Lexical representation of the notion coffee in present-day English (on the material of lexicographical sources)

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ABSTRACT: The article is devoted to the study of the lexicon that represents the notion of coffee in present-day English. The novelty of the research is that the corresponding lexical units were established, analysed, and then distributed in groups, with their semantic connections revealed and described. It is quite topical as a great number of modern philology studies focus now on those lexical domains that verbalize various fragments of material and spiritual life of an ethnic community. Thus, in this work, the thematic criterion of stratification of the part of English vocabulary that denotes coffee was applied. The borrowed nature of the lexeme coffee was revealed. The polysemous lexeme possesses a six-component structure, the basic lexico-semantic variant of which fixes the idea of a drink and is characterized by the double axiology of its connotation. It was established that the other meanings were formed as a result of a metonymic shift. We demonstrated that the unit coffee is a core of the lexicon “coffee” with nine thematic groups, further differentiated into thematic subgroups, lexical-semantic groups and synonymic rows. The stylistic classification of the vocabulary was also carried out. The identified groups reflect the components (or their combination) of the notion of coffee, which was initially modelled on the basis of the study of the meaning of the lexeme coffee and finally expanded in the course of further analysis of the lexical fragment.

KEYWORDS: coffee; semantics; nomination; lexico-semantic variant; synonym; thematic group

1. Introduction

Today’s linguistics more than ever concentrates its efforts on the study of the world languages. In fact, one of the ways to penetrate into the substance of language is to study its constituents built around globally or culturally relevant ideas represented in national languages (Kostruba and Virna, 2020; Mizin et al., 2023; Partee, 1993; Protopopescu, 2023; Zheng, 2022). Here the researchers seem to be unanimous pointing out that the results of this representation are complex structures embodied in an indefinite number of various groups of semantically and grammatically interconnected lexical units (Evans, 2009; Jackendorff, 2022; Lyons, 1995; Zwitserlood and Gaskell, 2011) headed by definite word or word group (Gómez, 2023; Demenchuk, 2018). The authors rightly argue that the establishment and investigation of such a network of correlations within thematic language areas leads to the explanation of the peculiarities
of object designation (Goldberg, 1988; Kornfilt and Correa, 1993; Spencer, 2013), and the very idea of a nomination process (Borysov and Mai, 2022; Kovác, 2011: 17; Selivanova, 2017).

In our research we will stick to this idea and develop it on the example of the lexical fragment built around the mental unit of coffee. It goes without saying that in the present-day English language the lexeme coffee represents the denotatum that has already become something of a cult, being a mass-consumption product in modern globalised world (Banks et al., 2015). According to the statistics, most coffee is consumed in the European Union (34.4% of world production), the USA (18.2%), Brazil (14.9%), Japan (5.2%), China (2%) (ISIC, 2023; RCH, 2019). Among many plants belonging to the genus of coffee only *Arabica*, *Robusta*, and, to a much lesser degree, *Liberica* and *Excelsa*, are consumed on an industrial scale (Banks et al., 2015; BCA, 2023; Pendergrast, 2010). Due to demand, there appeared huge coffee companies: *Starbucks*, *Tchibo*, *Dunkin*, *Nescafé*, *Lavazza*, *Folgers*, etc. (Davids, 2001; ISIC, 2023). No doubt, Anglo-American cultural community appreciates the drink a great deal, as it is in the top list of the most consumed drinks alongside water, tea, and beer (Banks et al., 2015; BCA, 2023). Correspondingly, the coffee industry and its ultimate food product—coffee and its types, varieties, devices, instruments and technologies of its making—are also being actively introduced into Anglo-American collective and individual consciousness via a great number of linguistic expressions. In the light of the mentioned above, it is obvious enough that there rose an urgent linguistic necessity to study this rapidly growing lexical segment of present-day English, which designates a most popular beverage in Anglo-American world.

2. Literature review

There still is uncertainty about the etymology of the lexeme coffee (Cappelletti et al., 2015). It is assumed by the lexicographers of CT (2023) and OED (2023) that the word coffee was formed from the Arabic “qahwah”, which means “wine” or “strength”, “energy”. The nomination is also associated with the name of the South Ethiopian province of Kaffa, which is considered to be the birthplace of the plant (Banks, 2015). According to another version, it was formed from the Turkish “kahveh” (the Turkish way to pronounce “qahwah”) or Dutch “koffie” (OED). As stated in (Cappelletti et al., 2015), the English word coffee in its early forms (“chaoua”, “cahve”, “kahui”, etc. (CT; OED)) found its way into European languages in the 17th century from the Italian word caffè, cf. French café, German Kaffee.

As it is one of the demands of etymological studies (Halliday and Yallop, 2007), another borrowing historically and semantically related to the unit coffee is also worth presenting here. It is the borrowed lexeme caffeine—a chemical substance found in coffee, tea, cocoa, which affects your brain and body and makes you more active, derived from German Kaffee (“coffee”) with the addition of the suffix “ine” (OED). The version is that the word form can also have been borrowed from French caffeine. Such units, for instance, as caffeine-free (with the suffix “free”), decaffeinate (with the prefix “de” and suffix “ate”) or decaf (shortening of the word decaffeinated) were formed from caffeine (LDCE; OED).

