NOMINATIVE AND ATTRIBUTIVE EXOPHORIC REFERENCE IN FOREIGN PRESCRIPTION MEDICATION INSTRUCTIONS AS TEXT REFERENTIAL IDENTITY MEANS IN SPECIALIZED TRANSLATION

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Abstract

Purpose of the study: The present paper examined nominative and attributive exophoric reference and their textual referents in the English prescription medication instructions (henceforth is PMI). In the focus of research, there were the key referents that define the translator’s referential knowledge for the PMIs and the cognitive features of the referents verbalized in PMIs by means of nominative and attributive exophoric reference.

Nominative and attributive types of exophoric reference and their textual referents ensuring the referential identification of a foreign text and facilitating its understanding are in the focus of this research.

Methodology: The methodology of this study includes the following key methods: the method of contextual analysis; distributional analysis; descriptive method; quantitative evaluation method. The texts of prescription medication instructions, e.g. for “Nurofen For Children”, “Ibuprofen 400mg Tablets”, “Panadol”, etc., displayed on the Internet sites of pharmaceutical companies/pharmacies make the corpus of our observation material.

Main findings: Using English PMIs as the object of specialized translation, it is established that the PMI text exophoric referential net is created primarily by means of medical terms verbalizing objects and subjects of a PMI text (nominative exophoric reference) and verbal referents of their qualities and features (attributive exophoric reference), actualizing a foreign specialist text referential identity and thus facilitating its understanding.

Applications of this study: The study is intended for translators, translation students, ESP researchers. The education of specialized translation professionals should incorporate special text referential analysis as part of pre-translation analysis facilitating special text decoding and optimizing its understanding and subsequent translation.

Novelty/Originality of this study: the Nominative Exophoric Reference and Attributive Exophoric Reference creating the Text Exophoric Referential Net are described for English Prescription Medication Instructions as specialist texts intended for translation. It has been found out that both the source and target PMI texts relate to the same three entities of objective reality: MEDICINAL PRODUCT, HEALTH DISORDER, and PATIENT constituting the PMI’s referential identity.

Keywords: Nominative Exophoric Reference, Attributive Exophoric Reference, Prescription Medication Instruction (PMI), Foreign Specialist Text, Text Referential Identity, Specialized Translation.

Cognition as an activity is predominantly non-linear, and the content that is likely to get explicit in the process of analysis of the text and its constituents – lexemes, grammemes, syntaxemes – becomes understandable only in case of coming out of the text and moving “beyond the text”. S. V. Vlasenko (2010a)

INTRODUCTION

A survey of research sources that explore psycholinguistic and cognitive processes involved in professional translation serving the theoretical background of the present study has shown that in case of a specialist text decoding the procedure of the domain knowledge understanding is to be resorted to by the translator that, among other things, consists of the identification of some specialist content in terms of the subject matter presented in the text for its subsequent situational denotation (the attribution of meaning in the target language) (Vlasenko, 2009).

From the procedural point of view, interlingual translation is done by way of correlation of verbal realizations with object/non object entities of the real ornamental world as one of the key comprehension tactics during the reception and understanding of textual spaces, fragments, and units (Vlasenko, 2010b). To correlate words with objects, word combinations and sentences with logical connections and relations existing in reality, and texts with definite sections of reality mean to comprehend lexical and grammatical meanings, overall meanings communicated to the recipients, and in
the receptive speech activities, the internal result of reception is the comprehension or incomprehension of the semantic content of the text (Kalinkova,

Since the text makes a reference of the utterance to an extralingual communicative situation (Kazantzseva,

in other words, exophoric reference or exophora, paramount importance for the comprehensive reception and subsequent translation of a foreign specialist text is attached to the issue of identification of domains in the continuum the text refers to. At present, the issue of exophoric reference typology in a specialist text remains open for further research, though the importance of its differentiation is conditioned by language means variation in inter-lingualude notation of the same type, referentially identical situations; and what is more, the domains of a specialist text exophora further detail the procedures of textual, contextual and contrastive translation analysis, thus optimizing the translation process. In accordance with the above said, this study aims at the description of nominative and attributive exophoric reference of a foreign specialist text based on the example of English prescription medication instructions (henceforth is PMI).

