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A COMPARATIVE ANALYSIS OF GENDER DIFFERENCES IN THE METAPHORICAL USE OF COOKING TECHNIQUES TERMS IN ENGLISH: A FRAME-SEMANTIC AND LEXICO-GRAMMATICAL APPROACH

Abstract. The aim of the paper is to offer a comparative, corpus-based, frame-semantic and lexico-grammatical analysis of gender differences in the frequency of the metaphorical use of three cooking techniques terms: grill, stew and roast. The study reveals that men use metaphors drawn from the three concepts more frequently than women, whereas women are more likely to use them in a non-metaphorical context. The application of the frame-semantic and lexico-grammatical perspective has enabled us to provide a multi-aspectual description of metaphorical linguistic expressions. It is claimed that the differences in the frequency of the metaphorical use of the analysed terms can be accounted for with the sociolinguistic approach according to which language and the notion of gender are believed to be intrinsically interrelated. In view of the above, it is believed that women's lexical choices are shaped by those aspects of their life which are stereotypically considered to be exclusively feminine.

Keywords: conceptual metaphor; corpus BNC; grill; stew; roast; lexico-grammatical approach; frame semantics; cooking techniques; gender differences

LEKSYKALNO-GRAMATYCZNA ANALIZA PORÓWNAWCZA RÓŻNIC PŁCIOWYCH W METAFORYCZNYM UŻYCIU TERMINÓW WYRAŻAJĄCYCH TECHNIKI KULINARNE W JĘZYKU ANGIELSKIM W ŚWIETLE TEORII RAM SEMANTYCZNYCH

Abstrakt. Artykuł oferuje leksykalno-gramatyczną analizę różnic międzypłciowych związanych z metaforycznym użyciem trzech angielskich czasowników wyrażających techniki kulinarne w ujęciu ram semantycznych: *grill*, *stew* i *roast*. Badanie wykazuje, iż mężczyźni wykazują większą tendencję od kobiet do używania wymienionych jednostek leksykalnych w znaczeniu metaforycznym, podczas

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gdy kobiety częściej używają ich w kontekście niemetaforycznym. Zastosowania paradygmatu Teorii Metafory Pojęciowej w leksykalno-gramatycznej analizie metafor w świetle Teorii Ram Semantycznych umożliwiło uzyskanie szczegółowego obrazu właściwości semantycznych i gramatycznych analizowanych czasowników. Twierdzi się, że różnice w częstotliwości metaforycznego użycia omówionych jednostek leksykalnych można wyjaśnić za pomocą podejścia socjolingwistycznego, zgodnie z którym język i płeć to pojęcia silnie powiązane. W związku z powyższym wykazane różnice mogą wynikać z ról społecznych związanych z płcią będących konsekwencją oczekiwań kierowanych wobec kobiet i mężczyzn, które z kolei są rezultatem stereotypowego myślenia.

Słowa kluczowe: metafora pojęciowa; korpus BNC; *grill*; *stew*; *roast*; lingwistyka korpusowa; analiza korpusowa; techniki kulinarne

INTRODUCTION

It should come as no surprise that linguists have made numerous attempts to examine the reflections of gender differences in language use. Following the second wave of feminism in Western societies in the 1960s and 1970s, Lakoff's (1975) *Language and Woman's Place* is believed to have inaugurated the research on the relationship between gender and language. Ever since then the question of how gender stereotypes influence various aspects of language has attracted the attention of linguists. More specifically, much focus has been devoted to such linguistic aspects as lexical choice (Dubois & Crouch, 1975; Lakoff, 1973, 1975; McGlone & Pfister, 2015; Coates, 1986, 1993; Bayard & Krishnayya, 2001; Stapleton, 2003, Aries & Johnson, 1983; Herring, 1993; Tannen, 1990; Bucholtz & Hall, 1995; Bonvillain, 2003; Goddard & Patterson, 2003; Herring & Paolillo, 2006; Karwatowska & Szpyra-Kozłowska, 2010), phonological forms such as pronunciation, intonation, pitch and volume (e.g. Trudgill, 1972; Weiss, 1970; Lakoff, 1975; Tahta et al., 1981; Fishman, 1980; Weatherall, 2002) as well as syntactic variations (cf. Cornett, 2014; Tse et al., 2002). However, we believe the impact of gender differences on the formation of figurative language has not received enough attention. For this reason, the present paper attempts to narrow this gap by offering a comparative, corpus-based, frame-semantic and lexico-grammatical analysis of gender differences in the frequency of the metaphorical use of cooking techniques terms. More precisely, the paper will investigate metaphors drawn from the verbs *grill*, *stew* and *roast*.¹

¹ The analysis is partly based on my previous study of *grill*, *stew* and *roast* published in Izdebska (2019).

