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## Pragmatics of article choice as a mathematical formula (based on the material of abstract value-oriented vocabulary)

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*The target of this study is to identify the degree of freedom of the speaker when choosing the type of article. Using the method of continuous sampling, we analyzed the article combinations with the same lexeme in the "opinionating" text format. Several topics are presented, in accordance with the abstract lexemes titling each text. Some methods and categories of border disciplines – mathematical logic and philosophy – are used: the general and particular, singular, element-set. The study revealed that the choice of the type of article can be described by a mathematical formula and is fully determined. The parameters that determine the choice of the article are the degree of generalization of the abstract lexeme, determined by the variability of the correlated denotative series considered as a type of set; the manifestation/awareness of the external and essential internal features of the referent; the paradigmatic connections of thesaurus.*

**Keywords:** *the type of article, countability, element, set, the singular, variability of the particular.*

### Introduction

The relevance of this study is determined by the fact that a native speaker of Russian who has learned a language that possesses articles (English, German, etc.) believes that he can use an article intuitively, voluntarily relying on some didactic rules, the main of which are the following: alternation (replacement of the indefinite article for the definite article in the process of speech), the zero article with proper names, nationality names and professions. As a rule, the use of article types in some of the most frequent set phrases and phraseological units causes no difficulty, e.g., *step by step, with pleasure, have breakfast, zu Hause sein* (German: *be at home*), etc.

At the same time, the fact, that the alternation of the indefinite article for the definite one mostly characterizes descriptive and narrative text formats, remains beyond a school language course. But even in these texts formats, the indefinite article introduces new information only within a minor part of the text.

In our earlier studies, it was revealed that the percentage of article types for any texts – fiction, journalism, scientific presentation – remains approximately the same and corresponds to the following indicators: 40% each for the zero and definite article types, about 8% for indefinite, 12% are covered by other determinatives (various types of pronouns, for example, demonstratives, the negation "keine", numeral) [21, p. 31].

There is no article choice algorithm. German researchers propose rather an extensive list of rules for using articles. So, for example, Grimm and Kempfer propose 13 basic rules and 50 additional ones concerning the use of article [14], pointing out, however, that some cases, such as idioms, are inexplicable.

The algorithm for choosing the definite, indefinite, or zero article, proposed in this paper, is based on mathematical formulas as the algorithm for its choosing.

The materials of the research included, primarily, the authentic texts of a series of popular science programs on German television “Auf ein Wort” – “Just a minute”/“Just one word”, which discuss philosophical topics reflected in particular in value-oriented context. The interviewer Michel Friedman asks provocative questions to his opponent, a philosopher, as a rule. The program lasts 42 minutes (the list of guests-interlocutors are given in Table 1).

Table 1

Interviewees of the discussion program “Auf ein Wort” (interviewer Michel Friedman)

№	The title of the episode = lexeme (German/English)	Interviewees		
		Participants' names	Qualifications/profession/ /job position/degree	Sex
1	Scham/Shame	Maria-Sibylle Lotte	Philosophin – philosopher	female
2	Gewissen/Conscience	Friedrich Wilhelm Graf	Professor für systematische Theologie und Ethik – Professor of Philosophy and Ethics	male
3	Gott/God	Wolfgang Huber	Theologe – Theologist	male
4	Tod/Death	Tomas Macho	Naturwissenschaftler – naturalist	male

Using the method of continuous sampling, we analyzed the article combinations with the same lexeme, used in the “argumentation” text format; several topics are presented, in accordance with the abstract lexemes titling each text. Textual illustrations are recorded, translated, systematized according to the type of the determiner: the indefinite, definite, or zero articles, demonstrative pronouns, the negation “keine”. In addition, some texts from documentaries and movies in German were used. Materials in English are presented by a piece of modern American literature and by the text of Joe Biden’s inaugural address.

For better illustrations while translating we used the following icons before nouns corresponding to the types of articles: “+” – for the definite article, “-” – for the indefinite article and “\*” – for the zero article.

