



Scientific Uses of This/That in Linguistic Texts: Semantic Aspect

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ABSTRACT In the present paper, the authors scrutinize the behavior and semantics of English index words in scientific discourse. This paper concentrates on the semantic subtleties of the categorical meaning of proximity/distance expressed by the demonstratives THIS/THAT pronouns generally in scientific texts, and particularly in the text on gender and linguistics. The theoretical and methodological basis of the research is based on fundamental assumptions of modern linguistic knowledge in deixis and indexicality. The paper employs the methods of component, mental-logical analysis, and the descriptive method. The investigation revealed that the proximal and distal demonstratives THIS/THAT retain their basic semantic features while functioning in scientific texts, and their modified applications emerge from the more fundamental and categorical definition of the distance/proximity. Although these modifications implied by Spatio-temporal markers, they exceed them, converting to psychological, emotional, and speculative markers of acceptance: consent/alienation, explicit/implicit knowledge, certainty/uncertainty.

INTRODUCTION

Peculiarities of scientific communication have developed the professional culture and compositional style of scientists as writers (Goldbort 2006). In modern linguistics, the language of science is identified as one of the principals, full-fledged, and independent objects of study and requires identification of formal language means serving to represent the semantics of these texts, among other issues (Kondrateva and Nazarova 2015). Deictic words/indexical expressions are one of the varieties of these formal language means, which assist in organizing the compositional structure, coherence, cohesion, and also style of the text (Kolomiets 2017).

Scientific applications of pronouns and other indexical words (or deictics) possess several features and differ significantly from those in common language. For instance, some researchers strongly believe that congruent pronoun references, such as avoiding pronouns that possess personal references, are of the most reliable methods to maintain a powerful level of objectivity and precision in scientific writing (Goldbort 2006). As Benveniste correctly highlights in scientific papers, YOU and I can be hardly encountered throughout the text, whereas colloquial speech is characterized by a considerably higher frequency of their usage (Benveniste 1971a).

Additionally, indexical words function with extreme clarity and conciseness throughout direct communication as an act of indication frequently supports those (Crossley et al. 2017). Whereas scientific texts are devoid of such characteristics, and this fact requires modifications of their meaning. For instance, the adverb NOW in colloquial speech or fiction makes a direct reference to the case in the utterance timeline or the moment of speech situation, while NOW possesses a temporal meaning of immediacy or the moment of speaking as well as a locative meaning of highlighting a certain place in the scientific texts. Consider the following example:

(1) To demonstrate this in more detail, now I consider some of the cases of a spinster in the British National Corpus (G&L).

In (1), the time adverb NOW means not only the moment that coincides with the time of writing this word but also every other moment when the reader approaches a particular place in the text. Accordingly, NOW obtains the meaning of multiple presents, and integrating a spatial meaning concurrently, an indication of place in its semantic content. Alternatively stated, the adverb NOW appears as an iterative pointer of the present moment coinciding with the reading a specific place in the scientific text (Hinterwimmer and Bosch 2016). The local coloring obtained by the adverb NOW in related usage is further

confirmed because it is possible to use another deictic adverb in similar cases – the adverb of place *HERE*:

(2) Here, I need to step outside the corpus for a moment and consider other varieties of historical information (G&L).

The adverbs *HERE* in (2) and *NOW* in (1), conveys a set of spatial-temporal meanings. Moreover, *HERE* means ‘here/now, the moment the reader approaches this place in the text.’ Consequently, it can be assumed that *HERE* and *NOW* are semantically similar and functionally interchangeable in scientific texts. In this context, the functioning of the demonstrative pronouns *THIS* and *THAT* in linguistic texts is remarkable.

Objectives

The primary purpose of this study is to scrutinize the behavior and semantics of English index words in scientific discourse.

METHODOLOGY

The present paper focuses on the semantic subtleties of the categorical meaning of proximity/distance represented by the demonstratives *THIS/THAT* pronouns generally in scientific texts and particularly in the text on gender and linguistics. The research contains some examples from nine pieces of researches on the multi-authored monograph gender and language research methodologies (2011) and the linguistic monography of Widdowson Linguistics (Widdowson 2003). In general, 15 occurrences of applying *THIS/THAT* from 1045 corpus are analyzed in this paper.

The theoretical and methodological basis of the research is according to the fundamental assumptions of modern linguistic knowledge in deixis and indexicality expanded (Salkhanova et al. 2016). Furthermore, the methods of component, mental-logical analysis, and the descriptive method were applied in the mentioned paper (Strausov et al. 2018).

In the semiotic tradition, indexicals are signs that signify through direct relation. American philosopher Charles Peirce first proposed the concept of the index (Peirce 1931). According to Peirce, an index is the sign which refers to its

object not so much because of any similarity or analogy with it, nor because it is connected with the general characters that object happens to possess, as because it is in dynamic connection both with the individual object and the feelings on the one hand, and with the senses or memory of the person for whom it serves as a sign, on the other hand. Philosophers and linguists typically utilize the term indexicality to recognize the classes of expressions, which meaning is conditional on the situation of their application, from those that refer to a class of objects, which meaning is declared to be specifiable in the objective, or context-free terms (Suchman 1990).

