

Научная статья

УДК 81'33

DOI 10.52070/2542-2197_2023_8_876_22



Прикладные лингвопрагматические технологии: словарь семантических орбит

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Аннотация. В статье описываются концепция и технология реализации нового механизма оптимизации лингвопрагматического воздействия на целевые аудитории. Суть метода заключается в проведении ассоциативного эксперимента среди испытуемых, принадлежащих к заранее заданной целевой группе, в ходе которого выявляются все ассоциации, связанные с данным словом. Статистическая обработка результатов позволит получить информацию о вероятности возникновения конкретной ассоциации среди представителей заданной целевой группы и модифицировать тексты с точки зрения лингвопрагматики для достижения искомого воздействия путем намеренного имплицитного внушения конкретных ассоциаций.

Ключевые слова: лингвопрагматика, семантические орбиты, ассоциативный эксперимент, экспериментальная лингвистика, психолингвистика

Для цитирования: Джунковский А. В., Цветаев Е. Ю. Прикладные лингвопрагматические технологии: словарь семантических орбит // Вестник Московского государственного лингвистического университета. Гуманитарные науки. 2023. Вып. 8 (876). С. 22–26. DOI 10.52070/2542-2197_2023_8_876_22

Original article

Applied Linguopragmatics: Semantic Orbit Dictionaries

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Abstract. The article describes the concept and technology for implementing a new mechanism to optimize linguopragmatic impact on target audiences. The essence of the method is to conduct an associative experiment among subjects belonging to a predetermined target group, during which all associations perceived with a certain word are discovered. Statistical processing of the results provides an opportunity to gather data on the probability of a certain association being invoked among the representatives of a said group when subjected to a specific word and modify texts through the application of linguopragmatics to achieve the desired impact by means of suggesting certain associations both intentionally and implicitly.

Keywords: linguopragmatics, semantic orbits, associative experiment, experimental linguistics, psycholinguistics

For citation: Dzhunkovskiy, A. V., Tsvetaev, E. Y. (2023). Applied Linguopragmatics: Semantic Orbit Dictionaries. Vestnik of Moscow State Linguistic University. Humanities, 8(876), 22–26. DOI 10.52070/2542-2197_2023_8_876_22

INTRODUCTION

In the contemporary world, the amount of information is growing exponentially. Many different sources and creators produce content with different goals in mind, which creates many business opportunities in the modern global digital economy. A large portion of this content is linguistic in nature. Many stakeholders in this information economy may be interested in technologies that make their messages more persuasive. Such fields as marketing, public service announcements, governance, public diplomacy and other areas that have a goal of convincing people to either make a transaction, change their opinion on a subject or act in a certain way may benefit from means of improving the efficiency of communication that are based firmly in the scientific method.

We propose a way to achieve this goal through an innovative linguopragmatic technology. To lay down its theoretical framework, describe the technology itself as well as the possible practical applications we will consider a number of issues pertaining to it.

MANIPULATION IN LINGUISTICS

In the study of language, a lot has been said about manipulation. It is prudent to have an in-depth discussion of what linguistics has to say on the subject. It has to be said that although psychology views manipulation as a subtle attempt to make a person or a group of people act for one's benefit, linguists do not share this view¹. In linguistics, it is assumed that this behaviour should not necessarily bear ill will towards the object of manipulation [Antropova et al., 2020]. Other approaches to manipulation include the pragmatic approach of Sperber and Wilson [Sperber, Wilson, 1995], and that of T. van Dijk which is common for critical discourse analysis framework [van Dijk, 2001]. Both perspectives view manipulation as a valid tool for achieving the communication goals a manipulating party may have. The basis for manipulation is employing the common place assumptions which differ from one speech community to another and manifest in the way we interpret certain language units. The theoretical framework of linguopragmatics goes even further and allows one to describe any act of communication as an act of manipulation [Shurupova et al., 2019].

So while from an ethical standpoint looking at communication as manipulation may be extreme and impermissible, logically and linguistically speaking it

is safe to say that manipulation is but a simple result of already existing agreed-upon assessments. If one is to agree that manipulation is a tool and users of language have a goal in sight that they try to achieve by using this tool, the conclusion would be that at least in certain instances use of language is an act of manipulation.

To conclude, the term "manipulation" here is not used in the sense that is common in psychology and related fields. Instead, it is simply used to denote the fact that language use is an instrument of achieving a specific goal. Additionally, it is important to note that such linguistic manipulation does not by its very nature have to be malevolent.