LITERATURE REVIEW

Viewing translation as mediation and a separate speech activity (Vlasenko,

Serova&Naugolnykh,

Chernov,

2010). In our opinion, the receptive speech activities, the internal result of reception is the comprehension or incomprehension of the semantic content of the text (Kalin

Since comprehension and translation belong to super-sophisticated phenomena, the opinion that to speak of “understanding in translation, in general, is erroneous” appears to be strong (Naugolnykh,

Following it, our study focuses on the specific nature of a written specialist text comprehension in a source language within the framework of the so-called outer professional communication on the level of experts and customers. The language of such a text type reveals a high level of abstraction, conditioned by a high frequency of special terms occurrence and by rigidly determined syntax. A foreign prescription medication instruction is a typical example of the above-said texts that currently are widely used in specialist translation the precision of which has a great impact on patients’ health. From a didactic perspective, their compact form, their easy accessibility on the Internet make PMIs valuable learning material in translation teaching practices. Furthermore, general mechanisms and processes of such text type understanding can be transferred on similar texts of other foreign professional discourses.

One of the key psycho-lingual mechanisms of conceptual and categorical thinking involved in translation is “verbal associative net that defines both the translators’ context perception, their terminology comprehension and their selection of reaction to verbal and nonverbal stimuli” (Vlasenko,

From a contemporary linguistic perspective, associating names, nominal groups, and their equivalents incorporate in speech/text with the objects of reality (referents) is expressed by the notion of reference (Nozdri

The simplest definition of reference is the process of mentioning referents (Kibrik,

As an important component of the process of comprehension, reference is conditioned by the language system of a particular language (Yakovleva,

At present, the theory of reference is undergoing a period of rapid development (see surveys of its current understanding in (Mamai,

The variety of its explication, reference as a correlation of a lingual object and an object of a reality (objective or mental) is considered a language universal, but the language and speech processes involved in its realization differ for languages, language styles, registers, they are conditioned by the language system of a particular language (Yakovleva,

For specialist translation, the key question is how well their caption of a foreign text is secured by the translator’s referential knowledge about the information on the real or hypothetic (mental) world that is incorporated in the source text (the act of communication) (Vlasenko,

In this case, the reference embodies a basic mechanism enabling translators to perform such mental-and-speech acts as an interpretative conclusion, individual inference, logical conclusion by means of which extra-lingual entities as objects of thoughts actualized in a source text are identified (Vlasenko,

According to Kibrik, reference can be approached from two basic perspectives: from the addressee’s intention in the process of verbal message creation and transfer and the listener’s point of view while “attributing referents to referential expressions” (Kibrik,

In our opinion, in the process of attributing referents to referential devices, translators as text mediators should assess reference from both perspectives to decide which referential choice is best to make in the translation of the target text.

Russian researcher Chernov defined the act of reference as an act of nomination (pointing at), as a cribbing of which that is spoken of in the utterance to certain categories of objects of thought or events (states) (Chernov,

he also introduced the notion of “general referential structure of a message” to the scholarly discourse (op. cit.). According to an opinion (Sorokin & Levchenko,

the text incorporates a certain coordinate net fixing the meanings that are interiorized by the recipient (in) adequately. The referential net, in its turn, actualizes the text referential identity (Tayupova & Zhabbarova,

Both separate textual constituents and their groups united into sense groups are characterized by a certain degree of referential identification and transparency on the level of endophoric (intra-textual) connections and on the level of
exophoric (extra-textual) connections with the event-prototype in a real or mental world that is actualized in the text (Vlasenko, 2010a).

Understanding translation as an operation of not taking one text representation into another, but, rather, one that relates text representations via a situation model (van Dijk, & Kintch, 1983), i.e. with the entities beyond the text and following from the assumption that the text and its constituents possess internal content qualities of coherence, completeness, multidimensionality, and logic only due to their integration with the units of background knowledge in thinking and speech activity (Shabes, 1990), the research question of the domains of referential connections of textual units with sectors of real/possible/virtual world is acquiring paramount importance. Exophoric reference is responsible for the situational connection of meanings of the text units, for defining the meaning, and for connection with external contexts (Vlasenko, 2010a).

