, the feature is that *perfume* is treated as something that is similar to a substance that can fill an empty space, e.g.:

- (34) Beautiful blooms unfurl in the warmth of the summer sun, their sweet, spicy *perfume* *filling* the air.

PERFUME IS A PHYSICAL FORCE is the conceptual metaphor underlying one metaphorical collocation in three CL: *strong + perfume*. Similarly to *scent* and *aroma*, the quality of this conceptual metaphor is that perfume is conceptualised as something that is similar to a physical force, e.g.:

- (35) Besides being good to eat, the apricot has a *strong perfume* that was thought to be revitalizing.

3. Frequency distribution of source domains

Table 1 illustrates the number of tokens of metaphorical collocations assigned to conceptual metaphors.

The source domain OBJECT resulted in the highest number of tokens of metaphorical collocations, i.e. 84%. It means that smells are prevalently conceptualised as objects that have physical qualities. OBJECT as a source domain appeared in the first position in conceptual metaphors with all target words *scent*, *perfume*, *fragrance*, and *aroma*.

The second most frequent source domain is SUBSTANCE, with 9% of all tokens. SUBSTANCE resulted in a significantly lower number of metaphorical collocations, but the domain was also found in conceptual metaphors of all target domains.

The third recurrent source domain is PHYSICAL FORCE taking up to 6% of the total number of tokens representing the domains. This source domain was not found in the conceptual metaphors with the word *fragrance*.

Table 1. Number of tokens in conceptual metaphors formed with target domains SCENT, PERFUME, FRAGRANCE, and AROMA¹

Conceptual metaphor	To-kens*	Conceptual metaphor	Tokens	Conceptual metaphor	Tokens	Conceptual metaphor	Tokens	Total
SCENT IS AN OBJECT	1512	PERFUME IS AN OBJECT	10	FRAGRANCE IS AN OBJECT	84	AROMA IS AN OBJECT	227	1833 (84%)
SCENT IS A SUBSTANCE	152	PERFUME IS A SUBSTANCE	6	FRAGRANCE IS A SUBSTANCE	24	AROMA IS A SUBSTANCE	20	202 (9%)
SCENT IS A PHYSICAL FORCE	95	PERFUME IS A PHYSICAL FORCE	3			AROMA IS A PHYSICAL FORCE	32	130 (6%)
						AROMA IS FOOD	22	22 (1%)
Total	1759		19		108		301	2187

*tokens of metaphorical collocations

The fourth source domain, according to frequency of usage, is FOOD. This source domain resulted in the lowest number of metaphorical collocations and took only 1% of the total number of metaphorical collocations. Source domain FOOD was found only in metaphorical collocations formed with *aroma*.

Conclusions

1. In the English language, pleasant smell denoting words *scent*, *fragrance*, *aroma* and *perfume* underlie conceptual metaphors with the following source domains: OBJECT, SUBSTANCE, PHYSICAL FORCE, and FOOD.
2. The source domains of metaphorical collocations formed with fragrance are OBJECT and SUBSTANCE. The source domains of metaphorical collocations formed with *scent* and *perfume* are OBJECT, SUBSTANCE, and PHYSICAL FORCE. The source domains of metaphorical collocations formed with *aroma* are OBJECT, SUBSTANCE, PHYSICAL FORCE, and FOOD.
3. Metaphorical collocations with pleasant smell denoting words that underlie the conceptual metaphor with OBJECT as a source domain fell into three categories according to the semantic type of an object: an unspecified object, a moving object, and a sharp object.
4. The frequency analysis showed that the most frequent source domain of the metaphorical collocations with *scent*, *fragrance*, *aroma*, and *perfume* is OBJECT with 84% of frequency. SUBSTANCE ranked second with 9%. PHYSICAL FORCE ranked third with 6%. The least frequent is FOOD with 1%.
5. In the English language, the biggest number of metaphorical collocations with the pleasant smell denoting words belongs to the word *scent*, i.e. 80.4% of all occurrences of metaphorical collocations.

¹ Tables in this paper have been produced by the authors.

6. The analysis revealed that in the English language pleasant smell denoting words are most frequently conceptualised as an object because the very meaning of different smells is understood as the quality of something or a distinctive attribute, i.e. as a phenomenon having the meaning of thingness. Another reason for the high frequency of object related conceptualisation of smells is the fact that in the English language abstract and concrete phenomena are very often conceptualised as objects. The research proved that words *scent*, *fragrance*, *aroma*, and *perfume* do not make an exception in this respect.

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