Let us provide an example: two people are communicating, one of them is visibly upset. Upon noticing this, the other person tries to improve their mood by saying something positive. In this instance, the second person has a goal in sight – improving the mood of the first person – and they use language to achieve that goal and in essence alter the world around them. In this paper, we would classify this action as an act of manipulation within the framework of linguopragmatics.

LINGUISTIC MANIPULATION AND LANGUAGE OPTIMIZATION

Thusly, the possible ethical issues may be solved in a satisfactory manner and linguistic manipulation may be viewed in the context of increasing its own efficiency. One way to understand language is to see it as striving for optimality. That view is supported in the field of analytical philosophy, as both B. Russell and L. Wittgenstein (in his early works) put forward the notion of an ideal language free from ambiguity [Wittgenstein, 1922; Russell, 1959]. While their efforts were focused on optimizing language for the purposes of philosophy, this line of thinking may be instrumental for our purposes.

The strive for an unambiguous language is closely related to language optimization. The task of achieving laconism is in an analogous manner not dissimilar from the task of relaying a message as efficiently as possible. We posit that these efforts may also be undertaken with the goal of achieving such a state of language messages that allows them to fulfil their instrumental task as quickly and efficiently as possible. In other words, we posit that it is possible to optimize language through the optimization of the speed and efficiency of linguistic manipulation. This theoretical basis allows us to move forward and introduce a practical way of altering messages in their creation stages with that goal in mind.

¹ <https://dictionary.apa.org/manipulation>

CONCEPT OF SEMANTIC ORBITS

The proposed method is an expansion on the already existing concept of semantic cores (semantic kernels, query kernels in some sources) [Goddard, 2002]. Semantic cores are used in the fields of search engine optimization and marketing. This method entails altering the semantic makeup of a website or creating it from the ground up. The goal here would be to match the presence of certain words to the possible search queries in search engines. A well-maintained semantic core increases visibility of a website and brings in more customers.

The proposed semantic orbits concept is based on semantic cores both conceptually and metaphorically. In its nature, the creation of semantic cores has a goal of researching the target audience and altering the linguistic makeup of a website in such a manner that their queries in search engines match the words that are used in the website. It is effectively presaged what words the target audience may input into the search engine and those words are inserted into the site to create a match between the query and the search result.

There is a *prima facie* problem with probable terminological confusion, and in order to avoid this we believe it worth mentioning that the concept we put forth in this paper does not infringe on the research carried out with regard to lexical domains. These are a subset of language domains, understood by Otto Ducháček as sets of words which are linked to each other by certain mutual relationships that form a hierarchical structure [Ducháček, 1967]. More specifically, as a term, lexical domain has its roots in functional linguistics and is often equated with "lexical and semantic domain" which highlights the fact that this concept has found a home in semantics.

If we were to summarise the definitions to be found in the body of work related to this concept, we could infer that any given lexical domain pertains to a certain number of lexical items that share a continuous semantic space and / or are juxtaposed to each other in some way [Гусейнова, Алекперова, 2021]. These domains also deal with a specific field of human activity or experience and therefore either include or reference them [ibid, p. 80]. However impressive the diversity of definitions might be, a common feature is that lexical domains deal with sets of lexical units.

Semantic orbits, on the other hand, do not deal with words from a lexical point of view. The way we define them, the orbits mean the continuum of possible associations perceived with any given word for a predetermined target audience with an indication of the frequency of appearance of all associations for said target audience. The goal of

discovering a semantic orbit of a word is to determine what associations are the most frequent for it to be perceived with. While such a line of inquiry would pose value for the field of psycholinguistics in and of itself, the discovery of semantic orbits has practical applications for a number of aforementioned fields. In their essence, semantic orbits, if coupled with solid scientific data, allow one to gain some insight into word perception processes of entire target groups.

With the concept described, it is needed to go into the specifics of how these semantic orbits may be discovered. The rigorosity of the discovery process will determine the efficiency and the results of implementing this technology as a basis for linguistic manipulation.

SEMANTIC ORBIT DISCOVERY METHOD

The steps needed to discover semantic orbits are as follows:

1. Choosing a list of words to analyse.
2. Choosing a target group.
3. Determining the respondent sample size.
4. Finding the respondents.
5. Conducting an associative experiment.
6. Experiment data processing.
7. Semantic orbit elucidation.

In the first two stages, the researchers need to determine what words they wish to use as stimuli for the discovery of semantic orbits and the makeup of the target group.

In the third and fourth stages, the sample size needs to be determined. Naturally, the bigger the sample size, the more accurate the discovery results. At the same time, the sample size needs to be weighed against financial and time constraints of the discovery and adjusted accordingly. After that the respondents are brought in.

