

Antonyms in the Terminological System of Logistics in English and Bulgarian

Galina Velikova

Introduction

Before evolving as a cross-disciplinary science logistics was considered an aspect of military operations, “the three big M’s of warfare – materiel, movement, and maintenance. If international politics is ‘the art of the possible’, and war is its instrument, logistics is the art of defining and extending the possible. It provides the substance that physically permits an army to live and move and have its being” (Huston 1966). Apart from influences logistics has experienced from Military Science, it owes a lot to a number of areas of expertise: management, transport, commerce, information technology, engineering, marketing, international economic relations, law, mathematics, computer science, etc (Купцова, Стерлигова, 2006). What is more, with the implementation of web-based practices, e-procurement and reverse logistics methods practitioners from the above-mentioned areas, including the military, are embracing new logistics terms or borrowing them back.

The process of building up the terminological system of logistics is still incomplete, shaping up and transforming, nevertheless, it ensures a common language for logistics experts. This system, however, has not been investigated in detail, accordingly there are very few studies on logistics from a linguistic point of view both abroad and in Bulgaria.

The purpose of this paper is to address problems of terminological antonymy in the sphere of logistics both in the English and Bulgarian language. It briefly reviews theoretical assumptions in the sphere of antonymy and offers a classification of antonyms from a morphological and semantic point of view. The examples discussed are excerpted from documented materials standardized and consistent within the area of logistics. The topic is worth discussing in order to meet our syllabus goals and needs of learners who are going to function in a multinational environment—whether military or civilian—and be faced with varieties of English as the primary language for international communication. Furthermore, it is part of a detailed contrastive study on the terminological system of logistics in English and Bulgarian based on a corpus of 2950 terms and terminological phrases.

1 What is antonymy?

The term antonym is generally used to define “oppositeness of meaning.” According to Yule, antonyms are words which are “opposite” in meanings (Yule 2006).

Other scholars view antonymy as the relation among words in which the meanings of one term contrast, oppose or contradict the other term (Bolinger, Sears 1981; Cruse 1976; Lyons 1977). Palmer identifies it as the opposite of synonymy, but the status of the two antonyms is very different (Palmer 1981). On the other hand, there is a disagreement on what exactly is covered by antonymy and how it should be regarded.

Danilenko notes that antonyms are indeed more typical of the vocabulary of scientific language than the literary language (Даниленко, 1977: 78). Sometimes it is clear to distinguish this oppositeness, sometimes it requires specialist knowledge to be established. For instance, *solid* and *wet* are opposites when referring to *bulk cargo*—*насипен* and *наливен товар*. *Veering* and *backing* should also be considered antonyms when it comes to denoting *a wind changing direction clockwise or anticlockwise*—*вятър, духащ в посока на часовниковата стрелка или обратно на часовниковата стрелка*. Therefore, we suggest a reference to yet another definition which specifies “antonyms” in detail: [they] “should be used as a general term to describe words different in sound-form and characterized by different types of semantic contrast of denotational meaning and interchangeability at least in some contexts” (Ginzburg, 1979).

2 Features of antonyms

1. Antonyms may be defined as two or more words of the same language belonging to the same part of speech and to the same semantic field, identical in style, (Arnold 1986) with the same grammatical meaning and functions, as well as similar collocations—e.g. *seller*—*buyer* → *продавач*—*купувач*; *pick up*—*drop off* → *вземане на пратка (от изпращача за превоз на дълго разстояние)*—*доставка на пратка с превоз*.

2. They refer to phenomena, qualities, properties, and processes viewed from opposite perspectives, e.g. properties serve to denote size, existence, speed, brightness, strength, width, etc. Here is a set of antonyms of

<i>slow</i> – <i>fast</i>	<i>бавен</i> – <i>бърз</i>
– <i>on-time</i>	– <i>навременен</i>
– <i>quick</i>	– <i>чевръст</i>
– <i>prompt</i>	– <i>незабавен</i>

3. As antonyms do not differ stylistically, an antonymic substitution never results in a change of stylistic colouring. This is appropriate for terms.