It should be noted that the investigation of coffee as a food product is rather topical in culinary, commercial knowledge and medicine (Cappelletti et al., 2015; Nawrot et al., 2003; Pendergrast, 2010; RCH, 2019; Sunarharum, 2020). As for linguistic investigations, there are rare works performed in the area of sociolinguistics (Gaudio, 2003; Zahra, 2021) or communicative linguistics (Genovesi, 2023), however, not in lexical semantics. In Gaudio (2003), the object of the research is a social practice of coffee talk or casual conversations of representatives of the middle-class who discuss their matters in the situation of coffee consumption. The research shows that such talks determine and are determined by political, economic and ideological processes in society (Gaudio, 2003). Another sociolinguistic paper (Zahra, 2021) concentrates on the linguistic landscape and the use of certain languages on coffee shop
signage in public spaces of the city of Medan, Indonesia. The linguistic landscape is multilingual in general, English being only one of the many languages used to mark the coffee shop signboards of the city (Zahra, 2021). The reasons of the processes of nomination of coffee shops were also in the focus of the investigation. In the context of our research it is noteworthy to mention two reasons for this, namely Coffee Type (e.g., \textit{Arabica coffee}), and Place/Location where this or that coffee comes from (Zahra, 2021). Finally, in the work by Genovesi (2023), the lexical component coffee is taken as a part of metaphorical expression widely used in day-to-day communication and is not a separate object of the research, which is primarily devoted to the problems of interpretation and comprehension.

Definitely, the nominative units that verbalize coffee in present-day English within the boundaries of one thematically organized lexical structure have not been investigated. More than that, because of the dynamic character of language functioning, there is a constant need to take its lexical units inventory, specifying their meanings as well as structuring the lexicon of national languages. Due to such a situation in linguistic studies, the novelty of the work is outlined.

Thus, the aim of the research is to single out and analyse the lexical units that represent the notion of coffee in present-day English. Linguists propose different terms for such groupings of the lexicon formed around a notional unit, or mental representation (Quilty-Dunn, 2020), such as lexico-semantic group (Goldberg, 1988), thematic group (Ginzburg et al., 1979), semantic field (Demenchuk, 2018), nominative field (Borysov and Mai, 2022), and lexical domain (Gómez, 2023), or just a lexicon characterized with some attribute, e.g., emotion lexicon (Alvarado, 1998) or expressions of spatial location and motion (Partee, 1993).

These language fragments are built by the lexemes that designate a definite notion of mental sphere of a cultural community. The lexeme is understood as a unit of the lexical level with all its meanings and forms, i.e., lexico-semantic variants (Ginzburg et al., 1979; Lyons, 1995; Peftieva, 2016). In other words, a lexical unit in one of its meanings is its lexico-semantic variant (= LSV) (Ginzburg et al., 1979). LSV of the lexeme possesses a direct (central) meaning which directly points out the correlation of the word-form with the reality phenomenon. All the other meanings of the LSVs are characterized as transferred (metaphorically or metonymically derived), which characterize natural phenomena indirectly (Demenchuk, 2018; Kováč, 2011).

Among the most frequently occurring paradigmatic relations within the lexicon are synonymic ones (Filipec, 1994). Synonyms are defined as words that belong to the same lexico-grammatical class, possess fully or partially identical meanings that may vary depending on the context (Lyons, 1995; Stanojević, 2010) and form synonymic rows (= SR(s)) or synonymic sets (Ginzburg et al., 1979). The unit with the most general meaning, which can be found in the meanings of the other members of the SR and reflects the potential maximum of the features of a certain notion is a synonymic dominant (= SD) (Goldberg, 1988).

SRs construct lexico-semantic groups (= LSG(s)), or the association of words of one part of speech with a common component in their lexical meanings, i.e., the ones that describe different aspects of a common notion (Goldberg, 1988). In their turn, LSGs enter thematic subgroups (= TSG(s)) and groups (= TG(s)) understood as sets of units of different parts of speech which name one area of activity, situation, or topic (Lyons, 1995) and thus are in the hierarchical relations. Correspondingly, we will present the coffee lexicon as a thematic group.

Such researches are rather topical as they are conducted within a general task set before modern linguistics, which is to investigate the functioning of the language, its fragments in regard to the mental
plane and sensual perception (Evans, 2009; Kornfilt and Correa, 1993; Spencer, 2013). A multi-faceted description of the lexicon united around the denotatum coffee allows us to reconstruct the structure of the notion of coffee, which ultimately results in understanding the peculiarities of its interpretation and verbalization. In its turn, it undoubtedly leads to the expansion of our knowledge about the English language consciousness.

3. Materials and methods

3.1. Methodology of the study

The research was carried out within the structural paradigm of linguistics in view of the anthropocentric approach to language in modern science (Kováč, 2011; Peftieva, 2016; Stanojević, 2009). It means the acknowledgment of the idea that in order to explain the semantics of the lexical units' denoting coffee and establish the principles of coffee nomination and grouping of the units under analysis, one should take into account their mental basis, or the corresponding notion (Borysov and Mai, 2022; Genovesi, 2023; Zheng, 2022).

So, modelling of the notion of coffee in present-day English and building a coherent methodological conception of its consideration presupposes the use of an expanded inventory of scientific methods, both general scientific (such as analysis, synthesis, induction, deduction and comparison) and linguistic proper. Among the latter there are the following ones:

a) hypothetical-deductive method—to select the material;
b) dictionary definitions analysis—to identify the peculiarities of the meanings of the units that represent the notion of coffee in present-day English (Lyons, 1995);
c) onomasiological analysis—to establish the relation of the units to the designated fragment of reality (Selivanova, 2017);
d) componential analysis—to identify and describe the semantic components and relations between them in the hierarchy of the meanings of the units that represent the notion (Filipec, 1994);
e) descriptive method—to give the peculiarities of the semantics of the units and their groups within the fragment of the lexicon (Borysov and Mai, 2022);
f) grouping method used to group the investigated lexical domain (Goldberg, 1988);
g) modelling used to visualize the connections (Mizin et al, 2023) between the components of the lexical meanings and the components of the notion of coffee;
h) quantitative analysis—to reveal the distribution of the units inside and between various groups (Reed, 1949).