In Rusinek (2015) we managed to reveal the existence of gender differences in the frequency of the metaphorical representation of *boil*, *cook* and *simmer*. The analysis of the data demonstrated that women more frequently use the three basic-level concepts in a non-metaphorical context, whereas men apply them more frequently with a metaphorical meaning. The analysis of the data in the present study has revealed the same tendency with respect to the metaphorical and non-metaphorical use of *grill*, *stew* and *roast*. The data indicates that men use metaphors drawn from the concepts *grill*, *stew* and *roast* more frequently than women, whereas women are more likely to use them in a non-metaphorical context. In view of the above, it seems justified to claim that not only does the present paper corroborate our previous research (Rusinek, 2015), but it also provides further support for the claim that women's lexical choices are shaped by those aspects of their life which are stereotypically considered to be exclusively feminine (Lakoff, 1975, 2004).

1. DATA AND METHODOLOGY

The present study is based on the theoretical framework of the Conceptual Metaphor Theory, as proposed by Lakoff and Johnson (1980, 2003) and Kövecses (2010a) together with Fillmore's (1975, 1976, 1977, 1982, 1985) Frame Semantics, henceforth referred to as FS. The lexico-grammatical representation of the metaphorical meaning possible through a frame-semantic analysis is supposed to yield a detailed picture of numerous nuances concerning some semantic and grammatical properties of the analysed verbs, otherwise not accessible through the CMT. The analysis will be based on authentic data drawn from the British National Corpus (BNC). For the purpose of identifying the metaphorically used words in the corpus, the Metaphor Identification Procedure (MIP) proposed by the Pragglejaz Group (2007) has been applied to the data. After MIP was carried out, we selected specimen sentences containing the cooking techniques verbs suitable for our analysis. We first provide a brief characterisation of the literal meanings of the discussed verbs and then offer a more detailed account of their metaphorical use. Depending on the evoked frames and the context, we distinguish separate lexical units (referred to as LUs²) for different senses of the same word. For the definitions of particular

² In FrameNet we talk about lexical units rather than words as belonging to a particular frame. A lexical unit (LU) is described as a pairing of a lemma and a frame, or as a pairing of a word with

frames and the information about their frame elements we have drawn on FrameNet.³ Through the description of frames and frame elements, we define the meaning of the analysed words against the proposed frames. The frame-semantic approach to the metaphorical linguistic expressions enables us to study the semantic and syntactic combinatory properties of the analysed COOKING TECHNIQUES verbs. The investigated COOKING TECHNIQUES verbs will be scrutinized in terms of their syntactic and semantic valency. While syntactic valency of the verbs will be described in terms of the number and type of complements they take (complements or adjuncts) and the syntactic category and function of these constituents,⁴ semantic valency will be specified by recourse to semantic roles, also referred to as thematic relations. In the present paper the arguments will be characterized with respect to their semantic roles expressed in terms of frame elements. Next, the sentences will be annotated manually. Arguments associated with the analysed verbs representing a particular COOKING TECHNIQUE, i.e. the target, will be detected and labelled with frame elements they express with respect to the target word. Unexpressed arguments are described in terms of definite, indefinite or constructional null instantiation.⁵ Last but not least, valency patterns for each of the lexical unit of the given verb will be identified and the annotated corpus citations will be used to illustrate how these valency patterns are instantiated in actual sentences. In the FrameNet terminology, grammatical function corresponds to syntactic functions, such as Subject or Object and phrase types are equivalent to syntactic categories, such as a noun phrase (NP), prepositional phrase (PP) or a determiner phrase (DP).

one of its meanings. In other words, a lexical unit might be described as a lemma in one of its senses, where a lemma is understood as a unit made up of one or more lexemes and a lexeme is defined as a word in a given part of speech instantiated by one or more word-forms. For more information on FrameNet see the next footnote.

³FrameNet is a lexical database of English, based on FS and supported by empirical corpus evidence from the English language corpora, primarily the British National Corpus. See <https://framenet.icsi.berkeley.edu>

⁴ While syntactic category in the FrameNet project is referred to as phrase type, syntactic function is called a grammatical function or a grammatical relation.

⁵ Null instantiation is the omission of a verb argument. In the FrameNet methodology (Hilpert, 2014; Ruppenhofer et al., 2016) three types of null instantiation with regard to the definiteness of the omitted argument are distinguished: definite null instantiation (DNI), indefinite null instantiation (INI) and constructional null instantiation (CNI). See Hasegawa et al. (2014), and Ruppenhofer et al. (2016, pp. 25–26) for a discussion on the three types of null instantiation.

2. FINDINGS AND DISCUSSION

2.1 GRILL

There are 191 citations of *grill* in the BNC corpus altogether. The total number of hits for *grill* in the BNC texts written by male and female authors is 35 and 45, respectively. Altogether, there are 27 examples of the metaphorical use of *grill* and 53 instances of its non-metaphorical use. Out of 35 male uses of *grill* in the BNC, metaphorical expressions account for 57.2% (20 hits), whereas in the case of women, out of 45 examples of *grill* written/spoken by women, only 15.6% (7 hits) constitute metaphorical expressions. Thus, the data indicate that men use *grill* metaphors more frequently than women, as men are 41.6 percentage points more likely than women to use the concept *grill* metaphorically.