### 1. Variability in the language of mathematical logic

On the basis of concepts of mathematical logic and philosophy, i.e. the concept of variation, the categories of the general – particular – singular, we propose the following formulas of non-strict inequality for the choice of the indefinite and zero articles, and the formulas of equality for the choice of the definite article for the countable singular. By the singular in linguistics, we mean a particularized noun (we use mathematical symbols, A denotes the singular):

$A \leq 1$ , for the indefinite article, that is, A is the singular minus the individual, potential poly-variability;

$A = 1$ , for the definite article, the individual is manifested in the singular in this particular variant, univariance;

$A \geq 1$ , for the zero article, the individual and essential is taken in all possible completeness, compositionally complex integral or holistic, invariant.

The variability of the particular, manifested in the specified singular, determines the type of the article. Let us clarify and explain the use of the terms and formulas.

## **2. Terminological research apparatus: philosophical and mathematical terms applied to linguistics. Thesaurus as a type of set**

“Not only a separate object, but also a class of objects can be considered as a singular one, if it is taken as something unified, relatively independent, existing within the boundaries of a certain measure. At the same time, an object is a certain set of parts, which, in turn, act as singular” [15, p. 183]. The conceptualization of reality, nomination of concepts of various extension, the fixation of meaning within a certain framework of the form are reflected in the language, in its thesaurus. The singular, as applied to linguistics, is a word with inherent characteristics of the object, which, in turn, can be classified as basic non-variable and individual, variable. As for this aspect, our scientific reflection is confirmed by the definition of the lexical meaning of the word from the linguistic encyclopedic dictionary, i.e. the statement that the lexical meaning is based on a concept that “is characterized by vagueness, blurring of boundaries: it has a distinctive core, which ensures the stability of the lexical meaning of the word and mutual understanding, and fuzzy periphery. At the same time, fuzziness and instability have their own boundaries, determined by... lexical paradigmatics” [17, p. 262]. The thesaurus is a structured system. In terms of semantic relations, we distinguish between “groupings of words in the language system based on the opposition – these are synonymy, antonymy, hyponymy, paronyms, word nucleus group, word family, lexical-semantic group, as well as the most general grouping of words – field” [17, p. 438].

Obviously, this citation has very much in common with the definition of the set:

“A set is a number, a collection, a class of some objects that have a common characteristic for all... a set is the broadest concept of mathematics and mathematical logic, that is, a category... of set consists of one or another collection of objects, which are called elements of a set... The basic concept of theory of sets is the concept of belonging of elements to a set” [15, p. 354]. Every noun defines a set and at the same time can be an element of a set.

In logic they distinguish between finite, infinite and singular sets in accordance with presence/absence of the elements that have typifying characteristics, specified by a definite set. A singular set is understood as containing only one such element. In terms of linguistics, this correlates with the denotative series. An empty set is also possible if there are no elements possessing the required characteristics. A vivid illustration of an empty set can be the following quote from the story of V. Pelevin “The Life of Insects”, who describes an instant transformation of three people into mosquitoes and calls an outside observer to witness this process: “And nobody knows what that someone would have done, who in fact does not exist, but has inhumanly sharp eyesight” [19, p. 12]. The presupposed characteristics are the following: “not to exist, to have inhumanly sharp eyesight” – there is not a single element that meets these characteristics.

In our study, the distinction between particular and abstract vocabulary is relevant. In the first case, reference to objects/events of objective reality is possible, while the latter, in their essence, are the result of conceptualizing objective reality and have no direct material referent:

“...according to the correlation of concepts principles (subordination, hyponymy, antonymy, etc.). Paradigmatic relations are formalized using mathematical set theory” [17, p. 437–438].

It is important to differentiate vocabulary not only essentially, but also due to the fact that we focused our attention mainly on abstract lexemes, since the topics of disputes are philosophical, that is, abstract.

### 3. Analysis of article usage with abstract lexemes in texts on various topics: general vs particular

In accordance with the target of the program, they consider concepts and the corresponding abstract nouns. Abstract nouns, describing the world of ideas and feelings, tend to be used with the zero article. An abstract noun is essentially collective and does not have a referent as a specific object in the real world, but correlates with a particular situation that causes a certain well-known response in a person. This is the response of our mind and emotions.