In order to overcome the subjectivity of dictionaries, which is thoroughly analysed in Halliday and Yallo (2007), we used different present-day English dictionaries to synthesize the meanings of the units under analysis. Thirteen dictionaries and one glossary served as a source base of the research. The material of the research found in them comprises 398 lexical items.

3.2. The procedure of the investigation

The procedure of the research includes the following steps.

First, we analyzed the lexeme coffee taking into consideration its origin and development in the history of English. The identification of the main semantic feature serving as a ground for nomination of coffee, that is the inner form of the word, is a part of the onomasiological analysis (Selivanova, 2017). Then we searched for all the LSVs of coffee in the authoritative lexicographical sources of present-day
English. The method of analysing dictionary definitions enabled us to define LSV₁ and build the semantic structure of the polysemous unit coffee, which includes all the other LSVs designating the objects closely connected with the drink of coffee. While reconstructing the lexeme structure (Ginzburg et al., 1979), we stuck to the order of LSVs which we found typical in the corresponding entries in the majority of the dictionaries analyzed.

After that, on the basis of all the LSVs, we synthesized the definition that represents the denotatum coffee. The semantic components of the generalized meaning were analysed with the help of the componential analysis. They represent the features of the notion, and thus are key to building the core model of the notion of coffee, which was carried out via the method of modelling.

The next step of modelling was building synonymic rows and lexico-semantic groups of the units that represent the notion of coffee in present-day English followed by integrating them into thematic subgroups and groups within the lexicon and calculating the percentage difference between them. For this, the grouping method and descriptive method were involved among others.

Finally, the model of coffee notion was elaborated by adding new components discovered in the process of studying the structure of the present-day English coffee lexicon.

4. Analysis and discussion

The description of any fragment of national language starts with the description of the main lexeme, which verbalizes a particular notion of ethnic consciousness most explicitly and unites the other words within various lexical groups. That is why the study of this domain begins with the lexeme coffee. Establishing the semantic boundaries of the lexical unit in synchrony involves finding, analysing, describing, and comparing the definitions of the lexeme and its LSVs, which are given in the authoritative present-day English dictionaries.

For instance, the analysis of dictionary definitions has revealed that one of the largest number of LSVs of the lexeme coffee is offered by Macmillan Dictionary. LSV₁ represents the meaning of coffee as follows: a hot, slightly bitter drink made by pouring hot water over brown powder consisting of coffee beans that have been ground (MD). The specification of the LSV occurs in LSV₁.1 a cup of coffee and LSV₁.2 the crushed beans that you use to make coffee. The meanings were formed metonymically: in the first case, it refers to the container from which the drink is usually consumed—a cup, or a portion of a coffee drink; in the second case, the metonymic shift switches our attention to the substance from which the drink is made—the crushed beans.

LSV₁.₃ (flavoured with coffee, or used for storing, making, or drinking coffee), which is used as an attribute in a phrase only before a noun, is used to convey the coffee taste of a gastronomic product (e.g., coffee cake, coffee ice-cream) or to characterize an object used for storing, making, or drinking coffee (e.g., coffee-machine, coffee cup). LSV₂ denotes a special shade of colour: a light brown colour.

Similar ways of interpreting the denotatum are proposed in Oxford Learner’s Dictionary. However, the emphasis in the semantic structure of the lexeme is shifted, because LSV₁ contains information about roasted beans of a tropical bush or powder—the roasted seeds (coffee beans) of a tropical bush or a powder made from them (OLD). In LSV₂ we find the description presented in LSV₁ in MD—a hot drink made from coffee powder and boiling water, which may be drunk with milk and/or sugar added. At the same time, the meaning contains additional semantic components (semes) milk/sugar that reflect an individual preference or enhancement of the taste of coffee.
LSV₃ contains the meaning a cup of coffee, which fully corresponds to LSV₁₁ of MD while LSV₄ correlates with the meaning of LSV₂ in MD (a light brown colour) and is further specified—the color of coffee mixed with milk, light-brown.

In Longman Dictionary of Contemporary English, the semantic structure of the lexeme coffee is similar to that of MD. Thus, LSV₁ represents a drink—a hot dark brown drink that has a slightly bitter taste (LDCE). LSV₂ with the semantics a cup of coffee completely coincides with LSV₃ in OLD. The meaning of LSV₅ (cf., LSV₁₂ and LSV₃ of the dictionaries) whole coffee beans, crushed coffee beans, or a powder to which you add water to make coffee is expanded by specifying the form of the coffee substance to which water is added. A striking difference in this case is the absence of the ‘hot’ or ‘boiling’ semes, which indicates that special temperature conditions are not important for coffee brewing.

LSV₄ coincides with the last LSV of MD: a light brown colour.

The peculiarity of Cambridge Dictionary is that it presents the British and American vision of this product, and the former is represented by two LSVs, while the latter is represented only by one. So, in LSV₁ a dark brown powder with a strong taste and smell that is made by crushing dark beans from a tropical bush and used to make a drink (CD), the meaning is formed around the main seme, or archeseme, ‘powder’, which is concretized by a whole set of differential semes, the last of which is only ‘drink’. This seme, in its turn, becomes an archeseme for LSV₂—a drink, usually hot, made from dark brown powder produced from crushed coffee beans. This LSV semantically corresponds to LSV₁ of the other dictionaries that designate the drink itself.

The “American understanding” of the meaning of coffee is more extensive: LSV₂ is a dark brown, slightly bitter drink that is usually served hot, esp. in the morning and at the end of meals, a cup of this drink, or the beans from which this drink is made. The LSV is a kind of synthesis of the previous LSVs given in the dictionary with the addition of the method (‘served’) and a time period of serving the drink (‘morning’/‘at the end of meals’). The meaning is built around three archesemes (‘drink’, ‘cup’, ‘beans’). LSV a light brown colour is absent in CD.