4. Antonyms tend to co-occur in sentences or in particular contrastive constructions, an observation (made by Murphy 2006) which holds true for specialized texts, e.g. *from cradle to grave (throughout the life cycle)* → *от люлката до гроба*,

по време на целия жизнен цикъл; *tracking and tracing* (determining current and past locations of a unit) → проследяване напред и назад.

Almost every word can have one or more synonyms. Comparatively few have antonyms. There may be concepts without counterparts—usually these express a generic concept of class or construction, e.g. *navigating bridge*—*мостик* and *cab* (*separate front part of a large vehicle, such as a truck, bus, or train, in which the driver sits*)—*кабина* which is only natural because they denote a position on each of the means of transport which cannot be contrasted or opposed to another such location. Or *linehaul* (*long distance moves from one city to another more than 100 to 150 miles in length*)—*междуградски превози над 100 до 150 мили* signifying a type of movement that is unique of its own.

Depending on its meaning a word may be a member of a synonym set and an antonym set. As each member of the antonym pair or set may not intersect with all synonyms, a certain coordinate system may be formed with synonyms placed on the vertical axis and antonyms—on the horizontal axis. Such a correlation demonstrates the system relations between lexical and terminological units in particular (Georgieva 2013: 183).

In a broad sense a concept may have different antonyms depending on criteria of classification (place, direction, manner), e.g. *green side light* vs. *red side light* → *зелена* vs. *червена бордова светлина* denoting starboard or port side of a ship; *green water* (*the area covering continental shelves, archipelagoes and islands up to thousand miles from shore*) vs. *blue water* (*the open sea*) → *крайморски* vs. *морски води*

green transport vs. *eco-unfriendly transport* → *зелен* vs. *екологично несъобразен*. The problem of which of its senses is realized may be solved by both linguistic and extralinguistic means.

Antonyms can also be viewed as a binary taxonomy (Leech 1974) as in *couple-decouple* or multiple taxonomy which is extended to three or more terms, e.g. *the four cardinal points*—*north, east, south, west*. Lyons and Cruse clearly demonstrate the inadequacy of the traditional notion of antonymy pointing out the variety of distinctions which exist in the area of lexical opposites, e.g. direction, place, consequence, etc., relations common in logistics terminology (as cited by Lipka, 1992).

3 Types of antonyms

The **classification of antonyms** offered by Komissarov in his Dictionary of English Antonyms is based on a **morphological** principle (Комиссаров, 1964) according to which antonyms may be subdivided into **absolute** (root) and **derivational**. **Absolute antonyms** have different roots, e.g. *collect*—*deliver* → *взимам* –

доставям (пратка); private (carrier)—common (carrier) → частен превозвач—обществен превозвач; receiving (point) —shipping (point) → приемен пункт—товарен пункт; constant—variable → постоянна—променлива (величина).

Derivational antonyms have the same roots but different derivational affixes which impart a negative meaning to words. These may be formed by negative prefixes such as **un-**, **im-**, **in-** **il-**, **ir-** (added to adjectives), **non-**, **mis-**, **dis-**, **de-**, **un-** (added to adjectives, verbs and nouns), e.g.

dis-: *assemble—disassemble → съглобявам—разглобявам; regard—disregard → зачитане—незачитане; есопоту—disесопоту → икономия—икономическа не-ефективност*

un-: *stuff—unstuff → товара (контейнери)—разтоварвам (контейнери); loading—unloading → товарене—разтоварване; anticipated—unanticipated → очакван—неочакван*

de-: *consolidate—deconsolidate → консолидирам—деконсолидирам (пратки); coupling—decoupling → скачване - разделяне; mountable - demountable → монтируем - демонтируем.*

non-: *stackable—non-stackable → който може да се подрежда един върху друг или не; palletized—non-palletized → палетизиран—непалетизиран (товар); standard—non-standard → стандартен—нестандартен; compliance—non-compliance → съответствие—несъответствие.*

In Bulgarian these antonyms are rendered with similar prefixes: **раз-**, **не-**, **де-**. Interestingly enough typical prefixes such as **анти-** and **противо-** are rare in logistics terminology while **re-** does appear as a negative prefix - *adapt - re-adapt → приспособявам—преработвам* or *engineering - re-engineering → инженеринг—реинженеринг* with the corresponding **пре-** or **ре-** suffix in Bulgarian.

