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**LINGUACOGNITIVE MECHANISMS OF CONCEPTUAL  
CONTAMINANTS INTEGRATION IN THE MODERN ENGLISH  
LANGUAGE**

Elena V. Murugova (a)\*  
\*Corresponding author

(a) Don State Technical University, Rostov-on-Don, Russia, murugovaelena@yandex.ru, +7 9282964540

*Abstract*

This article is intended to cover the major issues of secondary nominated contaminants, focusing on the investigation of linguacognitive mechanisms of conceptual contaminants integration in the modern English language. Cognitive research in linguistics aimed at interlaced mechanisms as verbalization (the work with the word forms), conceptualization (the work with notions, signs and their meaning), and categorization (the work with senses). Their study leads to the mental processes of keeping, storing and transferring experience from generation to generation. The integration process is revealed through the usage of cognitive models reflecting interconnected mental spaces. Contamination is one of the productive word-building processes of merging parts of stems into a new word. The contaminated parts are interconnected associative, structurally, functionally close to each other. The article presents the key models reflecting the processes of compressing, broadening and detailing information. The results anticipated could advance our understanding of the nature of contamination, examine language mechanisms of contaminants formation. It could shed light on major questions in the study of cognitive aspects of the derived contaminated words formed in the process of secondary nomination.

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**Keywords:** Conceptual integration, contaminants, linguacognitive mechanisms, secondary nominated words, word building models, mental spaces.



## 1. Introduction

In recent years, the amount of diverse information in the context of globalization has grown rapidly, and it now requires the creation of special mechanisms for its processing and compression. Lexical units created by means of secondary nomination (word-formation), should be examined as elements of a language, created by secondary nomination and accompanied by additional (new) information on the grounds of existed one. Semantics of a newly appeared word is modified. It is clearly manifested in the resemblance of a derived word with its derivative. A sign language system is never stable as it meets the inevitable changes of real life reflecting all social needs of people.

The relevance of this research is due to the formation of new approaches to the study of word-formation and reality categorization. It is determined by the following main problematic factors:

- linguacognitive paradigm in modern linguistic studies is prioritizing nowadays; especially in the field of cognitive word formation;
- dual nature of word-formation processes on the diachronic level reflects the cognitive mechanisms and principles of the discursive activity inherited by a particular language community, and on the synchronic level - cognitive-linguistic characteristics of both society and individual;
- the need to incorporate human experience as the most important tool into the cognitive and linguistic processes and in this sense to improve methods and research approaches to the study of word formation processes of the reality categorization in humanities.

The conducted research represents an attempt to perform a complex study of all the interlaced units in the world building system of a certain part of speech. Such signs as availability of universal word-formation meanings, crossing of the semantic features of the derivatives with their derivational bases give the grounds to speak about interdependence of parts of speech and linguacreative processes. A person is able to operate with a certain number of word-formation models in the linguacreative activity. These models in their cognitive structure reflect the essential functions of a human thinking to perceive and comprehend the environment, in particularly, various objects, processes, relations. It leads to the change of both lexical and grammatical meaning of the word, the emergence of new words. The baseline results of the current research may be basis for the assessment of the existence of the interaction law illustrating productivity of derivational mechanisms and systematic characteristic of word formation. At the same time, the blurred boundaries between cogitative categories reflect the universal language interaction of substance and attributive areas, which found the reflection in parts of speech. Interaction of individual with the environment will help us to understand the relations existed between human consciousness and systematic ties reflected in the language.

In this regard, contamination is one of the effective methods of information compression on the expression plane as well as on the content plane. Certainly, this word building process united the best features of two productive ways of English word formation, such as abbreviation and word compounding. The high degree of information compression enabled scholars to use this productive word building process in the creation of terms, advertising slogans, youth vocabulary, including online communication. Contamination covers all levels of language: phonetic, syntactical and lexical ones.

## 2. Problem Statement

The study material is the contaminated lexis selected from lexicographical sources. In this study, we focus on a contemporary English language. The subject of the research indicates the linguistic and cognitive mechanisms of conceptual integration of contaminants in the modern English language.

We find that hypotheses emphasizing conceptual integration as a fixation of structuring processes and sub-processes of different degrees of complexity in concepts or between concepts receive strong support. It helps us better understand the relationships between objects of the objective reality by means of re-nominated units.