It should be noted that in the Western scientific tradition, exophora is interpreted as a reference of an object or state not mentioned in the text, although their identification is possible from the communicative situation (Rings, 1986; see also: Cerban, 2009; Awwad, 2017). We consider that exactly this interpretation of the exophora can be valid for oral discourse where the elements of the communicative situation are visualized and indicated by the deictic language elements; in case of special written texts, exophoric reference is foregrounded by direct-nominated linguistic means, the specifics of which depend on the type of special text/discourse.

For special texts, Vlasenko singles out the following types of exophoric reference: nominative, attributive, modal, and predicative (incorporating temporal and spatial references) (Vlasenko, 2010a). We claim that among these types, nominative and attributive exophoric references play a key role in prescription medical instructions. Let us take a closer look at them.

Generally, the researchers stress the crucial importance of nominative procedures because they are inseparable from the cognitive processes (Sakhno, 1986). Nomination as the naming of objects or phenomena is in the first place of language expression of a speaker’s conceptual system, it is the primary process of cognizing the things, phenomena and their definition, and therefore the primary process of reception, comprehension, understanding (Kolshanskyi, 1984), and thus the nominative reference as identification of subjects and objects, actions and states of which are reflected in the text in the form of language and speech images (Vlasenko, 2010a) is the key to the identification of any special text.

Whereas the information about the features of an object is crucial in its identifying, there is also clear importance of attributive exophoric reference that encompasses any kind of definitions relating to the subject, action, event, or state presented in the text, as well as the deictic means – articles, demonstrative pronouns, adjectives (Vlasenko, 2010a).

Emphasizing the importance of the correct referential choice made by the translator while attributing referents to referential expressions in the process of interlingual translation of PMIs and the importance of the exophoric reference as one of the key comprehension tactics during the reception and understanding of a foreign text, this study concentrates on the following questions:

**Research question 1:** What are the key *referents* (entities of objective reality) that define the domains of the translator’s referential knowledge for the texts of English prescription medication instructions?

**Research question 2:** What are the cognitive features of the referents verbalized in the English PMI texts by means of nominative and attributive exophoric reference?

**METHODOLOGY**

This research is done from the perspectives of text linguistics, and translation studies due to the objective and subjective factors of specialist translation nature that determine psycholinguial and sociolinguial mechanisms of the translator’s professional mental and speech activity.

As a focus of the analysis, texts of *prescription medication instructions* for “NUROFEN FOR CHILDREN”, “IBUPROFEN 400mg TABLETS”, “PANADOL”, “STREPSILS HONEY AND LEMON”, displayed on the Internet sites of pharmaceutical companies /pharmacies, were explored in terms of the nominative and attributive exophoric references actualized in the above said PMIs.

A mixed methods research methodology was adopted in this study. The *distributional analysis* was used to explore and depict semantic structures of medical terms as referential devices occurring in the texts of PMIs and to model the attribution of referents to referential expressions; *contextual analysis* helped identify the meaning of a certain medical term or phrase within the stretch of specialized text information structure that encodes medical domain knowledge; a *descriptive method* was used for a comprehensive depiction of collected factual data on the subject of research; *quantitative analysis* was resorted to for finding the frequency of medical terms in PMIs.

**DISCUSSION/ANALYSIS**

Since any text actualizes exophoric reference, i.e. the reference of the utterance to an extra-lingual communicative situation, its meaningful reception and subsequent translation necessitate the differentiation of domains beyond the
textual continuum that it refers to. Before depicting the key types of exophoric reference inherent in PMI texts, let us note that in the communicative-pragmatic aspect, the identified texts consist of communicative blocks (henceforth is CB), that is, structural-semantic text units that represent the result of language materialization of only one or several communicative-cognitive actions (meanings). They function as a structural element of content, are characterized by a communicative focus on the expression of actual special knowledge, and implement many functions: descriptive, prescriptive, informative, and regulatory (Antonova & Tretyak, 2018).