Sometimes opposites are formed by means of antonymous suffixes: **-ful** and **-less** (careful - careless). More often -less does not necessarily oppose -ful, rather it just changes nouns into adjectives and signifies 'lack of' as in *contactless scanning of goods—безконтактно сканиране; wireless communication—безжични комуникации; paperless information flow—безкнижен информационен поток; lightless plant—несветец (автоматизиран) завод*. Still, the opposite of paperless is paper(-activated) and that of lightless—lighted which should be duly noted when teaching.

The **semantic classification of antonyms** subdivides them into:

a. **Complementary (contradictory) antonyms**. They are pairs of words in which one member has a certain semantic property that the other member does not have (cf. Lyons, 1977). Complementaries must denote absolute

states or properties, i.e. they are mutually exclusive and no middle ground is allowed for. As Cruse states “The essence of a pair of complementaries is that between them they exhaustively divide some conceptual domain into two mutually exclusive compartments, so that what does not fall into one of the compartments must necessarily fall into the other” (Cruse 1986), e.g. *deep-sea—short-sea shipping* → *морски превози на големи разстояния—морски превози на кратки разстояния*; *push strategy—pull strategy* → *стратегия с изтегляне или с избутване*; *merchandising inventory—manufacturing inventory* → *търговски запаси—производствени запаси*; *active storage—extended storage* → *краткосрочно складиране—дългосрочно складиране*. The examples above point to contradictory adjectives or attributive modifiers, however, adverbs, nouns and verbs may also be used to denote opposition in acts, states or properties. It should be noted that most of the derivational antonyms also belong to this class: *assemble—disassemble* → *комплектовам—разкомплектовам*; *durable (goods)—non-durable (goods)* → *стоки за продължително ползване—стоки за кратковременно ползване*; *ashore—offshore* → *на брега—на известно разстояние от брега*, etc.

b. Contrary (gradable or scalar) antonyms differ from contradictories in that they denote mainly a degree in a property or activity. They admit the possibility of some intermediate members which are also antonymic. According to Zapata gradable antonyms are pairs of words that are contrasted with respect to their degree of possession of a certain semantic property (Zapata 2000). Each term represents or stands for an end-point (or extreme) on a scale (e.g. of temperature, size, height, beauty, etc.); between those end-points there are other intermediate points (i.e., there is some middle ground) (cf. Lyons, 1977, Пернишка, Василева, 1997). These can be exemplified with *nearshoring, offshoring and onshoring*—stages of relocating a company’s business to take account of labour and operations costs. *Offshoring* refers to the relocation, by a company, of a business process to another country or continent, *nearshoring* is relocating a company’s business process to a foreign country that is relatively close by, while *onshoring* or *inshoring* involves relocating business processes to a lower-cost location in the country.

The Bulgarian equivalents are direct borrowings *оншоринг, ниършоринг* and *офшоринг* which do not make clear the opposition between onshoring and offshoring. Probably the definitions offered *изнасяне на бизнес дейности (производство, услуги) на дадена компания извън границите на съответната държава, в географска близост до страната, която изнася бизнес дейности, и преместване на изнесените дейности обратно в страната* enable us to delimit the different stages of outsourcing but are too long.