The application of the frame-semantic approach to the BNC-based study of *grill* has allowed us to distinguish two different senses of *grill*, each linked to a different semantic frame. While LU-1 represents the non-metaphorical use of *grill* and evokes the Apply_heat frame, LU-2 of *grill* amounts to the metaphorical meaning and evokes the Questioning frame. LU-1 of *grill* evokes the Apply_heat frame in which a Cook applies Heat to Food by exposing it to a Heat_source. In this sense *grill* denotes the activity of cooking food over fire or hot coals, usually on a metal frame, using a grill or some other similar apparatus. In the literal sense *grill* is a divalent verb, as instantiated by the following examples:

- (1) Down by the river [the boys COOK: DP: SUBJECT] fish with rods cut straight from the surrounding forest and **grill** [their catches FOOD: DP: DIRECT OBJECT] [on an open fire HEAT_SOURCE: PP: ADJUNCT].

LU-2 of *grill* refers to the activity of subjecting somebody to intense questioning or interrogation (after *OED*). In this sense *grill* can be understood as evoking the Questioning frame in which a Speaker asks an Addressee questions. Topic specifies the content of the questions. As far as the noncore elements are concerned, these include Internal Cause, Manner, Medium and Time. LU-2 of *grill* is a divalent verb and the core elements that are obligatory to satisfy the valency of the verb are the Addressee and the Speaker. In the active constructions represented by the citations in (2–6), the subject argument is expressed by a NP or DP and plays the role of a Speaker. In these citations the Addressee is the grammatical object of *grill*. Conversely, in examples (7)

and (8) *grill* is used in a passive voice and the Addressee role is expressed by a DP as a grammatical subject while the Speaker is either omitted under INI or CNI in (7) or is introduced by the *by*-phrase, as in (8).

- (2) [I SPEAKER: NP: SUBJECT] **grilled** [a man called George Evans, the managing director of their operations here on the Continent ADDRESSEE: DP: DIRECT OBJECT]. [TOPIC INI]
- (3) [Service wives SPEAKER: DP: SUBJECT] did not **grill** [their husbands ADDRESSEE: DP: DIRECT OBJECT] [about bloody work TOPIC: PP: ADJUNCT].
- (4) He took to it like a duck to water and from then on [he SPEAKER: NP: SUBJECT] 'd **grill** [me ADDRESSEE: NP: DIRECT OBJECT] [for hours DURATION: PP: ADJUNCT] [on end MANNER: PP: ADJUNCT] [about the various types of plays TOPIC: PP: ADJUNCT], [especially when we were watching it on TIME: PP: ADJUNCT].
- (5) [He SPEAKER: NP: SUBJECT] **grilled** [me ADDRESSEE: NP: DIRECT OBJECT] [severely MANNER: ADVP: ADJUNCT] [about the attitude and background of the character, the place he would occupy in the programme, his point of view, and innumerable other aspects of Byron which I had not yet thought about TOPIC: PP: ADJUNCT].
- (6) [The priest whom she eventually accosted SPEAKER: DP: SUBJECT] took one look at her, an ill-proportioned, arrogant child with cheap clips in her gaudy hair, and started **grilling** [her ADDRESSEE: NP: DIRECT OBJECT] [for an address TOPIC: PP: ADJUNCT].
- (7) He looked dismayed, as if the word conjured up a vision of a formal enquiry, with [everyone ADDRESSEE: DP: SUBJECT] being **grilled** [about their movements and the happy atmosphere of his beloved school fouled by dark suspicions TOPIC: PP: ADJUNCT]. [SPEAKER INI/CNI]
- (8) [The traveller ADDRESSEE: DP: SUBJECT] was then **grilled** [by the corrupt Indian border officials SPEAKER: PP: ADJUNCT]. 'Their custom was to take a quarter of everything brought in by the merchants and to exact a duty of seven dinars for every horse.' [TOPIC INI]

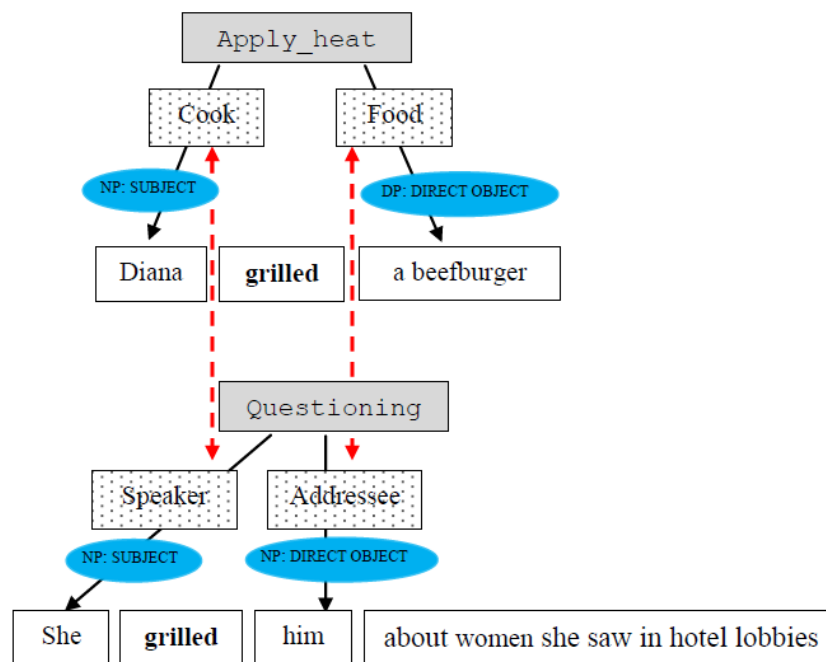
As for the Topic, it normally takes the form of a PP Complement with such prepositions like *about* (see examples (3–5) and (7)) or *for*, as represented by the example (6). What is more, it can also be omitted under INI (see examples (2) and (8)). Metaphorical linguistic expressions with LU-2 of *grill* instantiate the conceptual metaphor INTENSE QUESTIONING IS APPLYING HEAT and CRITICISM IS HEAT where a Speaker corresponds to the Cook and an Addressee is equivalent to the Food exposed to Heat. The correspondences of elements be-