The results of the study make a certain contribution to the development of semantic and word-formation tools of the derivatives and its cognitive analysis (Murugova, 2017), which determines the practical significance of this study. We find that derivation determines the direction of human linguacreativity, reflecting the processes of socio-cultural reality and knowledge categorization. Derivatives record human mind activity from the initial-empirical level up to the logical-conceptual one. That is why we distinguish the following levels and steps of categorization: empirical, conceptual (practical) and scientific (logical-conceptual) and the transition from one to another. The description of word-formation categorization from the point of anthropocentrism marks out the basic principles of its research: the derivation as binary process requires the analysis of not only new words as units of language system, but also new concepts; the result of any derivational process (formation of a word) is caused by active interaction of the cognizer and the object of cognition; the derivative as a mediator of the word-formation keeps, accumulates initial meanings and fosters emergence of new meanings; the derivative records and broadcasts selectivity of human thinking; the research of a word-formation categorization shall be performed in synergy with synchrony and diachrony; experiential approach to a word-formation categorization identifies mechanisms of collective knowledge and experience in the mental forms verbalized by the derivatives; word families (word nets), being complex units of word-formation, represent a complex storage system of knowledge that can be used productively in language learning.

Cognitive research in linguistics aimed at interlaced mechanisms as verbalization (the work with the word forms), conceptualization (the work with notions, signs and their meaning), and categorization (the work with senses). Their study leads to the mental processes of keeping, storing and transferring experience from generation to generation. These mechanisms bring the light on the role of word-building archetypes reflecting the key fundamentals of human activity. We support the assumption that language can be treated as an objective social phenomenon structured as sign – meaning- sense. The same formal meaning can express different sense depending on its usage. The cognitive structures are formed under the influence of human experience in compliance with extra linguistic courses. It is not a secret that inventive creators use academic tradition and skills as a stepping-stone into new frontiers. And any innovative creativity, where there is improvement through modification involve conceptualizing skills.

Linguacreative activity unites mental and language creativity covering the processes of nomination, categorization and conceptualization of the surrounding real as well as mental world by means of different language means. There is a great creative potential in a human brain that contributes to the problem solving by means of complex intellectual operations. A human is able to select those language units that express thoughts more efficiently. Thinking processes leads to the emergence of new words thanks to a

linguacreative activity of persons. In this regard, any word-building process fulfils its role in the human communication taking into account pragmatic and communicative intentions of a speaker. A person is not capable to give the name to each separate object, the phenomenon, property, quality, action etc. as each thing has uncountable amount of various qualities and, having investigated any final number of qualities of a thing, we cannot tell that this thing is studied by us completely. It follows that reflection of an object and phenomenon can't be full as the notion reflects differential signs of objects and the phenomena of real reality, and in this regard the structure of meaning includes only the most essential objectivized components of a concept, every time realizing this or that denotational component. Metaphor is considered the most productive way of the vocabulary enrichment along with the traditional processes of word formation. As a result, new meanings of already existed words or the new words which are homonymous to their derivatives appear in the language.

### **3. Research Questions**

Like most ways of word-formation, contamination has its own scope of unresolved problems related to the definition of this word-formation process and the establishment of its essence. In this study, we seek to disentangle those questions and to focus on the first by identifying contamination. The lack of common point of view on the essence of the contamination process is supported by the fact that in the linguistic literature, both domestic and foreign, you can find a significant number of definitions. Moreover, the very term contamination has several synonyms, which at different times either acquired or lost their relevance. Thus, in English synonyms of the analyzed term are "blends", "portmanteau words", "telescope-words", "hybrid-words", "fusion-words", "amalgamated words". Many of these terms were borrowed in the Russian language, so today along with the term contaminants exist such blends (from the English. blend means "to mix"), blending, hybrid words, telescopes or telescopic words, words-amalgam, "convolution", the bullion, the word purse. Such terminological diversity reinforces the expectations and interests of scholars in word-formation processes. .

The next problem concerned contaminative vocabulary is to establish the status of the comprised word-contaminants. More tentatively, our findings are consistent with the claim that the irregular nature of the submerging units classification of the contaminants are somewhat cumbersome, and in some cases difficult due to the fact that from the morphological point of view the word-formation contaminated elements are considerably diverse (see also N. Lavrova, 2013).

The prior research suggests that still there is the difficulty in establishing the status of word-formation elements of contamination and the lack of a unified classification of word-formation models (Gnezdilova & Badulin, 2015).