In its turn, the compilers of Collins English Dictionary also provide British and American interpretations of the meaning of the lexeme coffee. A comparison of these two ethnic positions has revealed, first, that semantically they generally coincide coffee—drink, beans/seeds, colour, (coffee) tree. Second, there exists an additional meaning shrub in the American version and a meaning not recorded in the above analysed dictionaries: LSV₅ a reception or social gathering at which coffee, tea, etc. are served, esp. one held for the purpose of promoting a cause or introducing a political candidate (cf. with LSV₆ of coffee presented in Merriam-Webster Dictionary (MWD) or The Free Dictionary by Farlex (FDF)). It also shows the effect of metonymy: coffee can be a necessary attribute of a social event, and thus the unit designates the event itself.

In general, CED provides an “average”, found in the other dictionaries, and ethnically independent representation of the nominal capacity of the unit coffee: LSV₁—a hot drink made with water and ground or powdered coffee beans; as for LSV₂, its meaning is the roasted beans or powder from which the drink is made. As we can see, the underlined archesemes exchange places in these LSVs in terms of their significance in the composition of the meanings, representing different objects of nomination.

Thus, the analysis and comparison of the LSVs of the lexeme coffee in English dictionaries allows us to model the semantic structure of the polysemous unit and present it in the form of a six-component structure. For convenience, we present only the archesemes of each meaning of the LSVs:

- LSV₁, ‘drink’;
If LSV 1 (‘liquid suitable for swallowing’) is characterized by the central meaning of the lexeme (Peftieva, 2016), then LSV 4 (‘plant’), LSV 5 (‘a phenomenon of light’), and LSV 6 (‘party’) (LDCE; MWD), as the entries of the dictionaries testify, are at its periphery. LSV 2 (‘individual serving’) and LSV 3 (‘fruits of plants’) (FDF) are semantically the closest to the basic meaning of the unit. As we can see, the formation of the meanings of LSV 2–LSV 6 occurred due to the metonymic basis of the polysemy process and involvement of such mental models as “content-container”, “whole-part”/“part-whole”, “instrument-activity” which establish close connections between the cognitive objects mentioned above (Zheng, 2022) fixed by the lexeme.

In this paper we are primarily interested in the denotatum of a drink (coffee) denoted by the unit coffee. Therefore, taking into account the LSVs from different dictionaries and a maximum number of common and distinctive semantic parameters, we model the all-embracing definition of LSV 1: coffee is a hot drink made by pouring boiling water over a dark brown powder produced from roasted beans of a tropical bush with a strong flavour and a slightly bitter taste.

The meaning of the lexical unit is formed by its denotative and connotative components (Halliday and Yallop, 2007; Peftieva, 2016). In our case, the denotation of LSV 1: coffee almost completely coincides with its lexical meaning. The exceptions are, first, the evaluative seme ‘bitter’, which reproduces a negative connotative sense of the meaning: bitter—with an unpleasantly sharp taste; and second, a positive evaluation seme ‘strong’ (very noticeable or powerful) (CD). Furthermore, on the basis of the above synthesized definition of the lexeme coffee, the description of its lexical meaning consisting of the minimal semes also becomes possible. The archeseme and differential semes of its specification are hierarchically ordered within the semantics of LSV 1: coffee.

So, the archeseme of the lexical meaning is ‘drink’, which indicates that the word refers to a liquid that can be consumed (drink—an amount of liquid that you drink) (LDCE). As for the other semes, they are as follows.

First, the attributive component ‘hot’ (of high temperature—used about weather, places, food, drink or objects), which provides a qualitative characteristic to the (hot) denotatum, or drink;

Second, the seme ‘drink’ is characterized by the whole attributive complex ‘made by pouring boiling water over a dark brown powder’, which consists of the seme ‘made’ (to produce something) concretized, in its turn, by the semes ‘pour’ (to make a liquid flow out of or into a container by holding it at an angle), ‘boiling’ (very hot), ‘water’ (the clear liquid without colour, smell, or taste that is used for drinking, etc.) and ‘powder’ as integral components of the drink (a dry substance in the form of very small grains). The latter is presented by the semes ‘dark’ (quite close to black in colour) and ‘brown’ (having the colour of earth, wood or coffee).

Third, another attributive semantic complex ‘produced from roasted beans of a tropical bush’ to the seme ‘powder’ consists of the semes ‘produced’ (to cause a particular result or effect), which reproduces an action directed at a quantitatively represented object expressed by ‘many’ and ‘bean’ (a seed used in making some types of food or drinks). The latter is specified by two attributive semes: ‘roast(ed)’ (to heat nuts, coffee beans, etc. quickly in order to dry them and give them a particular flavour) and ‘bush’ (a plant
with many thin branches growing up from the ground) characterized, in its turn, by ‘tropical’ (existing in the hottest parts of the world).

Fourth, the seme ‘powder’ is further semantically limited by ‘flavour’ (the particular taste of a drink) and ‘taste’ (the feeling that is produced by a particular food or drink when you put it in your mouth). They are also evaluated by the semes ‘strong’ and ‘bitter’ with a gradational component ‘slightly’ (a little) (LDCE).

So, on the ground of the established system of the meaning components of coffee, we can build a basic notion of coffee that functions in the modern English language consciousness (in the yellow colour on Figure 1).

![Figure 1](attachment:image.png)

**Figure 1.** The notion of coffee in the modern English language consciousness.

In general, this scheme realizes the following idea: a person (the component PERSON is not explicitly represented on the semantic level) heats (ACTIVITY) liquid (LIQUID; (water)) that has neither smell nor taste nor colour, takes seed(s) (SEED; MULTITUDE) (of a plant that grows in warm countries (PLANT; PLACE)), grinds them to a powder (POWDER SUBSTANCE) with SMELL, TASTE, COLOR and pours boiled (TEMPERATURE) water over it. As a result, one gets a blend of water and a powder, or a coffee drink (LIQUID 2), with the characteristics of smell, taste and colour and it is evaluated positively or negatively (EVALUATION).