tween the frames Apply_heat and Questioning are captured in Table 1 and Figure 1 below (as cited in Izdebska, 2019).

Table 1. Constituent mappings in the metaphor INTENSE QUESTIONING IS APPLYING HEAT between the frames Apply_heat and Questioning

Source: Apply_heat	Target: Questioning
food exposed to heat	addressee
cook grilling the food	speaker questioning the addressee
heat applied to the food	tough and difficult questions
grilling	asking difficult questions

Figure 1. Metaphorical mappings in the metaphor INTENSE QUESTIONING IS APPLYING HEAT between the frames Apply_heat and Questioning



As visible in Figure 1 above, the frame elements which participate in the mappings between the Apply_heat and Questioning frames correspond with each other in terms of the grammatical function and category. In the metaphor

INTENSE QUESTIONING IS APPLYING HEAT grilling somebody can be understood in metaphorical terms as asking people difficult questions and thus putting them in a difficult situation, just as if they were exposed to heat on a hot grill. In other words, tough and repeated questions are seen in terms of Heat to which the Food is exposed. This metaphor points to higher-level metaphors HUMAN PROPERTIES ARE THE PROPERTIES OF INANIMATE THINGS and HUMAN IS FOOD (Kövecses, 2010a, p. 154; Lakoff, 1987, p. 409) just like human properties such as behaviour, emotions or appearance are often projected onto inanimate objects (Nieuwland & van Berkum, 2006, p. 1109).

2.2 STEW

The BNC returned 89 hits for *simmer* and these instantiated 20 and 39 hits for *stew* in texts written by male and female authors, respectively. Altogether there were 11 male metaphorical expressions which account for 55% of all the male examples of the use of *stew*. Female metaphorical expressions are attested 16 times and thus constitute 41% of the total of female *stew* hits. Thus, the data indicate that men are 14 percentage points more likely than women to use the verb *stew* in a metaphorical manner. In the course of the frame-semantic analysis of *stew*, we have distinguished three different senses of *stew* evoking three different semantic frames. LU-1 and LU-2 constitute the literal uses of the word and evoke the Absorb_Heat and Apply_heat frames respectively. LU-3 is a metaphorical sense of *stew* and evokes the Emotions frame.

The meaning of LU-1 of *stew*, which is a monovalent verb, evokes the Absorb_Heat frame and is used to refer to some Food which undergoes stewing, i.e. slow cooking in a closed container. Very often, it is used with reference to tea which is undergoing the infusion process, as illustrated by the following example:

- (9) Do you want [a cup of tea FOOD: DP: SUBJECT] that's been **stewing** for three days?

LU-2 of *stew*, which evokes the Apply_heat frame, amounts to the idea of a Cook cooking the Food by boiling it slowly in a closed Container. Apart from the core frame elements Cook, Food and the Container, non-core elements which might also be expressed in the Apply_heat frame are a Medium and a Co-participant. Medium is a substance through which Heat is applied to the Food. Since the method of stewing involves the use of some kind of a liquid, the Medium is expressed by a DP referring to a liquid, as illustrated by (17)

below. In other words, the verb *stew* refers to a scenario in which a Cook cooks Food in a closed Container in a Medium kept at the simmering point. A Co-participant is the grammatically and conceptually less prominent of the two Food items to which the Heat is applied, expressed by a PP as an adjunct, see (11). The BNC examples below illustrate LU-1 of *stew*:

- (10) [Maggie COOK: NP: SUBJECT] had been **stewing** [meat FOOD: DP: DIRECT OBJECT], and now she rolled out pastry with a heavy glass roller like the one Mrs Martin had used in the Bradfords' kitchen.
- (11) **Stew** [very slowly MANNER: ADVP: ADJUNCT] [one quart of green gooseberries FOOD: DP: DIRECT OBJECT] [with half a pound of white sugar CO-PARTICIPANT: PP: ADJUNCT] [and enough water MEDIUM: DP: ADJUNCT] to prevent fruit from burning. [COOK DNI, CNI]
- (12) Melt the butter in a saucepan, add the nettles and **stew** [gently MANNER: ADVP: ADJUNCT] [for about 10 minutes DURATION: PP: ADJUNCT]. [COOK DNI, CNI] [FOOD DNI, CNI]

As is the case with the majority of verbs denoting a cooking technique used in their literal sense, the frame element Food is either expressed as a direct object of *stew* or is omitted under DNI and CNI in imperative constructions (example (12)). Both in (11) and (12) the implicit subject of *stew* is retrievable and null instantiation makes it possible to maintain reference without the necessity to repeat the referent.