From this perspective, in the program “Scham” (Germ.) [5] – “Shame”, the word “shame” was pronounced 61 times. (We left outside of our research the derived words, complex expressions, such as, the ability to experience shame, the boundaries of shame, the sense of shame, focusing exclusively on the lexeme “shame”). In terms of quantity, we picked up 61 samples, i.e.: 17 usages with the definite article, 2 usages with the indefinite article, 1 usage with the negation of “keine”, 1 usage with this demonstrative pronoun – “diese” (this/these) and 40 usages with the zero article. That is, two-thirds of the usages fell to the zero article, which is quite consistent with the concept of an invariant demonstrated by this type of article: the concept is considered in all possible completeness of manifested individual characteristics for each possible variant of manifestation, with a dominant typifying feature. Similarly to the reviewed material on the topic of Shame, the three other lexemes which denote abstract concepts: death, God, conscience are considered. Let us see Tables 2.1, 2.2 which fully characterize the use of articles within the discussed topics.

Table 2.1

The determiners of abstract lexemes in the “opinionating” text format: article types (in numbers)

№	Lexeme	Total number of lexeme usages	Zero article	Definite article	Indefinite article	Other
1	Scham/Shame	61	40	17	2	2
2	Tod/Death	86	8	73	3	2
3	Gott/God	129	115	7	2	5
4	Gewissen/Conscience	132	27	65	33	7

Table 2.2

The determiners of abstract lexemes in the “opinionating” text format: article types (in percentage)

№	Lexeme	Total number of lexeme usages	Zero article	Definite article	Indefinite article	Other
1	Scham/Shame	100% = 61	66	28	3	3
2	Tod/Death	99% = 86	9	85	3	2
3	Gott/God	100% = 129	89	5	2	4
4	Gewissen/Conscience	99% = 132	20	49	25	5

\* An error of one percent rounds to the nearest unit

### 3.1 Methodology of performing statistical selection

The method of continuous sampling was used to calculate the number of lexemes in the text corresponding to the topic of discussion. The number of words with different types of articles was revealed: definite, indefinite, zero article. Other determiners, such as possessive, demonstrative pronouns, and negation “keine” were also counted. Table 2.1 reflects the results of calculations in numerical terms. Table 2.2 converted the numerical terms of the articles usage into percentage terms, so that the analysis of frequency of the articles in different programs could be comparable. The total number of uses of the topical lexeme in each program is taken as 100%. Articles are considered in percentage terms for each text, so that the analysis is adequate when comparing the texts.

Analysis of the statistical data revealed the following:

**3.2. The number of usages of the same lexeme**, connected with the chosen topic, during the fixed time interval of the dispute (42 minutes) changes, increasing, as follows: 61 – 86 – 129 – 132. That is, the number of uses doubled in the program “Conscience” (figure 4 in the Tables), in comparison with the program “Shame” (figure 1 in the Tables). This is due to the enthusiasm for the topic shown by both interlocutors and, accordingly, to their rate of speech, each of the interlocutors has individual rate of speech. In the first case, the dialogue proceeds in a calm form, the interlocutor is a woman. In three other programs, the interlocutor is a man. The interviewer himself seems most interested in Topic 4 “Conscience”, besides, he feels good towards the interlocutor. In Topic 3 “God”, the rate of speech is also quite high, but the interlocutors feel mutual irritation, their positions are clearly opposite.

### 3.3. Zero article

The highest numbers of 89% characterize the topic “God”. We consider it the highest degree of abstraction, an invariant. It goes together with the definite article having the lowest numbers of use here – 5%.

This is explained by the fact that the concept of “God” is not determined by any fixed representation/image; the external manifestations of the referent are unknown. The cliché characteristics of the God, such as +Almighty God – der Allmächtigste Gott, +Merciful God – der Liebe Gott [4], act as substitutes for such external manifestations. In this sense, the Bible quotation “I recognize you by your deeds” seems applicable here. The second in frequency with zero article was the lexeme “Shame” 66%, then in descending order “Conscience” – 20% and “Death” – 9%.

### 3.4. Definite article

The highest numbers of 85% characterize the topic “Death” (2), while the zero article has the lowest numbers in the sample – 9%.

This is because human experience describes as obvious the external manifestations of death. The stages of the coming death have been recorded both in everyday and scientific discourses. However, a living person cannot imagine the inner content, the essence of death. It is only possible to understand that death is the antipode of life, its termination. And any contrast, or antonym, according to the connections of the thesaurus, is naturally determined by the definite article. The individual, and in this case the essential, is manifested by contrast. The form is evident, the content is unknown, so it is defined as the opposite to the well-known content of the lexeme “life”.