A similar set is represented by the *unimodal, transmodal, intermodal, multimodal* and *combined transport* depending on the modes of carriage involved. *Unimodal transport* involves *carriage of goods by a single mode of transport—еднороден*

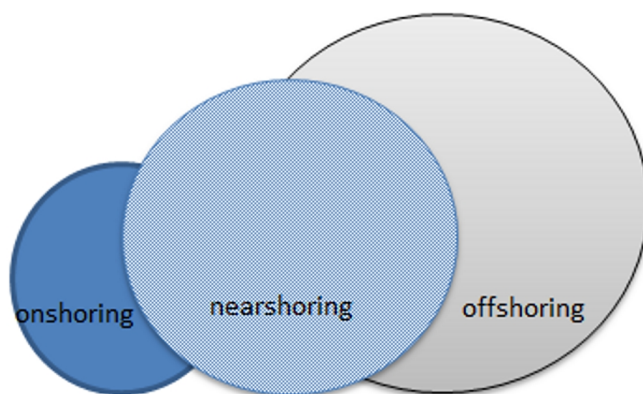


Fig. 1: How onshoring, nearshoring and offshoring interrelate

превоз. *Transmodal* denotes freight transfers within the same mode, i.e. it extends unimodal in the number of vehicles used—*превоз чрез различни превозни средства с един вид транспорт, включващ претоварване*. *Intermodal* opposes transmodal in that it refers to freight and passenger transfer from one mode of transport to another at special intermodal terminals which may be sea ports or rail yards, airports, etc.—*интермодален транспорт*. However, it also contrasts *multimodal* where various transport modes are employed to complete a freight journey—*мултимодален транспорт* named so after the UN Convention on the International Multimodal Transport of Goods, 1980. The difference between intermodal transport and multimodal transport is whether handling of cargo occurs during the journey when changing modes—in multimodal transport it is required whereas in intermodal it is not. Last but not least, a reference should be made to *combined transport* which denotes movement of goods in one and the same loading unit or road vehicle, using successively two or more modes of transport without handling the goods themselves when changing modes. With this type of carriage the major part of the journey is by rail, inland waterways or sea, and any initial and/or final legs carried out by road are as short as possible—*комбиниран транспорт*. In her textbook *International Logistics* Rakovska (2011: 241) delimits it to 'carriage of goods in which the major leg (in Europe) is by rail, inland waterway or short-sea transport and the initial and/or final leg by road is as short as possible'. We can conclude that the end points in this antonym set are unimodal and multimodal with several intermediate points in-between which mark different stages in the process.

The sets discussed above illustrate asymmetric antonymy. Adjectives are another instance of this type of antonyms when they can be graded along specific dimen-

sions of variation, e.g. (in temperature) *cold–chilled–lukewarm–warm–hot* where the intermediate terms: chilled, lukewarm and warm are asymmetric to hot.

c. **Converse (vector) antonyms** are used to “express a relationship between two entities by specifying the direction of one relative to the other along some axis” (Cruse 1986). Therefore the main idea with this class of antonyms is that of direction and movement, e.g. *inbound logistics—outbound logistics* → *входяща логистика—изходяща логистика*; *inputs—outputs* → *вложени ресурси – изходни резултати (продукция, услуги, печалби)*; *reverse logistics—forward logistics* → *обратна логистика—логистика напред в посока на потребителя*; *pre-carriage—on-carriage* → *начален превоз (доставка на товара до товарен пункт преди основния етап на транспорт)—краен превоз (доставка на товара до разтоварния пункт след основния етап на транспорт)*; *divergent logistic system—convergent logistic system* → *разклоняваща се логистична система—обединяваща (сборна) логистична система*.

As stated above, antonyms like these are frequent in logistics terminology and if the activity and direction cannot be specified, it should be explicated in context. The fact that learners are aware of this type of relationship in logistics does not help them to identify and express overtly the meaning of such pairs in Bulgarian. When asked to guess the meaning of two such pairs: *pre-carriage* and *on-carriage* as well as *headhaul* and *backhaul*, they came up with very inadequate ideas. Most of the students related the first pair to loading before carriage—процеси преди натоварване или транспортиране и по време на транспортиране. As for the second pair, they either associated it with machinery or linked it with carriage. Only one dared suggest movement along the supply chain to and from the customer which is closest to their meaning—пълен курс към клиента and обратен курс.