The analysis of the metaphorical linguistic expressions with *stew* derived from the corpus has allowed us to identify one metaphorical sense of *stew*, which evokes the Emotions frame. LU-3 of *stew* serves to describe an Experiencer's emotional state of anger or anxiety. In other words, *stew* is used in the meaning 'be angry or worried about something'. *Stew* in this sense can function as both a monovalent and a divalent verb the subject of which functions as the Experiencer, as illustrated by the following sentences:

- (13) [He EXPERIENCER: NP: SUBJECT]'s been sitting there **stewing** [all day DURATION: ADVP: ADJUNCT] [over that CAUSE: PP: DIRECT OBJECT].
- (14) [We EXPERIENCER: NP: SUBJECT] **stew** [for some time DURATION: ADVP: ADJUNCT].

The Cause of the Emotion is expressed in (13) in the form of a PP direct object headed by *over*. *Stew* is often found in constructions with the verbs *let* and *leave* such as in 'let somebody stew' or 'leave somebody stew', which evokes both the Letting and Emotions frames. The two expressions are used to de-

scribe a scenario in which a person, who can be interpreted as a Grantor, lets the Experiencer, i.e. a Grantee be alone in order to give her or him the opportunity to remain in a state of anger, uneasiness or suspense and think about what has happened or what they have done. Witness the following examples of LU-2 of *stew* used with the verbs *let* and *leave*:

- (15) James MacDiarmid will be expecting us, so [we GRANTOR: NP: SUBJECT] will let [him EXPERIENCER/GRANTEE: NP: DIRECT OBJECT] **stew** [a bit DEGREE: ADVP: ADJUNCT].
- (16) [Christine GRANTOR: NP: SUBJECT] let [him EXPERIENCER/GRANTEE: NP: DIRECT OBJECT] **stew** [in it SEAT_OF_EMOTION: PP: ADJUNCT] [for a few moments DURATION: PP: ADJUNCT].
- (17) But leave [him EXPERIENCER/GRANTEE: NP: DIRECT OBJECT] to **stew**, if that's your humour. [GRANTOR DNI,CNI]

Sentences (15–17) need to be analysed with reference to both the Letting and Emotions frames due to frame element conflation postulated in these examples as well as the presence of frame elements belonging to these two frames. In sentences (15) and (16) the subject *we* and *Christine* stand for the Grantor who gives the permission to the Experiencer. Grantor is omitted in (17) because of the imperative constructions under CNI. Frame element conflation is found in (15–17), where the direct object of *let* and *leave* realises both the Experiencer and the Grantee, i.e. the person who is being permitted. In sentences (18–19) below *stew* appears in the construction *stew in one's own juice/juices*, which literally could be interpreted as referring to boiling Food for a long time in its own gravy, i.e. a Medium. However, the expressions below are used metaphorically to describe a scenario in which a person is left alone to suffer the consequences of one's own actions. *Juice* corresponds to the frame element *Seat_of_emotion* which functions as an adjunct expressed via a PP headed by *in*:

- (18) Give it to me, Lori, or so help me [I GRANTOR: DP: SUBJECT] will go to the police and let [you EXPERIENCER/GRANTEE: NP: DIRECT OBJECT] **stew** [in [your own juice EXPERIENCER: DP] SEAT OF EMOTION: PP: ADJUNCT].
- (19) [She EXPERIENCER: NP: SUBJECT] could **stew** [in [her own juice EXPERIENCER: DP] SEAT OF EMOTION: PP: ADJUNCT].

Metaphorical linguistic expressions with *stew* instantiate the metaphors EMOTION IS A FLUID, ANGER IS HEAT and THE BODY IS A CONTAINER FOR EMOTIONS. As it has already been implied many times, the way people talk about emotions is firmly grounded in the ways in which people experience