We proceed now with a thematic grouping of the lexical fragment “coffee”, taking as a basis the main components of the reconstructed notion of coffee, the presence of which determines the functioning of the whole layer of the lexicon. Here it should be noted that a total number of units that are stylistically
neutral is 86\% (e.g., white coffee, percolator, coffee festival, plantation, coffee morning, etc.), while the number of stylistically coloured units is 14\% (5\% of which is elevated, e.g., brew group, pour-over, aero press, cold brew, etc.) and 9\% is lowered vocabulary (e.g., corporate coffee drinker, coffee-and, coffee shits, instant, coffeeholicanism, etc.).

So, nine TGs were established all in all.

TG\textsubscript{1} “Person” (4.5\%) is divided into two TSGs: TSG\textsubscript{1.1} “producer” (2.2\%) and TSG\textsubscript{1.2} “consumer” (2.3\%), which include nouns referring to different types of people who are in this or that way connected with coffee.

TSG\textsubscript{1.1} “producer” coincides with the boundaries of the noun LSG\textsubscript{1} “producer” (2.2\%), with the units that represent a certain type of occupation of people related to growing of the plant, making the drink, etc.: coffee grower—a person who grows large quantities of coffee in order to sell it; coffee roaster/roaster—one who prepares coffee beans for use by roasting them (CD; OLD); barista—one whose job is to prepare coffee in a coffee bar (LDCE), etc.

TSG\textsubscript{1.2} “consumer” includes noun LSG\textsubscript{2} “drinker” (2.3\%), which can be represented as SR\textsubscript{1} with the nouns that denote people who drink coffee. In this case the SD is coffee drinker (someone who regularly drinks coffee (LDCE)): hardcore coffee drinker—you have coffee in your veins and drink nothing but (UD), coffeeholic (inf.)—someone addicted to coffee or caffeine (OLD), etc. Here we should add that a new component TIME of the notion of coffee is also activated by the lexemes.

In this subgroup one can also find the units which denote
a) the feeling of guilt of a person in a specific situation: coffee guilt (inf.)—the guilt one feels arriving late to a meeting, carrying a purchased cup of coffee that reveals why one was late (MD);

b) physiological state of a person: caffeism/caffeinism—a morbid condition caused by excessive caffeine intake (CED).

Thus, new components FEELING and STATE of the notion of coffee are actualized and added to its basic scheme.

TG\textsubscript{2} “Plant” (5\%) coincides with the boundaries of the noun LSG\textsubscript{3} “living thing in soil” (MD), which units describe plants on which coffee beans grow. We single out

a) SR\textsubscript{2} with the SD coffee (LSV\textsubscript{1}) (a tropical tree of the madder family that yields coffee beans, as Coffea arabica and C. canefora (FDF)): coffee tree—any of several rubiaceous trees of the genus Coffea, esp. C. arabica, the seeds of which are used in the preparation of the beverage (FDF); coffee nut (LSV\textsubscript{2})—Kentucky coffee tree (CED), etc., and

b) SR\textsubscript{3} lead by the SD coffee bush (LSV\textsubscript{2})—any shrub that produces coffee beans (CED); Arabian coffee—a tall, widely cultivated shrub of the Marena family that produces coffee beans (CED), etc.

TG\textsubscript{3} “Seed” (10.9\%) contains noun LSG\textsubscript{3} “beans” which is formed as SR\textsubscript{4} with the SD coffee bean (nib)—a seed of a tropical bush that is heated until it is brown and then crushed to make coffee. The SR is presented by

a) proper/semi-proper names: R(r)obusta/coffee (LSV\textsubscript{2})—a type of coffee beans with a strong, slightly bitter taste; A(a)rabica/coffee (LSV\textsubscript{2})—a high-quality coffee bean obtained from the tree Coffea Arabica (CD), and
b) common names: coffee blend—a mixture of two or more different origin coffee beans; coffee nut (LSV₁)—the fruit of the Kentucky coffee tree (CED), mocha (LSV₂)—the small, irregular-shaped coffee beans of plants grown in the mountainous regions of Yemen that produce an earthy, strong coffee of usually medium to high acidity (MWD), etc.

TG₄ “Place” (6.4%) is divided into TSG₄₁ “institution” (5.1%) and TSG₄₂ “area” (1.3%), which contain the nouns that describe various institutions, establishments, locations related to coffee and verbalize the notional component PLACE.

TSG₄₁ “institution” is represented by LSG₄ “restaurant” (1.7%) with the nominations of places where coffee drinks can be purchased or consumed, which in this case is realized as SR₅ with the SD coffeehouse (a restaurant serving coffee): coffee-shop/bar—a small restaurant, often in a store, hotel, where coffee, tea, etc. are served (OLD; Theasurus); café—an informal restaurant for simple meals and drinks (MD).

In LSG₄ “restaurant” (within the framework of metonymic relations), there functions LSG₅ “furniture” (0.8%) with the units that reflect in their meanings a part of the interior of restaurants, namely furniture: coffee counter—in a café or restaurant, a long narrow table or flat surface at which customers are served (CED), coffee-table—a small, low table on which coffee is served or books and magazines are arranged (CD), etc.

LSG₆ “company” (2.6%) contains the units that nominate world-famous companies related to the production and sale of coffee: Lavazza, Nestlé, Starbucks, Segafredo, Costa Coffee, Caffe Revive, McCafe, Caffe Ritazza, Caffe Nero (SD), etc.