The zero article is presented to a greater extent as an indicator of an invariant, the idea of the incomprehensibility of death.

Indicators for other lexemes in the definite article (in descending order): “Conscience” – 49%, “Shame” – 28%, “God” – 5%.

**3.5. Indefinite article** has the largest numbers of 25%, in numerical terms it is 33 usages out of 132, in the topic “Conscience” (4), while the percentage of the definite article remains quite high – almost half of all usages, 49%.

This is explained by the fact that the concept of *conscience* includes a priori variability: a calm conscience/remorse (Russian), ein schlechtes Gewissen/ein gutes Gewissen (literally in German – bad conscience/good conscience). This pair accounts for 25 of 33 usages, that is, 75% of the total number of usages of the indefinite article. The remaining 8 usages in percentage terms comprise 6% of the total use of the lexeme in the text. So, the use of the indefinite article in this sample, although it remains the largest (ranging 2 – 3 – 6%), is fully covered by our statistical data on the use of the indefinite article for all types of texts – up to 8%.

A high percentage of the definite article use for this topic is also connected with the fact that the concept *conscience* is associated with a definite referent – an individual person. Conscience has a “place of attachment,” a spatially limited framework, and georeferencing gives a bigger chance to use the definite article. There is no concept of, say, “public conscience”, unlike, for example, “public consciousness”. The manifestations of conscience are always individual.

Indicators for other lexemes by indefinite article (in descending order): “Death” – 3%, “Shame” – 3%, “God” – 2%.

The lexeme *shame* (1) gives the most ordinary picture of the use of articles with abstract names: this is the predominance of the zero article – 66%, and it’s an invariant, which signals the appeal to the world of ideas, the description of emotions. In comparison with the zero article, the use of the definite article is much lower, 28%, with almost minimal variability – 3%.

It should be noted that minimal variability is inherent in all abstract nouns, the essence of which is generalization. The indicators of the indefinite article in our sample, respectively, are 2 – 3 – 6% (but for the duality of the concept of *conscience* whose opposite variants were dealt with above).

#### 4. General characteristics of article types usage for abstract vocabulary

Let us give examples that illustrate the use of different types of articles with abstract nouns from the corpus of texts, described above. We will also supplement them with examples from other sources. Let us consider the article types in a sequence that reflects the quantitative frequency for abstract names: zero type (the highest frequency), definite and indefinite article. (The topics and corresponding lexemes analyzed above, such as “God”, “Conscience” and “Death”, made exceptions for each type of article due to their semantics).

##### 4.1. Zero article with abstract nouns

A ≥ 1. The individual and essential is seen in all possible completeness, compositional complexity and integrity. Invariant.

There go examples with the lexeme God [4]:

– *Warum ist Gott ein Mann? (1) – Why is \*God a man?*

– *Gott ist kein Mann, denn unsere Art von Gott zu reden. – \*God is not a man, this is our way of talking about \*God.*

*Wo war Gott in Auschwitz? – Where was \*God in Auschwitz?* (Note that space particularization does not produce the definite article here, it means that the Lord is conceived on a large scale.)

*Gott ist allmächtig. (6) – \*God is almighty.*

The incomprehensibility of death, its total power is conveyed by the zero article in the following sentence, borrowed from a different source, the documentary [22]:

*Ich würde sagen, dadurch, dass ich früh mit Tod konfrontiert war, habe ich vielleicht einen sehr schönen Zugang zum Leben. – I would say that due to the fact that I came face to face with \*death in my early years, I value life very much.*

*Aber anscheinend kann man auch mit schlechtem Gewissen einen sehr ruhigen Schlaf haben [3]. – It seems that you can sleep peacefully with \*guilty conscience (literally: with a bad conscience).*

*Is \*shame emotional or cognitive? – Ist Scham etwas Emotionales oder Kognitives? [5]:*

Both concrete and abstract nouns are used with the zero article, if the speaker generalizes, “rises above the situation”, gives it a name, i.e. refers to the invariant (the scope of the article does not allow to give examples for concrete names in this function).

As a rule, the phatic appeal characterizes sentences with the noun God. It’s the most frequent variant.