Even so, this process of word formation is referred to secondary: it is mentioned and described not in all textbooks on lexicology of the modern English language. At the same time, the study of contamination shows that it actively enriches the vocabulary of the English language with neologisms, and these new units serve to denote the concepts of important branches of human activity: science, medicine, electronics and many others (Zhukova, 2010, Lavrova, 2013; Nesvetailo, 2010).

It should be noted that in the English language contamination is examined as one of the most productive ways of word formation, in the Russian language, it is often considered as a manifestation of occasional word formation, as an artificial word building process or even "pathological". Pioneering studies played a critical role in identifying contamination. As this literature has expanded, scholars have increasingly supplemented observational studies with experimental approaches.

#### **4. Purpose of the Study**

Our study aims at revealing specific characteristics of linguistic and semantic processes of secondary nominations expressed by the contaminated words in English. This aim entails several goals:

4.1. To define the mechanism of derivational (structural and semantic) processes, due to which derived contaminants are formed.

4.2. To describe cognitive models of secondary nominations expressed by the derived words.

Our design has several advantages over prior observational and experimental approaches. First, the usage of cognitive approach helps to investigate derived contaminants deeper. Second, we can examine language mechanisms of contaminants formation, defining key structural types efficiently. Finally, qualitative-quantitative analysis of contaminants functioning allows considering interaction between its main components through the prism of cognitive mechanisms of integration.

#### **5. Research Methods**

The subject of this research is a cognitive base and a linguistic way of formation of the contaminated words in the process of secondary nomination in modern English. The goal of the research will be achieved by the deployment of a whole complex of methods such as word-building, component, distributional, contextual, conceptual, quantitative types of analysis, and conceptual and cognitive methods.

#### **6. Findings**

In linguistics, the term contamination (derived from the Latin. *contaminatio* "contact", "confusion") is emerged due to the scientific researches of neogrammarians, namely the works of E. Porcig and G. Paul. The research provide us with substantial leverage to reconsider various theoretical explanations of contamination definition. Contamination is viewed as the phenomenon in which two synonymous or somewhat related forms of expression of thought arise in the mind next to each other, so that none of them is realized in its initial form, but instead there is a new form in which the elements of one form are mixed with elements of the other.

The term contamination refers to the creation of a new language (or speech) unit in the interaction of, as a rule, two free stems that are structurally, functionally or associatively close to each other. Contamination is one of cognitive mechanisms, which illustrates an interaction process of different concepts. A contaminant involves two or more domains or input spaces, one generic space and a mapping relationship (Fauconnier & Turner, 2002). In a contaminant, both domains (input spaces) are source domains, and together they contribute to the creation of a third, entirely new domain. Structurally each

domain (or input space) consists of many conceptual elements and relations between them. Contaminants include the coinage of words.

In English, the examples of contamination are known since XV century. According to the observations of N. Laurel, the first contaminated units, emerged in the English language, reflected a humorous look at the picture of the social fabric and mores of different eras. Such units are found in the works by W. Shakespeare, L. Carroll, John. Rowling, in addition, a number of linguists, for example, G. Sweet, A. Abbott, O. Jespersen, J. Bergström drew attention to the contaminated units in their works. Our findings are at odds with scholarship reports pronounced differences in interpretation of the word-formative essence of contamination, which led to an ambiguous understanding of this linguistic phenomenon.

Thus, a number of linguists, identified contamination as the interaction, crossing, unification of linguistic units or their parts on the basis of their structural, functional or associative affinity, leading to their semantic or formal change, as well as to the formation of a new linguistic unit (Lavrova, 2013, 2014).

The others interpret the term contamination as confusion (the statement is based on two different syntactic models at the same time) (Norman, 2014).

Some linguists adhere to the traditional English term blending and define it as the process of merging parts of the word. Language mechanisms of expression of contaminants differ from representation of contaminants with overlay of components of word-sources (alcoholiday (alcohol + holiday), steelionaire (steel + millionaire), sinema (sin + cinema), destarture (departure + start), dramedy (drama + comedy), animule (animal + mule), advertorial (advertisement + editorial)) to overlay of words-sources (brunch, latensify (latent + intensify), ballut (balloon + parachute), boldacious (bold + audacious), fanzine (fan + magazine). Each group has its own structural types.

In the problems study of contaminated vocabulary, the question of language mechanisms that unite the conceptual spaces of contaminants is all the more remarkable.