TSG₄₂ “area” consists of the units of LSG₇ “region” (1.3%) that denote the affiliation of coffee to the places where it was cultivated: bean belt—the latitudes in which all coffee plants are grown (SD), coffee estate—a coffee farm; plantation—a large piece of land, especially in a tropical country, where crops such as rubber, coffee, tea or sugar are grown (CED), etc.

TG₅ “Substance” (6.3%) comprises

a) TSG₅₁ “chemical compound” (0.6%) with LSG₈ “caffeine”: caffeine/caffeine—a chemical substance found in coffee, tea, cocoa, which makes you feel active (CED), caffeic acid—a phenolic compound present in coffee (CED) and

b) TSG₅₂ “physical substance” (5.7%) with

- LSG₉ “powder” (2.5%): ground coffee—coffee beans that have been crushed into particles for the purpose of brewing (CED) together with SR₆, the SD instant coffee: instant (inf.)—coffee that can be made quickly by adding hot water (OLD); coffee granules—instant coffee in the form of grains (CED), etc.
- LSG₁₀ “concentrate” (0.2%): coffee essence—a thick liquid made from coffee beans, often containing chicory (OLD), etc.
- LSG₁₁ “beverage” (2.8%): Tia Maria—coffee-flavoured, rum-based liqueur (OED); bawls—high caffeine Guarana beverage; red bull—an overly caffeinated energy drink (UD), etc.
- LSG₁₂ “sweet” (0.2%): jolt gum—caffeinated stick of gum (UD).

TG₆ “Appliance” (21%), which activates the component APPLIANCE of the notion of coffee, includes TGS₆₁ “device” (6.3%), TGS₆₂ “parts of device” (5.4%) and TGS₆₃ “object” (9.5%).

TSG₆₁ “device” consists of noun LSG₁₃ “brewing device” (4%) and LSG₁₄ “grinding device” (2.3%), which describe the inventory used in the process of making coffee at different stages of its preparation.
LSG₁₃ “brewing device” contains SR₇ with the SD coffee machine (LSV₁) (a machine that makes coffee from ground coffee): drip/coffee-maker/Chemex—a machine for making coffee at home (CDCT; MD), etc.

LSG₁₄ “grinding device” is represented by SR₈ with the SD coffee grinder: coffee grinder—a small machine for grinding coffee beans (OLD); coffee mill—a machine for grinding roasted coffee beans (CED), etc.

TSG₆.₂ “parts of device” includes LSG₁₅ “constituents” (5.4%), which contains the nouns to denote parts of a brewing device: gasket—a piece of material that is put between two metal surfaces to prevent gas or steam from escaping (CD); coffee filter—a paper cone that can be used to make coffee by pouring hot water through crushed coffee beans (CD), etc.

TSG₆.₃ “object” represents the LSG of nouns for utensils, tools, receptacles, etc. used in preparation, serving, keeping coffee. So, noun LSG₁₆ “utensils” (4%) is formed by SR₉ with the SD pot—a vessel with a handle and a small pouring tube used for making tea or coffee (LDCE): cezve—a small metal pot, usually made of copper, with a long metal handle, used for making coffee (CED); moka pot—a metal pot for making coffee which works by heating water in the bottom of the pot (CD), etc. and a unit coffee spoon—a small spoon for stirring coffee (CED).

The noun LSG₁₇ “container” (5%) was also singled out, with the semes

a) ‘(for) drinking’: coffee cup/mug—a cup in which coffee is served (CED), demitasse—a small cup of coffee (CD), espresso (LSV₂)—a cup of strong black Italian coffee this coffee (OLD) and

b) ‘(for) storage’: coffee can—a jar for storing ground coffee (OLD), coffee bag—a small bag containing ground coffee beans, infused to make coffee (CED).

LSG₁₈ “support object” (0.5%) is represented by SR₁₀ with the SD holder: cup holder (a device for holding containers for drinking liquids such as tea, coffee, etc. (CED)), zarf—an ornamental metal cup-shaped holder for a hot coffee cup (CED).

TG₇ “Activity” (18%) consists of TSG₇.₁ “process” (8.1%), TSG₇.₂ “result” (5.4%) and TSG₇.₃ “event” (4.5%).

In TSG₇.₁ “process” there are units of different parts of speech that reflect certain actions aimed at the object coffee.

The verbal LSG₁₉ “processing” (2.2%) was identified, within which we distinguish the units with the semes

a) ‘parch’: to roast (coffee)—to heat coffee beans until they are dry (MD);

b) ‘brew’: to brew/make coffee—to prepare a drink from coffee by pouring hot water over ground coffee (CED; CD);

c) ‘decaffeinate’: to decaffeinate—to remove all or part of the caffeine from (coffee, tea, etc.) (CED).

The TSG also includes the noun LSG₂₀ “processing” (1.6%), with the following semes

1) ‘parching’: roasting (LSV₁)—the process of roasting something, especially coffee, or the result of it (OLD);

2) ‘brewing’—(of tea or coffee) to be mixed with hot water and become ready to drink (CD);

3) ‘decaffeination’—removing most or all of the caffeine from (coffee or tea) (OLD), etc.
The noun LSG1 “technology” (3.1%) consists of the methods of coffee processing: extraction—
drawing flavour from coffee grounds; drip coffee—coffee made with a filter, a press pot, a percolator or
a countertop coffee maker (GTF), etc.

The verbal LSG2 “serving” (1.6%): to serve coffee; to pour the coffee (out) (CED), etc. and LSG3
“consumption” (1.2%): to drink/consume/have/sip (a) coffee (CED), etc. were also established.