Accordingly, words with indexical semantics are morphologically heterogeneous. They include proper names, which compose a subclass of nouns on the one hand, and there are pronouns, adverbs, and other classes of words united by deictic function on the other hand (Malmkjær 2018).

These heterogeneous pieces of speech are related to as indexical words since their function is rather an indication than description or characterization in contrast to the larger part of the vocabulary. Both proper nouns and pronouns identify objects; however, do not nominate them. B. Russell declares that although there are many people named Smith, they do not create a single class united by the meaning of ‘smoothness’ (Russell 2013). Similarly, pronouns do not correlate with a particular class of objects integrated by a common meaning of *me* or *THIS* despite their ability to denote various objects. However, the similarity between proper names and pronouns is concluded by this feature. The remaining properties of a couple of classes of words are different.

The principal difference is that the proper names regularly correspond with the object because they possess a constant referent. Conversely, the deictic words correlate to new referents in every single act of speech. For example, Saint Petersburg perpetually remains Saint Petersburg, but what was *THIS* in one moment of speech can convert to *THAT* when the speaker, time, or place of the act of speech are changed.

Benveniste (1971b) highlights a meaningful difference between *I/YOU* and other types of language signs, because the application of the name has a reference to some constant and ‘ob-

jective' concept both virtual and actualized in every act of speech. In contrast, I do not possess a single class of referents, since there is no single object to be defined as I.

RESULTS AND DISCUSSION

It is recalled that the actual application of THIS/THAT is based on the opposition of proximity/distance to the deictic reference point, which is ordinarily described by the "ego." As Lyons proposes, the proximal pronoun THIS is close to the meaning of the adverb HERE, and the distal pronoun THAT is close to the meaning of the adverb THERE. Both THIS and HERE denotes proximity to the speaker, and THAT and THERE presents the distance (Lyons 1996). This feature of the functioning of the demonstratives THIS/THAT certainly provides a very general and approximate idea of the logic that underlies their application in the text, and the proximity/distance is interpreted in a more extensive relationship. A notable number of subtle and interesting laws governing their functioning were established in linguistics. For instance, it was remarked that THIS/THAT could be employed indiscriminately in an emotional speech (Lakoff 1974). For example, emotional speech does not make a difference between THIS/THAT (Davis and Potts 2010). However, not everything is obvious considering the laws governing the functioning of these pronouns in speech, and particularly their application in the scientific text (Evans and Green 2018).

The use of THIS/THAT mostly depends on the evidential character of speech, that is, whether the author points to his own words or the words of another speaker (Makhmutova and Lutfullina 2017). If the speaker refers to his words, the application of THIS or THAT is equally possible. If the reference is made to the words that have just been spoken but not by the author of the speech, but by someone else, only THAT is used (Tanz 1980). Following the observations by Ch. Tanz, only THIS can be employed with a cataphor (Tanz 1980).

Before continuing to a more comprehensive analysis of the functioning of THIS/THAT in the scientific texts, it should be recalled that only THIS is always deictic, and THAT can equally be applied as a non-deictic item. Whether deic-

tic or non-deictic applications of THAT are two functions of one word or whether they act as homonyms is a challenging question and not discussed in this paper. The present investigation analyzes only the deictic functioning of the demonstratives.

As previously mentioned, the functioning of demonstrative pronouns THIS/THAT possesses exclusive specifics. Naturally, they tend to be used in an anaphoric meaning in the text. In this connection, it is necessary to shortly mention the long-standing problem of the correlation between deixis and anaphora.

Some linguists consider anaphora as a variety of deixis. For instance, K. Buhler supposes anaphora included in the domain of deixis. Other scientists believe that deixis and anaphora should be differentiated.

Proponents of anaphora, which is considered as an independent phenomenon, show that the anaphoric relationships simultaneously govern the text organization (Bender and Lascarides 2019). Nevertheless, the agreement cannot be made for this point. However, another issue which is also obvious is as follows: the functioning of demonstrative pronouns is principally based on the anaphora in scientific texts. It is reasonable to believe that the functioning of some deictic words, including demonstrative pronouns THIS/THAT in the scientific text, is based on the anaphor. Still, it does not exhaust the entire variety of anaphoric relations. Alternatively stated, the deixis, which is a part of the anaphor, does not generally include the entire set of the anaphoric relationships. Examples can confirm this issue (Sichel and Wiltschko 2018).

The demonstrative pronoun THIS is extensively applied in scientific linguistic texts in anaphoric meaning as the following:

(3) In the same style, gendered social behavior for males appears to cover the application of a high percentage of terms associated with sports and numbers. These topics seem to be mediating males' identity... (G&L).

(4) Some of the most exciting ideas on social categories and speaker identity have been developed in connection to gender and sexuality, and both are capable of informing and challenging other areas of sociolinguistics. (G&L).