*“Oh, \*God,” he said. “Look here. We’re from \*Earth!” [8, p. 2].*

(Note that the proper name Earth, representing a singular set, as any singular set can be marked with a noun with a zero or with a definite article. In this case, accompanied by zero, the scale of the Earth as a planet is emphasized to a greater extent, rather than the popularity of its main and at the same time individual characteristics).

*He looked down the street and he began to run, stumbling awkwardly, falling, picking himself up, and running on. “Oh, \*God, God, thank you, \*God! Thank you!” [8, p. 3].*

Note that in the next sentence, the attribute *good* does not in any way affect the choice of the article in this case, there remains the zero article, just as it would be true for standard sentences of phatic communication, such as “Good evening”, “Good morning” (in English and German):

*This is private property. \*Good God, Hinkston! [8, p. 3].*

Let’s add to what has been already said: any nouns, both common and proper ones, are marked with the zero article when naming a topic or referring to an invariant [10]:

*Ich habe ein neues Buch geschrieben: “Imperium \*USA: die skrupellose Weltmacht”, und da geht es eigentlich darum, dass die USA (1) im Moment das mächtigste Land der Welt sind. – “I wrote a new book: “Empire \*USA: World Power of Strong Pressure”, it says, in fact, that + the USA (2) is currently the most powerful country in the world.*

In the first case, the name “United States” is an integral part of the title of the book, the theme, i.e., it refers to an idea, a version of which is presented in the book. It is an invariant; the zero article is used.

In the second case, the definite article is used before the same noun, which is the linguistic norm for this type of proper names. “The United States” stands out from a number of opposed countries. The definite article is used. It is an element of the “countries” set.

The English language is also characterized by a zero determiner with the lexeme *God*.

*...by \*God! They had orders! [8, p. 4].*

*I dare say there’s lots on every planet that’ll show you \*God’s infinite ways [8, p. 3].*

*We’re here. Don’t question. \*God is good to us. Let’s be happy [8, p. 4].*

*How was all this made? And why? For what purpose? Out of the goodness of some kind \*God? Was \*God, then, really that fine and thoughtful of his children? [8, p. 5].*

It is the same in German:

*Ich bin ein Mann Gottes* [22]. – I serve the \*Lord (literally: I am a man of \*God)

In comparison in a similar construction with the noun *church*, in contrast to *God*, the definite article is used. At the same time, the compared sentences are characterized by the syntactic parallelism.

*Ja, er war ein Mann der Kirche* [23]. – He was a man of +the church (about a specific person).

Similarly, in the following example, the definite article is used before the lexeme *monarchy*, as opposed to the zero article with the lexeme *God*.

*Aber seine wahre Berufung ist nicht Gott zu dienen, sondern der Monarchie.* – His true calling is not serving \*God, but +the monarchy [23]. (Literally: ...it is not to serve \*God, but +the monarchy).

In his inaugural address, Joe Biden uses the lexeme *God* four times to address the nation, each time with the zero article [12]:

*...we come together as one nation under \*God...Before \*God and all of you, I give you my word. May \*God bless America and \*God protect our troops.*

**4.2.1. Definite article with abstract nouns.** Let us give examples supporting the formula  $A = 1$ . The individual is manifested in the singular in this particular variant, the one-variance.

As we have already mentioned, the largest number of uses of the definite article is associated with the topic “Death” [6].

Probably due to the fact that in our minds death is opposed to life, and although people do not have the experience of remembering their own death, its image, the phenomenon itself, is perceived and felt very vividly.

*Ich kann mir den Tod nicht vorstellen.* – I can't imagine +the death.

It's the first sentence with the observed lexeme. The definite article is used.

*Der Tod scheint unendlich Angst zu machen.* – +The death is terrifying.

*Gibt es eigentlich den guten Tod?* – Is there, in fact, +the good death?

*Der gute Tod im Mittelalter* – +The good death in the Middle Ages ...

The form of this event is obviously manifested.

It is interesting that the lexeme “God” is firmly used in definitions with the zero article, and only in these cases it was different: the almighty God – der allmächtigste Gott, the merciful God – der liebe Gott. The singular set “God” is considered discrete, because it is formed by the aspects of the essence of God. The same article combinability of the lexeme “God” was revealed in the film “Sehnsuchtsort Kloster” about the monastic life in Germany [22].