The essence of the model of conceptual integration of the contagious units consists in the presence of the initial mental spaces (input space 1, input space 2), the general mental space (generic space) and the integrated mental space, called the contaminant. For example, in the formation of an integrated space – the contamination of flightmare– fear of flying on an airplane involved the mental spaces flight and nightmare. For example:

She glanced, for the first time since this flightmare started, to the man sitting in the aisle seat beside her (Eden Falls by Joe Shredder, 2011).

It is necessary to emphasize that the structure of the integrated space of the contaminant is characterized by the presence of both elements common to the initial spaces, and specific elements for each initial space, but the relationships between the elements within the contaminant develop according to their own specific principles and logics. Therefore, the contaminant is not a simple set of elements of the original spaces, but a completely new unique unit that has specific elements that differ significantly from the elements of its original structures. By the conceptual integration of contamination, we mean a universal cognitive mechanism, which consists in the presence of two or more initial mental spaces, a common mental space and an integrated mental space. Each of the mental spaces contains the conceptual elements that are in certain relationships and connections with each other. At the same time, the contaminant as an

independent unit that is characterized by the presence of connections with the original mental spaces. The integration process is presented as an integrated space with the help of cognitive models reflecting the interaction of the respective mental spaces. In most cases, contaminants represent nouns formed by merging two substantive mental spaces.

For example, blaudience (blog + audience) – network journal; blath (blog + math) – problem in the online journal. Less often the integration of the subjective and substantive mental spaces: cybot (cybernetic + robot) – a robot that is capable of making its own decisions by simulating the process of rational thinking; slimnastics (slim + gymnastics) – gymnastics for weight loss; mechatronics (mechanical + electronics) – mechanical electronics.

Contaminant-adjectives in most cases represent the integration of verbal and substantive (smoketeria (smoke + cafeteria) – cafe where you can smoke) or substantive and subjective (cabarazy (cabaret + crazy) – amateur cabaret; celluloud (celluloid + loud) - too loud (about the film); mealicious (meal + delicious) – delicious), two subjective mental spaces (critical). + particular) - picky, fastidious; food (cool + good – excellent, first-class; cutiful (cute + beautiful) - handsome, pretty.

Contaminant-verbs represent the verb integration of the two spaces (contradictate (contradict + dictate) to dictate their conditions in the spirit of opposition; embrangle (embroil + entangle) to involve, implicate; chastigate (chastise + castigate ourselves) – to warn, rebuke (jokingly).

According to the semantics of the analyzed data, nouns contaminants can be assigned to the following major groups.

#### *Personal nouns*

The semantic nature of the lexical units indicates the presence of evaluative connotation in the structure of the lexical meaning of words. Thus, a positive assessment is expressed in units like feelosopher (feel + philosopher) – sensitive philosopher; negative evaluation is presented in the semantics of such nouns as videot (video + idiot) – a person who is overly fond of video games; villainvader (villain + invader) – uninvited guest

In some cases the gender correlation of some nouns –contaminants is revealed. F.ex.: femaleader (female + leader) – female leader, maleader (male + leader) – male leader, mannequeen (mannequin + queen) – mannequin female.

#### *Concrete nouns*

F.ex.: fastamp (fast + stamp) – fast – adhesive stamps, plumcot (plum + apricot) – fruit, plum and apricot hybrid, ragzine (rag + magazine) - old shabby magazine.

#### *Abstract nouns*

F.ex.: Manit (man + minute) – work that can be performed by people in one minute, natureligion nature (+ religion) – nature worship, evolution (electronic + revolution) – progress, a revolution in the field of electronic technology, animalogy (animal + analogy) – analogy with animals.

#### *Category of state*

F.ex.: *apprehenditis* (*apprehend* + *appendicitis*) – a condition in which anxiety is accompanied by acute abdominal pain, *feeblility* (*feeble* + *debility*) – severe physical fatigue, *ansurge* (*answer* + *surge*) – an irresistible desire to answer every phone call).

In our study verbs belong to the lexico-semantic groups of action (*polishine* (*polish* + *shine*) - clean to shine, *pointent* (*point* + *intent*) - intends to do anything), motion (*travisle* (*travel* + *isle*) to travel to the Islands, *moverturn* (*move* + *overturn*) – to turn the furniture in the placement), mental activity (*mugitate* (*muse* + *cognitate*) - to think, to ruminate).