The presentation order of the CBs in the source and target texts may vary, and some of them that verbalize cultural-specific information irrelevant to users of a foreign language are omitted in the translated texts of the PMI. Thus, for example, the English prescription medical instruction of the product “Nurofen for Children” consists of many such CBs: Name of the medicinal product; Qualitative and quantitative composition; Pharmaceutical form; Clinical particulars covering Therapeutic indications and Posology and method of administration / Mode and route of administration; Contraindications; Special warnings and precautions for use; Interaction with other medicinal products and other forms of interaction; Fertility, pregnancy, and lactation; Effects on the ability to drive and use machines; Undesirable effects; Overdose; Pharmacological properties incorporating Pharmacodynamic properties and Pharmacokinetic properties; Pharmaceutical particulars; Shelf life; Special precautions for storage; Nature and contents of the container that contains the information about the manufacturer (Nurofen for Children). Comparing the CBs in the English PMI text “Nurofen for Children” (the source text) with their Ukrainian equivalents (the target text), we note the inconsistency of order in which they appear in the target text. However, both the original and translated (lingual object) PMI texts relate to the same three key referents (entities of objective reality): MEDICINAL PRODUCT, HEALTH DISORDER, and PATIENT (see Figure 1).

The following cognitive features of the MEDICINAL PRODUCT referent are verbalized in the PMI texts by means of nominative reference: 1) name of the medicinal product, e.g.: Panadol; 2) qualitative and quantitative composition, e.g.: a thick, transparent suspension of pink color; 3) pharmaceutical form, e.g.: oral suspension; 4) posology and method of administration and route of administration, e.g.: oral administration; single dose of 2.5 ml; 5) pharmacological properties, namely pharmacodynamics, e.g.: inhibition of prostaglandin synthesis and pharmacokinetics, e.g.: maximum plasma concentrations; 6) pharmaceutical particulars, e.g.: Ibuprofen; maltitol liquid; 7) overdose, e.g.: liver damage is possible; 8) interaction with other medicinal products and other forms of interaction, e.g.: anticoagulant effect of warfarin and other coumarins may be enhanced; 9) shelf life, e.g.: 3 years; 10) special precautions for storage, e.g.: store below 25° C; 11) nature and contents of container, e.g.: amber-colored polyethylene terephthalate (PET) bottle with a child-resistant closure.

Figure 1: Key referents and their cognitive features verbalized in prescription medical instruction texts
The following clinical characteristics have been nominated for the HEALTH DISORDER referent, including 1) therapeutic indications, e.g.: teething pain; 2) contraindications, e.g.: severe hepatic failure, renal failure; 3) undesirable effects, e.g.: bronchospasm.

For the PATIENT referent, the following features have been verbalized in the PMIs under research: 1) age, e.g.: children and the elderly; 2) health disorder, e.g.: patients with renal failure; 3) treatment course of the patient, e.g.: patients on SABRIL.

For each referent in the PMI texts, it is possible to identify its nominative paradigm, whose members are in hyper-hyponymic and synonymic relations. The highest nominative density is fixed for the HEALTH DISORDER referent, for the nomination of which, beside disorder, the following synonyms are used: disease, failure, impairment, dysfunction, the problem with attributive words, and a large number of specific names, including many binomial or multicomponent entities, e.g.: aseptic meningitis, juvenile rheumatoid arthritis, etc.

In addition to the nominative reference that identifies the subjects and objects, the attributive reference indicating the qualities, characters, and states of the referents is of key importance in the PMI texts. Attributives are used both in the preposition (acetysalicylic acid) and in the postposition to the nominee of the referent (infants aged 3-6 months). There are also cases of simultaneous use of attributives in preposition and postposition for the same referent name (renal impairment in dehydrated children). According to part-of-speech and syntactic specification, attributives are expressed by attributes (renal impairment), common or proper nouns (heart failure; Steven-Johnson syndrome), polylexical clusters consisting of two (recommended daily dose), three (mixed connective tissue disease), or four components (serious soft tissues infectious complications) that represent the following patterns: “participle + adjective”, “participle + adjective + noun”, “two adjectives + noun + adjective”, as illustrated in the examples above. Postpositive attributives are expressed by participial (children weighing less than 5 kg) and prepositional constructions (patients with sensitive stomach). According to a semantic specification, attributive reference encompasses a set of qualities/features of MEDICINAL PRODUCT, HEALTH DISORDER, and PATIENT referents, among which the invariant ones can be defined that are found in any PMI text. As our observation data has shown, in the PMI texts, the most attributes are typical of the HEALTH DISORDER referent, whose nomenclature of features can be structured as follows: 1) a token of a diseased organ, e.g.: gastrointestinal bleeding; 2) a token of a specific inherent disease trait, e.g.: ulcerative colitis; 3) a gender token of the patient, e.g.: impaired female fertility; 4) a token of the severity of the health disorder, e.g.: severe/acute renal failure; 5) a token of the frequency of the disease, e.g.: recurrent peptic ulcer; 6) a token of the name of the doctor who discovered the disease, e.g.: Crohn's disease; 7) a token of the established diagnosis, e.g.: proven ulceration. Similarly, the attributes of other referents and their corresponding referential devices can be inventoried.