(5) moreover, though sexist language may certainly be absent on a given stretch of tape,

this is less true of gender tendencies in language use ... (G&L).

(6) It is conventional today to declare that linguistics is structural, and languages are treated structurally. This is a statement about the set of elements (constants), which were established by the abstraction in the description and analysis of languages (W).

In the examples (3), (4) and (5), THIS/THESE are applied anaphorically and co-refer with the units enumerated in the preceding sentence, for example (3)-(4), and with all that is said in the concessive clause in (5). In the example (6), THIS entirely refers to the sentence in the previous sentence. It is essential that the antecedents be present in proximity and explicitly expressed in both cases.

The situation is different with the function of demonstrative pronouns THAT/THOSE, which customarily signal that what they relate to, is outside the context of the text in question, i.e., it has not been explicitly expressed in the text and need to be restored according to the knowledge of the reader. For instance:

(7) The results of the present study confirm those obtained in previous vocabulary research in EFL ... (G&L)

(8) Besides, there is a behavior, and there are several systems of rules based on which exhibited in the judgments and abilities of those whose messages demonstrate the behavior (W).

(9) Based on the environmentalists' viewpoint, it is considered that language learning is not centrally different from other sorts of learning, and it depends on those same mental faculties involved in all aspects of the child's learning process (W).

In the examples (7)-(9) the demonstrative pronoun THOSE does not possess an antecedent in the passage in question and correlates with the knowledge of the author of the texts (7)-(8) and also with the knowledge expected for the addressee, according to the author's supposition (9). Therefore, the demonstratives THAT/THOSE can relate to highly uncertain entities, and it is essential that these entities not to be necessarily mentioned in the text. These occurrences are comparable to the statement same with That's funny (I'd swear I left my keys on the table), in which what the speaker describes as funny corresponds to My keys are not on the

table where I left them, which has not been explicitly expressed, remains in the implication and is consequent only from the situation and exclamation. It appears that in such cases, it is more precise to consider that THAT/THOSE correspond to the implicit declarations, which are either readily reconstructed from the asserted or constitute the reader's background.

The application of THAT/THOSE, but not THIS/THESE in such examples are also quite natural: the implicit assertions are more distant from the speaker than those expressed explicitly, and therefore, THAT/THOSE are employed in connection to implicit expressions. As mentioned above, correlation with THIS/THESE is typical for explicit statements:

(10) The student's age and language level were regarded in the preference of this topic ... (G&L).

(11) I concentrate on instances of shots classified by the camera angle. These are essential since various camera angles for people represent (G&L).

(12) Bloustein states that scrutinizing and commenting on the physical characteristics of others is common, even universal, the practice of adolescent girls. Hanna performs this here in detail (Bloustein 2003). (G&L).

The dichotomy of distance/proximity can be traced in some other examples. However, the distance/proximity should not be interpreted literally as spatial markers, for example:

(13) In this example, you use other members of the community as informants, drawing on their intuitions. ... The intuitions ... possess their validity. These conceptual constructs are also real; however, the reality is of a distinctive order (W).

(14) Criticism of correlational sociolinguistics tends to center around to interrelated problems. <...> First, second, If these criticisms have led to more investigation being carried out on individuals who..., this is, of course, welcome. (G&L)

(15) I conclude this chapter by pointing to some constraints... There are three further limitations... however, it is noteworthy that many of those criticisms also are true for other methodological methods in the investigation of language and gender. Therefore, they should not hinder us from counting corpus-based analyses

of gender and language; rather, they should make us... (G&L).

What appears to the speaker to be unquestionable, credible or probable is customarily expressed through the application of demonstratives THIS/THESE, which are employed to describe the concepts closer to those of the author of speech (13)-(14). If the writer does not share the discussed perspectives, he regards them far from himself and applies THAT/THOSE deictics, which leads to distancing the ideas to be alien to him (15).

In both examples (14) and (15), the authors employ indexicals relating to the declared criticism of the adopted methodological method. In both instances, the authors evaluate the criticism of the methodological analysis, which will be further applied in work. However, the authors' attitude of these critical remarks is significantly distinctive, which discovers expression in the application of demonstrative pronouns.

CONCLUSION

Consequently, THIS/THAT maintains their basic semantic characteristics functioning in scientific texts, in contrast to NOW/HERE, which lose their shifter characteristics to a certain extent and become connected to the designation of the same place and time in the text. These adverbs retain the freedom to modify the reference in various texts, although they are attached to the place in which they are used in the same text. Furthermore, the adverbs NOW and HERE respectively acquire the meanings of locality and temporality.

In this study is argued that the various uses of demonstrative forms could be derived via the relevance-theoretic comprehension procedure as the (pro-) conceptual and procedural meaning interacts with the different contexts to yield a wide range of inferential effects.

RECOMMENDATIONS

Future researchers can provide questionnaire data in order to scrutinize the semantic subtleties of the categorical meaning of proximity/ distance.

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