particular emotions. Due to physiological effects that accompany the experience of anger, human body is conceptualised as a container for emotions and emotions are understood as a fluid. Moreover, the intensity of emotion is conceptually correlated with the degree of heat. When we say that somebody stews or stews in one's own juice, what actually is understood to be metaphorically stewing is the Emotion, conceptualised as a Fluid in a Container, i.e. a human body. Thus, the emergence of such expressions as "somebody stews" or "let somebody stew in one's juice" is motivated and driven by the metonymies CONTAINER FOR CONTENTS and BODY FOR A HUMAN BEING. While emotions metaphorically captured as a fluid metonymically refer to the body, i.e. a container, and the body metonymically stands for the whole person. In line with Kövecses (1990, p. 54), we also believe that *stew* indicates a long duration, not only of the cooking activity, but also a continuation of negative emotions. This meaning component is strengthened by the frequent presence of the frame element Duration expressed via a PP adjunct such as *all day* or *for some time* (cf. examples (13–14)). The metaphorical linguistic expression with *stew* modified by the PP adjunct headed by *over* in (13) instantiates the metaphors IDEAS ARE FOOD and THINKING IS COOKING in which the abstract concept of ideas is captured in terms of the tangible concept of food. Just like we *think over* ideas, we also *stew over* them. The metaphor IDEAS ARE FOOD is motivated by perceived structural similarities induced by the basic metaphors IDEAS ARE OBJECTS and THE MIND IS A CONTAINER.

In Table 2 and Figure 2 below we illustrate the basic constituent mappings in the ANGER IS HEAT metaphor with the use of *stew* (as cited in Izdebska, 2019):

Table 2. Constituent mappings in the ANGER IS HEAT metaphor

Source: Apply_heat	Target: Emotions
stewing	being angry
stewed liquid/food	emotion of the experiencer
container	angry person's body

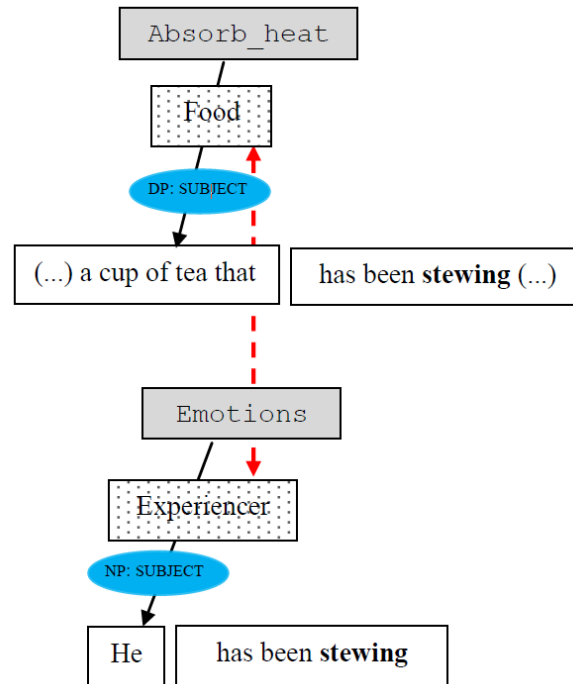


Figure 2. Metaphorical mappings in the metaphor ANGER IS HEAT metaphor captured as a transfer of elements between the Absorb_Heat and Emotions frames

In the ANGER IS HEAT metaphor the frame element Food in the Absorb_Heat frame is mapped onto an Experiencer in the Emotions frame, which metonymically stands for the provoked emotion in the Experiencer. Due to the fact that in Figure 2 *stew* in both the literal and metaphorical use is a monovalent verb, in the mapping the grammatical function and category is preserved. However, in the case of the transitive use of *stew* in the literal meaning, while *Food* is expressed as a direct object of *stew*, its mapped metaphorical equivalent, i.e. Experiencer functions as a grammatical subject.

2.3 ROAST

Altogether, there are 242 citations of *roast* in 164 texts in the corpus, 55 and 65 of which represent male and female examples, respectively. Out of 55 male citations, as few as 3 are metaphorical, which adds up to 5.4%. The frequency of the metaphorical use of *roast* with respect to women turns out to be

even smaller since only 1 female metaphorical expression was found in the BNC corpus, which constitutes only 1.5% of the female total, i.e., 65. Thus, the data indicate that men are 3.9 percentage points more likely than women to use the verb *roast* in a metaphorical manner.

Among all the 242 hits for *roast* in the BNC corpus we have identified two different lexical units of *roast* whose meanings are relativised to the Apply_heat and Judgement_communication frames. The meaning of LU-1 of *roast*, which evokes the Apply_heat frame, amounts to the idea of a Cook cooking the Food by prolonged exposure to heat in an oven or over a fire, or other source of radiant heat. The following BNC examples illustrate LU-1 of *roast*:

- (20) The next time [you COOK: NP: SUBJECT] **roast** [duck or chicken FOOD: DP: DIRECT OBJECT], cook thick slices of pineapple in the pan with lashings of black pepper.
- (21) Weigh the turkey to calculate the cooking time and put into a foil-lined roasting tin. Spread the butter over the breast, cover with foil and **roast** [in a pre-heated oven HEAT_SOURCE: PP: ADJUNCT] [for 15 min DURATION: PP: ADJUNCT] per 450 g (1 lb) plus 15 min. [COOK DNI, CNI] [FOOD DNI, CNI]
- (22) [The beans for the house coffee FOOD: DP: SUBJECT] are **roasted** [fresh FOOD: DP: SUBJECT] [every day FREQUENCY: ADVP: ADJUNCT] in the Fazzis' other premises in Clyde Street.