The combinability of this noun with the article is not arbitrary anymore, it can be called a set-phrase, which is non-variable and has well-recognized essence, (compare with the Russian phrases «красна девица, добрый молодец, волк-зубами-щелк» “a nice girl, a good fellow, a wolf-teeth-snap”). So, we can state that the view of the countable singular is changing.

“Die Bekanntschaft mit dem Einzelnen kann schon durch bloßen Gebrauch des bestimmten Artikels zum Ausdruck kommen [13, p. 272] – “A simple use of the definite article is enough to evoke the feeling of the familiar singular”.

*Gott, der allmächtige...* – God, +the Almighty

*...oder gibt es den christlichen Gott?* – ...or is there +the Christian God?

The phrase *Christian God* in the programme context contrasts this god with other possible gods. This is an element with a manifested individual characteristic of *the Christian*.

There go some examples with the lexeme *shame* [5]:

*A person feels uneasy, responds to this feeling of discomfort, apparently, a sense of his own pride awakens, and here it is possible to extremely efficiently learn to deal with +the shame, in the course of*



*this, it just becomes clear, which views in this group are considered to be a clear taboo, etc... – Man fühlt sich unwohl, reagiert aber auf dieses Unwohlsein, eventuell wird der eigene Stolz geweckt und da kann man auch durchaus produktiv lernen, mit der Scham umzugehen, indem man das eben thematisiert, dass in dieser Gruppe offenbar bestimmte Ansichten als Tabu gelten und dergleichen.*

This example doesn't show shame as abstract, but as a feeling coming over a certain person, this is seen as sort of manifestation of shame in a specific "carrier". It is a closed system in its own way, the integral: a person and his feelings. The ratio of the part and the whole, the demonstration of this ratio, is the prerogative of the definite article. The definite article most often assumes to be adjacent in space as one of its basic characteristics. To be limited in space, to have frames makes it possible to consider individual characteristics.

**4.2.2. Spatial characteristics: juxtaposition of objects and mental concepts as trigger of article usage.** Let us remind of the importance of spatial characteristics as a kind of limitation, concretization as one of the conditions for using the definite article. Spatial proximity, juxtaposition of objects reveals their individual characteristics by direct comparison. In addition, the object in this case is obvious to the observer in its concrete manifestations, it is "visible". As an illustration of what has been said, we present the facts described in the monograph by N. L. Ogurechnikova [18, p. 121], which suggests the following interesting examples from John Hawkins, the most cited English author who wrote about the article and commented on its usage.

If the driving instructor tells the student about the important parts of the car being inside the automobile and mentioning *the ignition key, gear shifting and clutch*, then he can use both definite articles and indefinite ones. But if the communication takes place outside the automobile, for example, in the garage, and the instructor talks about the same parts of the car, showing them as separate parts, the definite article cannot be used. Only the indefinite article is used.

The use of the definite article in the first case (in the automobile) is possible, from our point of view, firstly, since the car parts are presented as parts of a whole, closed system, limited space, united by function and juxtaposed with each other. In the second case, these are *scattered elements of the set*.

*This is the ignition key, that is the gear lever and that is the clutch. (1)*

*This is an ignition key, that is a gear lever and that is a clutch. (2)*

The definite article indicates the manifestation of an unambiguous characteristic of an element of a set. Let us pay attention to the juxtaposition of the elements "shame", "guilt" of the set, which could be called "conscience: negative evaluative experiences" (see the example below). They are juxtaposed, mutually define each other in contrast, and represent paradigmatic relations of synonyms [5]:

*Yes, +the shame relates to action differently than guilt. – Ja, die Scham bezieht sich ja anders als die Schuld nicht auf Handlung.*

Similarly, the elements of the set, conventionally referred to as "non-material tools for influencing the psycho-behavioral reactions of a person" are 'mind' as awareness and 'shame' as unconscious guide to action:

*Children are still completely unable to be guided by the reason (the arguments of the mind), therefore, +the shame is needed (the impact of shame). – Kinder können noch gar nicht durch die Vernunft gesteuert werden, also muss die Scham heran.*

The concretization, as genus-specific relations, determining subclasses, based on a new characteristic feature, or a subset of the set:

*...+the shame in the sense of being aware of your own body, I think, it's something completely different. – ...die Scham im Sinne des Körperbewusstseins selber denke ich ist etwas anderes.*

Part-of-whole relationships are also labeled with the definite article.