Adjectives, as a rule, belong to the anthropological group of adjectives that characterizes a human (*privacy* (*private* + *proxy*) – authorized, *preet* (*pretty* + *sweet*) – pretty, *snazzy* (*snappy* + *jazzy*) – bright, attractive, chic).

Negative characteristics are presented in the semantics of adjectives such as *noistreous* (*noise* + *boisterous*) – loud, noisy; *sugly* (*so* + *ugly*) – ugly, *torrible* (*terrible* + *terrible*).

A separate group of contaminants is distinguished among brand names. It is known that trademarks are created for advertising different products contributing to the brevity of information.

In modern society, there is hardly a woman who is not familiar with the diverse products of the company *Maxfactor*, cosmetics advertising. The name of this trademark is a word-bar, the initial element of which *max* is the truncated first syllable of the word *maximal* (*maximum*), respectively, *Maxfactor* (*maximal+factor*) literally translates as "maximum factor".

Element "max", being part of the name of a respectable company, indicates the maximum improved quality of the goods. Besides, it is quite clear that the main consumers of production are the women. Fruit ice cream "*Popsicle*", popular in the United States, submitted to the trademark of "*Popsicle Industries*". The name is formed from the words *pop* and *icicle*, that is, "*icicle-cracker*."

"*Bubblicious*" (*bubble gum* "*bubble gum*" flavoured production of "*American Chicle*"). The name *Bubblicious* comes from bending *bubble+ delicious*, that is, delicious chewing gum, which is so attractive to children.

Modern scientists and technologists managed to develop a recipe for sausages from vegetable protein that does not contain meat. The product is available under the trademark "*Prosage*" (*protein+ sausage*) and is popular among vegetarians because it fully corresponds to their plant diet.

Improved air conditioners are produced under the brand name *Cooline* (*cool* + *line*) Air Conditioners. The initial component of the contaminant *cool* directly points to the main function of the air conditioner – air cooling, and the final component of the *line* is an indicator of the goods produced quality.

Special attention should be paid to the terminological contaminants in the sphere of biology (*climatype* – *climate* + *type*), medicine (*conceptacle* – *conception* + *receptacle*), chemistry (*chemurgy* – *chemistry* + *metallurgy*), computer (*computer* + *literacy*), geography (*Chindia-China* + *India*), linguistics (*Chinglish-Chinese* + *English*), archaeology (*cryptex-cryptex*), theatre (*decoreographer* – *décor* + *choreograther*).

The empirical analysis allowed us to examine some special terms in welding (*oxygen* (*oxygen*) + *fuel* (*fuel*) = *oxyfuel* (*acytelene oxygen fuel*), *oxygen* + *acetylene* (*Atitlan*) = *oxyacetylene* (*acetileno-*

oxygen mixture), electricity (electricity) + slag (slag) = electroslag (electroslag), electricity + gas (gas) = electrogas (Elektrogaz).

The data analysis revealed both the structural and semantic diversity of the contemporary English language.

## 7. Conclusion

Thus, the analysis of the empirical data testifies the complexity of the contamination models classification due to the irregular nature of the morphemes forming a contaminative unit. The article introduces the fact that the most productive word-formation models for nouns are N+N, Adj + N. For the formation of adjectives, the most active models are N + Adj, Adj + Adj. Verb-contaminants built models V+ V, Vphr + V.

On the basis of semantics, the major groups of noun contaminants are personal, concrete, abstract concepts, nouns expressing the category of state. The semantics of nouns is characterized by evaluation and gender marking. The main lexico-semantic groups of verbs represent action, movement, mental activity. Most adjectives belong to the group of anthroponomical adjectives, introducing positive and negative qualities and properties of man. A separate group represents the names of famous brands. They are characterized by brevity of style, information compression, portability, catchy external form, the possibility of "language gaming".

Special attention should be paid to the terminological contaminants. Among the contaminants, one should distinguish between the actual terms and professional jargonisms that are not officially recognized, however, capable of expressing the essence of the concept. Contaminants can be found in different terminological areas of biology, medicine, chemistry, computer science, geography, linguistics, archaeology, theatre. Here, we have focused on linguistic and cognitive mechanisms of conceptual integration of contaminants in the modern English language. With the help of the mechanism of conceptual integration, it is possible to find out what structures the speaker operates, how the process of compression, deployment and detailing information is implemented in the structure of the derived word. It could shed light on major questions in the study of cognitive aspects of the derived contaminated words formed in the process of secondary nomination.

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