In (20) Cook is expressed as a subject of the sentences and Food is expressed by the DP as a direct object of *roast*. The omission of the frame element Food in (21) can be attributed both to the constructional and definite null instantiation. First and foremost, the deletion of Food is attributed to the anaphoric interpretation since its referent, i.e. *turkey*, is something already understood in the discourse context. Thus, since the referent of the missing element is present in the preceding concordance line, the function of the definite null instantiation is to avoid repetition. In addition to the anaphoric interpretation, the structural interpretation can also be regarded as the motivation for the omission of Food in (21). Interestingly, this null instantiation does not hang on any particular construction, but is rather dependent on the cookbook genre. LU-1 of *roast* can also be used to denote the activity of exposing coffee beans or nuts to heat in order to dry them or prepare for grinding, as illustrated by the examples in (22).

LU-2 of *roast* manifests the metaphorical use of the verb as in this sense the verb amounts to criticising, ridiculing or reprimanding a person severely.

In the Judgement_communication frame, evoked by LU-2 of *roast*, a Communicator judges an Evaluatee for a particular Reason or about a particular Topic and communicates the judgement to the Evaluatee:

If you waste his time, [he COMMUNICATOR: NP: SUBJECT]’ll **roast** [you EVALUEE: NP: DIRECT OBJECT], if you don’t you might just get that job.

Last week, [they COMMUNICATOR: NP: SUBJECT] **roasted** [Lavelle EVALUEE: NP: DIRECT OBJECT] [for eating at exclusive restaurants at the expense of company officials who were, at the time, under investigation by her department for dumping toxic waste in harbours and unprotected dumps REASON: CLAUSE: ADJUNCT].

They will say [Lamb EVALUEE: NP: SUBJECT] is being **roasted** [for breach of contract REASON: ADJUNCT]. [COMMUNICATOR INI, CNI]

Evaluatee, which is a core element whose presence is mandatory to describe the semantics conveyed by the Judgement_communication frame, is introduced by an NP or DP as a direct object of *roast* (examples (23) and (24)). In (25) *roast* is used in the passive and the Evaluatee is expressed as a subject of *roast*. Apart from the Evaluatee, Communicator is the other conceptually necessary component of the Judgement_communication frame, which in the active mode plays the role of the grammatical subject, as evidenced by the examples (23) and (24). The constructionally nullinstantiated frame element Communicator is illustrated in (25).

All the above-mentioned *BNC* metaphorical expressions with LU-2 of *roast* are everyday linguistic instantiations of the conceptual metaphor CRITICISM IS HEAT together with the metaphor EMOTION IS HEAT OF FIRE. Roasting a person literally suggests torturing or killing a person by burning, which entails the metaphor COMMUNICATING JUDGEMENT IS APPLYING HEAT. Thus, applying heat can be metaphorically understood as harming somebody, causing pain or some kind discomfort. Since fire can burn us and cause pain, physical or emotional pain is metaphorically comprehended through the recourse to the concept of fire. *Roast* is metaphorically applied to denote the activity of reprimanding or criticizing. The concept of criticism, to which LU-2 of *roast* is intrinsically linked, is close to the notion of emotions. Since the main meaning focus of the metaphor EMOTION IS HEAT OF FIRE is the intensity of a situation which provokes the emotions, one of the entailments of this metaphor is that CONTROLLING THE INTENSITY OF THE EMOTION IS CONTROLLING THE FIRE, and consequently, CONTROLLING THE INTENSITY OF THE EMOTION IS CONTROLLING THE FIRE. In other words, the more heat is

applied, the higher is the degree of fire. In metaphorical terms, an increase in the intensity of criticism leads to an increase in the intensity of emotion. In Table 3 and Figure 3 we have illustrated the basic constituent mappings of the CRITICISM IS HEAT metaphor in terms of mappings between the Apply_heat and Judgement_communication frames:

Table 3. Constituent mappings in the CRITICISM IS HEAT metaphor

Source: Apply_heat	Target: Judgement_communication
roasting food	criticizing, ridiculing or reprimanding a person
cook roasting the Food	communicator, i.e. the person doing the judgement
the food roasted	evaluee, the person being evaluated
produced food, finished product of cooking	forgery, falsified information or figures