The fifth stage consists of the associative experiment. All respondents are to be asked to provide all associations they perceive each given word-stimulus with. It is important that the respondents give their true associations, to which end their participation and identification needs to be anonymized of which they must be informed.

This data is then processed in stage 6 in the following manner: the resulting associations are tokenized and the frequency of their appearance for each word is determined.

Finally, the resulting data is presented in the following manner:

Word 1: [Association 11, X1%], [Association 21, Y1%], [Association 31, Z1%], ...
 Word 2: [Association 12, X2%], [Association 22, Y2%], [Association 32, Z2%], ...

Word 3: [Association 13, X3%], [Association 23, Y3%], [Association 33, Z3%], ...

All possible associations are given for each word. In the provided example, "Association 11" means "first association for the first word", "X1%" – "percentage of respondents within the target group that report Association 11 to the word-stimulus", etc. In such manner a semantic orbit is elucidated.

SEMANTIC ORBIT DICTIONARIES AND PRACTICAL APPLICATIONS

Discovered semantic orbits may be collected into semantic orbit dictionaries. These dictionaries may only be created if the data in them is gathered using the same sample size and the experiment is conducted in the same time frame. These conditions will ensure that the semantic orbits remain consistent and the data is not altered by temporal or sample size imbalances.

It is important to note that due to the fact that perception and language evolve over time, it will become a necessity to periodically rediscover semantic orbits. We believe that these semantic orbits will stay relevant for a limited time period. That will result in a need to study them once more over a period of time in connection with natural language evolution processes.

A semantic orbit dictionary may be used by PR and marketing companies to create textual advertisements that implicitly create certain associations within the target audience. This is the reason why semantic orbits need to be discovered for a limited time frame and with a specific group of respondents in mind. For example, if a company wishes to create advertisement that elicits hunger and their product is aimed at a specific group of customers, a semantic orbit discovery process will need to take that into account and search for stimuli that elicit associations of hunger. Perhaps it would be possible to use a juxtaposed version of this method wherein the respondents would be asked what association the stimulus "hunger" elicits in them. Another promising field for the practical application of this technology is public service announcements aimed at non-profit social goals.

Furthermore, semantic orbit dictionaries might prove useful to political parties, specialists in the field of digital diplomacy and brand managers, as well as other parties that may be interested in swaying public opinion in a particular way on a number of issues.

There are two possible options for this process to function. The first option presupposes that a party approaches a research collective dealing with semantic orbit discovery and puts forward all the necessary data to begin the process, i.e. the proposed respondent sample size, detailed information on the

target group, as well as the list of associations they desire to induce within their target audience. This allows the researchers to begin their inquiry and provide the client with the data they need. Due to the fact that this information can become outdated, these inquiries need to be conducted on a regular basis. Another option is team of researchers creating the semantic orbit dictionaries spontaneously with a goal of then providing them to the interested parties. Due to the nature of the data gathered, some oversight might be required to prevent misuse of this information.

CONCLUSION

Semantic orbit dictionaries are a potentially useful linguopragmatic tool of linguistic manipulation. The advantages of their usage have a strong scientific foundation and a high degree of specialization for each specific case. The concept of semantic orbits is derived from the existing search engine optimization and marketing concept of semantic cores and expanded upon. The concept presupposes discovering all possible associations to word-stimuli within a predetermined target group and conducting statistical analysis of the resulting data. This allows researchers to determine what words elicit what associations within a researched target group and the probabilities of each association. This information is then cataloged into semantic orbit dictionaries that we posit to be useful for any purposes where perception of a group of individuals needs to be altered in a particular way through the use of the gathered data. It becomes possible to construct texts with semantic orbit information in mind and craft controlled association-based subliminal messages.

While the laid out theoretical framework appears sound, it requires practical confirmation. Two main questions require testing: how effective the method is in praxis and how often semantic orbits would require updating, that is, how quickly the perception of lexical units shifts in society. One of the possible answers to the second question might be that the speed of this association evolution varies from language to language, from society to society and perhaps even within different strata of a society. The described tasks are monumental, but can be researched collectively on a global scale. The practical benefits and applications of semantic orbit dictionaries create a promising framework for such investigations to be carried out. The socioeconomic applications in the form of free market economic interest could become the driving force for research that essentially grants insight into the very essence of language, communication and the connection between language and the human psyche. Conducting further meta-investigations and comparative analysis appears to be a promising way of achieving this.

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Статья поступила в редакцию
одобрена после рецензирования
принята к публикации

16.05.2023
19.06.2023
22.06.2023

The article was submitted
approved after reviewing
accepted for publication