*This is definitely the part of +the shame. – Das ist sicher ein Teil der Scham.*

Philosophical categories “part-integral-holistic” are also extremely productive in our research. The integral is not the sum or consequence of its parts, but a qualitatively new unit. “The integral... is not reducible to those parts of which it consists without losing its qualitative essence” [20, p. 222]. The holistic does not have a new quality, in comparison with the original elements or parts.

An abstract concept, for example, *shame*, like any other concept that describes the sensory or mental sphere of a person, is holistic. It contrasts with the idea of “a human body”, which is a manifestation of the integral. It is impossible to lose a part without breaking the idea of the whole. The parts of the whole are united by the function and, thus, juxtaposed in space, interact, forming a new quality.

The nouns, denoting parts of the whole, are usually introduced into speech with the definite article [3]:

*Ist das Gewissen von Geburt an in uns? – Do we have +the conscience from birth?*

*Nein, es gibt nur wenig, was von Geburt an in uns ist. – No, we have little from birth.*

*Nein, es gibt nur wenig, was von Geburt an in uns ist. – No, we have little from birth.*

#### 4.3. Indefinite article with abstract nouns

A ≤ 1. The poly-variability of the particular. “A” is the singular minus the individual, the potential poly-variability.

“It is wrong to say that as a result of continuously occurring abstraction, our concepts become poorer and poorer: abstractive activity consists not in discarding features, but in turning them into variables”, – German logician Klaus [16, p. 214–215].

It is the start of the conversation on the topic *conscience*. A subset of the set is introduced: *a good conscience/a bad conscience*. The indefinite article is used. When the topical noun is mentioned again, the indefinite article is not replaced by the definite article, which is supposed to be a usual case [3]:

*Was ist Ihnen eigentlich lieber, wenn Sie ein gutes Gewissen haben oder wenn Sie ein schlechtes Gewissen haben? – What is better for you, –a calm/clear conscience or remorse? (literally: *good/bad conscience*).*

*Na ja, mit einem guten Gewissen kann man besser schlafen, aber ein schlechtes Gewissen dient auch dazu, Nachdenklichkeit zu stärken, Reflexionskraft zu mobilisieren. In diesem Sinne habe ich vor, wenn ich ein schlechtes Gewissen habe. – Well, yes, you can sleep better with –a clear conscience, but remorse (literally: –a bad conscience) serves to awaken pondering on what you have done, to mobilize the power of reflection.*

Now let us consider the lexeme *death* [6].

*Der gute Tod (1) war ein Tod (2), den ... – +The death was considered –a good death, which... (further special signs of such a death are introduced). In the first case, the noun with the definition is the first member of the opposition “good” – “bad”, therefore it is introduced as an element of the set with a manifested sign with a definite article. In the second case, the noun is part of the predicate. The subsequent introduction of unknown special features of the subject is declared. These special features suggest significant variability, and cause special attention of the recipient.*

Let us consider the lexeme *death* [5].

*...but for a very, very small and neatly dosed shame, in which... – mit Ausnahme einer ganz ganz sanften und wohl dosierten Scham, in der...*

This is an exceptional, rare, variable characteristic of shame. An indication of variability, as the possibility of a special manifestation of a characteristic, is the typifying function of the indefinite article.

Let us give the examples with the lexeme *God* [4].

*Was für ein Gott hat denn welche Welt geschaffen? – Who is a God who created such a world? (unfair – translator’s note).*

*Was ist das für ein Gott, was haben diese Menschen ihm getan? – Who is a God, what have people done to him? (What wrong did they do? – translator’s note.)*

The meaning of the statement approaches the following: “Well, is it really a God?” The characteristics are so variable that it seems initially hardly possible.

Noteworthy is the following example with the indefinite article with the lexeme *God*:

*It may be, sir, that we are looking upon a phenomenon that, for the first time, would absolutely prove the existence of –a God, sir* [8, p. 1].

In German, according to an informant, the indefinite article would also be used:

*Die Existenz eines Gottes* – The Existence of –a God, as well as (*Die Existenz*) *eines Raubtieres, eines Menschen* – a beast, –a man, etc.