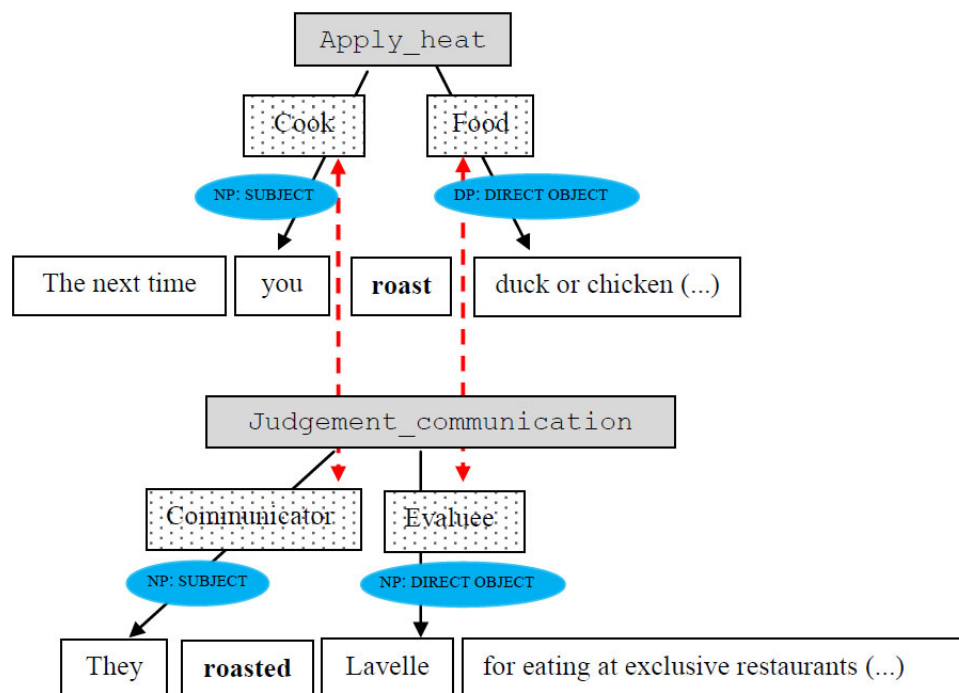


Figure 3. Metaphorical mappings in the metaphor CRITICISM IS HEAT metaphor captured as a transfer of elements between the Apply_heat and Judgement_communication frames.

As visible in the figure above, the frame elements Cook and Food in the Apply_heat frame are mapped onto the elements Communicator and Evaluee respectively in the Judgement_communication frame in such a way that the grammatical function and category of these elements remain unchanged in the mapping process.

CONCLUSIONS

The present study of conceptual metaphors employing *grill*, *stew* and *roast* as their source concepts has revealed the existence of gender differences in the metaphorical and non-metaphorical uses of the analysed basic-level concepts with respect to their frequency. The takeaway from the analysis conducted here is that the verbs *grill*, *stew* and *roast* are used more frequently by men in a metaphorical sense. In their literal meaning however, i.e. the one directly associated with the cooking activity, they are more often used by women than men. We believe that this tendency can be accounted for from a sociolinguistic approach according to which language and the notion of gender are believed to be intrinsically interrelated. Foley (1997) believed that the association between language and gender is not natural but culturally conditioned. What is more, in their introduction to the study of the relation between gender and language use, Eckert and McConnell-Ginet (2003) argued for grounding the study of language and gender in investigations of social practice. In the course of sociolinguistic research on gender-related linguistic variations it has been postulated that certain language forms may be associated with a particular sex (Lakoff, 1975; Romaine, 1994).

Since language can be viewed as “a window into the mind” (Chomsky, 1972) and metaphorical mappings in Conceptual Metaphor Theory are believed to be directly grounded in human experience (Evans & Green, 2006, pp. 437–438), it is quite natural that metaphorical language can be viewed as a mirror of gender stereotypes. Moreover, language is a social construct that influences how people perceive gender and behave towards others. For this reason we believe that the difference in the frequency of metaphorization of terms for COOKING TECHNIQUES by men and women appears to support the belief that female language, when it comes to the choice of vocabulary, reflects the topics women are relegated to in society. What is more, the disparity in the frequency of the metaphorical and non-metaphorical use of the verbs *grill*, *stew* and *roast* reflects a social inequity in the position of women. Since

the activity of cooking is stereotypically believed to be of no concern to men, the non-metaphorical use of the terms expressing cooking techniques is, as the study demonstrates, more popular with female speakers, probably due to the greater number of occasions which provide women, rather than men, with a natural context to make use of the cooking verbs with their literal meaning.

The application of the frame-semantic and lexico-grammatical perspective to the study of metaphors drawn from the verbs *grill*, *stew* and *roast* has enabled us to provide a multi-aspectual description of metaphorical linguistic expressions both at the level of linguistic and conceptual structure. The employment of the apparatus of FS together with the FrameNet project to the study of metaphors made it possible to yield a detailed picture of semantic and grammatical properties of the analysed verbs, otherwise not accessible through CMT.

Conceptual metaphors that arise from the metaphorical use of *grill*, *roast* and *stew* reflect people's folk theory of the source domain HEAT, which is strictly related to the activity of cooking. Due to the fact that the folk understanding of the world is acquired from everyday experience and social interaction (Kempton, 1987, pp. 222–223), conceptual metaphors, in the light of the cognitive theory, are believed to be both grounded and motivated by human experience (Lakoff & Johnson, 1980; Kövecses, 2010a, 2010b). In other words, people's everyday experiences are believed to form the experimental basis for metaphor. To put it more precisely, once we perceive a connection between a source and a target, conceptual correspondences between their elements are justifiable. This provides a rational explanation for why people associate anger with heat. Thus, metaphor is not only believed to be driven by human experience, but it can also reveal the divergent experiences of males compared to females when related to the source domains.

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