TSG1 “result” possesses noun LSG4 “consequence” (4.8%), with the semes
a) ‘semi-finished product’: roaster (LSV3)—a certain type of roasted coffee (OLD); dark roast—
coffee beans roasted until they exude oils (GTF);

b) ‘size’: grind size—how fine or coarse the coffee bean is ground in order to prepare the coffee
beverage (CDCT);

c) ‘expiry term’: roast date—date on bags of coffee (GTF);

d) ‘the remnants of brewing’: grounds (LSV3)—sediment or dregs, esp. from coffee (CED); aroma—
the smell that comes from freshly ground coffee and from freshly brewed coffee (GTF);

e) ‘side-effect’: coffee stain—a trace left by coffee or a coffee cup (LDCE), etc.

The first seme is also realized by adjectival LSG5 “consequence” (0.3%) with the units roast—that
has been roasted (MWD), while the last seme is activated by verbal LSG6 “consequence” (0.3%): to spill
coffee—accidentally spilling coffee over the edge of a container (CED).

To TSG1 “result” the words, which describe different types of coffee beverages, can logically be
referred. However, we single out TG “Drink” separately because of its size and a significant notional
component LIQUID SUBSTANCE2.

TSG2 “event” is represented by the noun LSG7 “occasion” (4.5%), which includes the nouns
denoting various kinds of events (as a part of coffee culture—a culture in which people like to visit cafes
and drink coffee (OLD)) related to coffee in one way or another: coffee-talk (inf.)—informal conversation
among acquaintances, which occurs in a casual gathering where people sit together and drink coffee (UD);
coffee break/hour—a short period of time when you stop working and have a cup of coffee (CED); coffee
klatsch—an informal social occasion, often at somebody’s home, at which people drink coffee and talk
(OLD), etc.

TG8 “Drink” (23.4%) includes the units, in particular, for the world-wide designations of coffee drink
varieties, hyponyms to the hyperonym coffee. The TG consists of a number of LSGs and separate units.

LSG8 “pure coffee” (4.1%): black coffee—coffee without milk, milk substitute or cream (CED);
regular—a coffee drink containing caffeine (MWD), joe (inf.)—coffee (CD), etc. which coincides with
SR11 lead by the SD coffee (LSV1)—a hot dark brown drink that has a slightly bitter taste (LDCE).

LSG9 “coffee with ingredients” (7.3%) with the semes
a) ‘milk’, e.g., flat white—coffee, which is espresso with creamy milk; latte—strong coffee with hot
milk with bubbles (MD); macchiato—espresso coffee served with hot or cold milk (CED);

b) ‘chocolate’, e.g., mocha—a type of high quality coffee drink, often with chocolate added (OLD),
cappuccino—coffee made from hot milk, sprinkled with chocolate powder on top (LDCE);

c) ‘ice cream’, e.g., affogato—a drink made by pouring espresso coffee over a scoop of ice cream
(OLD);
d) ‘sugar’, e.g., Turkish coffee—a very strong black coffee that is drunk in small cups with sugar (LDCE);

e) ‘whiskey’/‘cream’, e.g., Irish coffee—hot coffee mixed with whiskey and heavy cream on top, usually served in a glass (LDCE);

f) ‘brandy’, ‘lemon zest’, ‘cinnamon’, e.g., royal joe/café royale/coffee royal—black coffee with brandy, lemon zest, sugar, and sometimes cinnamon (CED).

LSG30 “coffee with (hot/cold/frozen) water” (2.1%) includes, e.g., iced coffee—coffee served cold with ice (CED); Americano—a type of coffee drink made from espresso and hot water (LDCE); frappe—a coffee drink served with ice (CED).

It should be noted here that the notional component TEMPERATURE is realized in the units that reproduce other ingredients for the preparation of the drink, e.g., cortado—a drink consisting of espresso mixed with warm milk (CED); cappuccino—an espresso shot combined with foamed steamed milk (GCT).

LSG31 “coffee by origin” (4.3%) consists of the lexical units denoting the affiliation of coffee with the geographical places where it was grown: colombian coffee; brazilian coffee; indian coffee; ethiopian coffee; Java (LSV2)—a kind of coffee grown on Java and nearby islands (CED), etc.

It also became possible to distinguish SR12 espresso (LSV1) (strong black Italian coffee): ristretto—a very strong espresso coffee; doppio—a double measure of espresso coffee (OLD); macchiato—espresso coffee served with a dash of hot or cold milk (CED); lungo—weak black Italian-style espresso coffee (CED), etc.

Adjectival LSG32 “caffeine-free (coffee)” (1.6%) conditionally coincides with SR13 which has the SD caffeine-free (containing no caffeine (CED)): decaf/caffeinated (coffee)—(coffee that) has had caffeine removed (CED), caffeine-free (LSV2)—decaffeinated (CED).

Adjectival LSG33 “(coffee) with caffeine” (2.1%) also functions here: caffeinated—(of coffee or tea) containing the natural amount of caffeine, or with caffeine added (MD); regular—(a coffee drink) that has caffeine (MWD), caffeinic—related to or containing caffeine (CD), etc.

Noun LSG34, “caffeine-free coffee” (1.9%): decaf/decaffeinated (LSV1) (inf.)—decaffeinated coffee (OLD), Sanka—brand of decaffeinated coffee (OED), etc., was also established.

The same TG possesses a number of hyponyms of LSG28 that actualize a whole set of the notional components of coffee. These include, e.g., such stable word-groups as takeaway coffee—coffee that you buy in a shop or restaurant that sells hot cooked food that you drink somewhere else (CED), formed around the components LIQUID2, INSTITUTION and LOCATION; filter coffee (LSV1)—coffee made by slowly pouring hot water through crushed coffee beans in a filter (CD) (components LIQUID2, TEMPERATURE, POWDER SUBSTANCE, APPLIANCE), fresh coffee—made very recently using coffee beans (LDCE) (the components LIQUID2, SEED, TIME).