The word *existence* approaches in its semantics to the existential verbs *sein/to be, haben/to have*, which in most cases involve the use of the indefinite article, since the speaker refers to the essence of a thing, its idea, the fact of its existence, absence/presence as such, distracting from the manifestation of individual characteristics.

### **5. Variability of the particular as determinant feature of article type choice**

The same lexeme, both abstract and concrete, can be formalized by any type of article, depending on the semantics of the statement and the demonstrated variability of the particular. Compare the usage of the article in the following sentences:

*Ich bin nur ein Mensch* [11, p. 395] – *I am only –a man* (*I am a man and nothing human is alien to me*).

In this case the indefinite article is used. It is important for the speaker to emphasize the variability of characteristics that may be inherent in any person, in this case – in him personally. Usually, the phrase means excuse for one’s own weakness. The possible denotative series of the set “person” is narrowed down to one element of the set, with its variable characteristic.

*Der Mensch lebt nicht vom Brot allein.* – +*The person does not live by bread alone* [11, p. 395].

In this case the definite article is used. It is generalization. The “person” is emphasized (as opposed to the animal world).

*Mensch! Wie stolz das klingt!* (Gorky) [7, p. 20]. \**Man* – *it sounds proudly!* (A. M. Gorky).

Here, the zero article is used which is referring to the invariant.

Within our topic it is interesting to quote T. V. Chernigovskaya at the seminar “Brain and Mind” devoted to “consciousness as an expectation of the unforeseen” [2]: if there is the unforeseen, then it is based on the foreseen, replicated, repeated many times, which is enshrined in the language and manifests itself in speech. And these are precisely those philosophical categories, the general and particular, or the set and element that the article demonstrates in the article-possessing languages. The competence and necessity of using the philosophical approach in modern research is indicated by T. V. Chernigovskaya: “The modern science, everywhere, in Russia and all over the world, needs a philosopher. At the same time, when I say a philosopher, I mean both a professional philosopher, who works in a team, and a good philosophical, not exactly education, but a good philosophical training, for scientists [9]”.

## Conclusion

In conclusion, we present a significant quotation from Yu. I. Alexandrov: “Western cultures are characterized by analytical perception and thinking, which means focusing on an object and in the linearity of the laws of causality.

Non-Western cultures are characterized by holistic perception and thinking, in which attention is extended throughout the field, connections, relationships between objects are perceived, and a dialectical approach is used instead of formal logic” [1].

Having a constant practice of putting off/putting on the individual on an object, determining it as an element of a set, the article-possessing language reflects (and forms) the so-called analytical, Western type of thinking, in contrast to the holistic, Eastern, which mostly considers objects in their interconnection.

So, the pragmatic aspect of the utterance is determined by the form of countability in which the speaker sees the object of his utterance: a set, a singular set, an element of a set, a subset of a set.

The chosen countability rigidly determines the choice of the article type. Just like, for example, choosing the case of a noun in Russian, the speaker demonstrates relationships and dependencies in the sentence, but the case endings are determined unambiguously, corresponding to the case of the noun. The choice of countability is largely determined by the type of lexemes, but is not completely deterministic. The speaker’s position is also important.

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## Прагматика выбора артикля как математическая формула (на материале абстрактной ценностно-ориентированной лексики)

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Целью данного исследования является выявление степени свободы говорящего при выборе типа артикля. В ходе исследования методом сплошной выборки проанализирована артиклевая аранжировка одной и той же лексемы, актуализируемой в типе текста «рассуждение»; представлены несколько тем, именуемых абстрактными лексемами в каждом отдельном тексте на заданную тему. Используются методы и категории пограничных дисциплин – математической логики и философии: общее и особенное, единичное, элемент-множество. В ходе исследования выявлено, что выбор типа артикля может быть описан математической формулой и является абсолютно детерминированным. Параметрами, определяющими выбор артикля, являются степень обобщения абстрактной лексемы, обуславливаемая вариативностью соотносимого денотативного ряда как типа множества, проявленностью/осознанностью для говорящего и реципиента внешних и сущностных внутренних признаков референта, парадигматические связи тезауруса.

**Ключевые слова:** тип артикля, исчисляемость, элемент, множество, единичное, вариативность особенного.

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