To the best of the authors’ knowledge, no other studies have been previously done on the nominative and attributive or any other type of exophoric references in relation to PMIs as specialist source texts intended for translation. Russian researcher S. Vlasenko focused her attention on a specialist text as an object of reference from a legal text perspective (Vlasenko, 2010a, 2010b), claiming that it is possible to establish a set of referents (entities of objective reality) that define a specialist text referential identity and domains of the translator’s referential knowledge. The present study confirms these theoretical assumptions and contributes evidence suggesting that PMI text referential identity is created by the following key referents: MEDICINAL PRODUCT, HEALTH DISORDER, and PATIENT.

CONCLUSION

The mechanism of production, reception, and understanding of foreign speech is considered to be one of the priority research areas in psycholinguistics and lingua didactic. Relevant research tasks include studying the reception and decoding of a foreign special original text (the source text) by a translator with the purpose of identifying the actualized knowledge in it that embodies the reference space of the text. Following the principle that the primary process of reception and understanding of a foreign special text is to identify the subjects and objects, their qualities and features displayed in it with the help of terminological units, the algorithm of pre-translation analysis of such texts should begin with the identification of the nominative core of the text. Professional terms as constituents of this core mark referential relations for decoding the referential knowledge. Identifying the referential relations, and referential domains of the text based on them (parts of the hierarchically organized real world) to which the text or its units are attributed constitute the content of exophoric reference that links the meaning of the text units with external contexts and forms the basis for their understanding. Among the types of exophoric references – nominative, attributive, modal, and predicative (temporal and spatial), the key ones are nominative and attributive exophoric references that determine the referential identity of the special text. The identificatory referents of English and Ukrainian prescription medical instruction texts are MEDICINAL PRODUCT, HEALTH DISORDER, and PATIENT. Each of these referents is actualized in the PMI texts by a certain number of cognitive characteristics/features displaying variability in the interlingual attribution that determines the foreign text complexity for translation.
LIMITATION AND STUDY FORWARD

Understanding foreign prescription medication instructions correctly is vitally important for translators, because translation errors in these medical texts, on the one hand, may create health hazards to patients, and, on the other hand, litigation and financial risks to medication businesses. One of the challenges in the interlingual translation of such texts is the incongruity of medical terminology conditioned by the differences of national healthcare systems structure, principles of their operation, etc. Prospective medical translators should have a deep understanding of domain knowledge, of key types of exophoric reference occurring in PMI texts, of adequate ways of their verbalization in the target language. This study has shed some light on the key exophoric references of prescription medication instructions – nominative and attributive, while other types, e.g. modal or predictive, still remain open for further research. A contrastive study of PMI’s exophoric referential net based on different languages and a larger sample size will obviously contribute to the quality of such texts translation. The prospect of further research is also seen in the description of peculiarities of exophoric references in other categories of foreign special texts.

AUTHORS’ CONTRIBUTION

Oleg Semenyuk and Valentyna Parashchuk conceived of the presented idea and were in charge of overall study direction and planning. Oleg Semenyuk, Laryssa Yarova, and Oksana Oliinyk conducted the literature review. Oleg Semenyuk and Valentyna Parashchuk developed the study theoretical and methodology framework. Oksana Oliinyk and Laryssa Yarova compiled a corpus of the English prescription medication instructions that served the study observation material and performed the numerical calculations. Laryssa Yarova and Oksana Oliinyk investigated medical terms and objects of a PMI text and Valentyna Parashchuk explored verbal referents of their qualities and features that contributed to the description of the nominative exophoric reference and attributive exophoric reference in the English texts of prescription medication instructions. Oleg Semenyuk and Valentyna Parashchuk supervised the findings of this study. All four authors discussed the results and contributed to the final manuscript.

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