On the marginal periphery of the TG we distinguish a number of units, e.g., coffee substitute—a drink resembling coffee that is sometimes substituted for it (FDF); babyccino—a cup of hot milk with bubbles in it and sometimes chocolate powder on top, sold for children in coffee shops (LDCE) (formed by blending the words baby and cappuccino and has a marginal seme ‘coffee (shops)’), dandelion coffee—a hot drink made from the roots of dandelions (LDCE) (with an independent morpheme coffee as the second component).
TG9 “Food product” (4.5%) consists of noun LSG$^{35}$ “cookery” (4.5%), which contains word-combinations that denote culinary products with the use of coffee. The TG includes SR$_{14}$ with the SD cake: coffee cake (LSV$_1$)—sponge cake with coffee flavour; coffee ring—coffee ring-shaped cake, regular or fruit, often with raisins, ground nuts and icing (CED), tiramisu—rich dessert made from coffee-soaked biscuits (OED) as well as coffee ice-cream—coffee-flavoured ice cream (UD). The TG also metonymically contains the adjective coffee-coloured—having a pale brown colour, like coffee with milk (CD).

The reconstructed TGs of the lexicon “coffee” embodied by the corresponding units of present-day English (Figure 2) allowed us to expand the notion of coffee (in green colour on Figure 1). So, a person (now an explicit component PERSON), who can be characterized in some cases by AGE, FEELING, HABIT, STATE, acts as a producer (PRODUCER) of the coffee drink or/and its consumer (CONSUMER). In both cases, one uses a certain device (APPLIANCE) or an object (OBJECT). Consumption of the beverage is possible only with the help of a container (OBJECT), which can also serve to store whole or ground coffee beans. Operations related to either the preparation of coffee—blending of powder and water (LIQUID$_1$)—or its consumption are fixed in the ACTIVITY component. The latter reflects the situation of using coffee powder (POWDER SUBSTANCE$_1$) to prepare coffee (LIQUID$_2$) and cookery (PRODUCT). It is also connected with the time interval (TIME) from the moment of processing the beans of the plant (SEED; PLANT; MULTITUDE) till the result of making the drink. Coffee can be prepared by using, other liquid or solid substance (LIQUID$_3$/SOLID SUBSTANCE$_1$), which a person adds to a brewed coffee drink (LIQUID$_2$), specified by the components SMELL, TASTE, COLOR. Coffee is produced and consumed in specific places (PLACE: INSTITUTION/COUNTRY/LOCATION).

![Figure 2. The lexicon “coffee” in the present-day English.](image-url)
5. Conclusions

In this research the lexical items that denote the notion of coffee in present-day English have been identified, described and grouped for the first time. The modelling of this notion, which is both an important component of the modern English language consciousness and the basis of a thematically organized fragment of the English lexicon, is also new.

The research proves that the denotative meaning of the lexeme coffee almost completely coincides with the boundaries of its lexical meaning, while the connotation is characterized by double axiology: negative (an evaluative seme ‘bitter’) and, at the same time, positive (a seme ‘strong’). This meaning can be presented as a structure containing the archeseme ‘drink’ and eighteen differential semes that characterize it and thus separate this denotatum from the other drinks in people’s consciousness. The meaning of LSV₁ is the main meaning of the polysemous lexeme coffee, which consists of six LSVs formed by metonymic reinterpretation. The following mental metonymic models as “whole-part”/“part-whole”, “content-container”, “instrument-activity” were identified.

We determined that the lexicon fragment (398 words and word-combinations) built around the notion of coffee stylistically consists of three layers. The number of neutral units constitutes 86%, while stylistically coloured vocabulary is 14% (5% of which belongs to the elevated and 9% to lowered vocabulary). Furthermore, the lexicon also underwent thematic differentiation. Thus, it was established that the lexical domain “coffee” consists of nine TGs, such as “Person”, “Seed”, “Plant”, “Place”, “Substance”, “Appliance”, “Activity”, “Drink” and “Food Product”. The largest number of the lexical items is represented in TG₇ “drink” (23.4%) and the smallest is characteristic of TG₁ “person” (4.5%) and TG₉ “product” (4.5%).

It was also found out that, in fact, thirty-five LSGs and fourteen SRs constitute these TSGs and TGs, thus, are the parts of the lexical domain “coffee”. The logic of the research proved that the identified TGs and TSGs reflect the components (or their combination) of the notion of coffee. It goes about LIQUID₁,₂, ACTIVITY, SEED, PLANT, MULTITUDE, SUBSTANCE, POWDER, SMELL, TASTE, COLOUR, PLACE, TEMPERATURE and EVALUATION. Further on, on the basis of the semantic analysis of the units of the groups, the initially reconstructed notion of coffee was supplemented and expanded. As a result, the constituent PERSON became explicit, diversified (PRODUCER/CONSUMER) and characterized (through AGE, FEELING, HABIT, STATE). More than that, the elements LIQUID₃, PRODUCT, APPLIANCE, PLANT, OBJECT and TIME were actualized.

We see the prospect of further research in the transference of the scientific investigation in the plane of cognitive studies, in which the notion is considered to be a nuclear component of the concept. The presentation of the concept of COFFEE in the form of a frame structure will not only expand the boundaries of the study, but will also allow us to interpret the results from new perspectives.

Author contributions

Conceptualization, OOB; methodology, OOB and OHV; validation, IOK, LHO, OOB and OHV; formal analysis, IOK, LHO and OHV; investigation, OOB and LHO; resources, IOK and LHO; data curation, IOK and OHV; writing—original draft preparation, OOB and LHO; visualization, IOK; writing—review and editing, OHV; supervision, OOB. All authors have read and agreed to the published version of the manuscript.
Conflict of interest
The authors declare no conflict of interest.

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