d. **Relational (reverse) antonyms** denote one and the same referent or situation as viewed from different points of view, with a reversal of the order of participants and their roles (Palmer 1981). In other words, the existence of one of the terms implies the existence of the other term. Very often they are mistaken with converse antonyms. Thus there will be pairs which represent two opposed perspectives on a relationship or transfer of cargo in the transport chain such as *consignor/consignee* → *изпращач/получател*, *exporter/importer* → *износител/вносител*, *origin/destination* → *произход/местоназначение*, *lessor/lessee* → *наемодател/наемател* depending on what is subject to lease. Lyons points out that many opposites of this type especially nouns involve social roles (Lyons 1977). Others (such as verbs and adjectives) signify an act or state that reverse or undo the quality, act, or state of the other, e.g. *buy/sell* → *купувам—продавам*; *pack/unpack* → *опаковам—разопаковам*; *lash/unlash* → *увързвам—развързвам*; *stayed/un-stayed* → *подвижен—неподвижен*, etc.

4 Distribution of antonyms among parts of speech

Based on our corpus antonyms in logistics terminology belong to the following parts of speech: nouns, verbs, adjectives and adverbs:

- Nouns – *input – output; negligence – non-negligence; economy – diseconomy; bundling – unbundling*;
- Verbs – *receive – dispatch; assemble – disassemble; wet – dry; stuff – strip*;
- Adverbs – *offshore – onshore; inshore – inland; upstream – downstream*;
- Adjectives – *inbound – outbound; unimodal – multimodal; local – international*.

Often adjectives are seen as antonyms only in phrases, e.g. *clean bill of lading*—*чист (без забележки) коносамент* → *foul bill of lading*—*коносамент със забележки* where *clean* and *foul* are opposites; *full container load*—*пълно натоварване на контейнер* → *loose container load /LCL/ or less than container load*—*частично натоварване на контейнер* with *full* and *loose* being antonyms.

Noun compounds and phrases can also enter in antonym relations:

- V-ing + N – *opening stock*—*closing stock* → *начални запаси в началото на периода*—*краен запас в края на периода*;
- V-ed2 + N – *outsourced activities – insourced activities* → *аутсорснати дейности, дейности, възложени на подизпълнител*—*дейности, досега изпълнявани от външен консултант, върнати обратно в компанията*; *closed port*—*open(ed) port* → *пристанище, затворено за корабоплаване*—*пристанище, отворено за корабоплаване*;
- V + prep + N – *drive in racking system*—*drive through racking system* → *проходен палетен стелаж с достъп от едната страна*—*проходен палетен стелаж с достъп от двете страни*; *pick up address – drop off address* → *адрес на вземане*—*адрес на доставка (пратка)*
- N + N – *shortage stock*—*surplus stock* → *недостиг на запаси*—*излишен запас*; *liner shipping*—*tramp shipping* → *линейно плаване – трампово плаване*;
- Adj + N + N – *flat rate tariff*—*variable rate tariff* → *единна тарифа*—*променлива тарифа*;
- Num + N + N – *single-trip pallet*—*multi-trip pallet* → *палет за еднократна употреба*—*палет за многократна употреба*.

There are whole set phrases which can be used as opposites, too, e.g. *First In, First Out (FIFO)*—*First In, Last Out (FILO)* → *Първи влязъл, първи излязъл*—*Първи влязъл, последен излязъл*; *Last-in, First Out (LIFO)*—*Last-in, Last Out (LILO)* → *Последен влязъл, първи излязъл*—*Последен влязъл, последен излязъл*; *Make-to-Order*—*Make-To-Stock* → *производство по поръчка*—*производство за запаси*.

Conclusions

Antonymy turns out to be widespread both in English and Bulgarian logistics terminology. The lexico-semantic processes typical of general language words are found to function in terminology as well to express opposition of activities, properties, qualities and states in the sphere of logistics by means of antonyms.

Morphologically antonyms are formed by using affixes which is characteristic for both English and Bulgarian, the most frequent being *non-*, *dis-*, *de-*, *un-* and *раз-*, *не-*, *де-* respectively. Semantically four classes of antonyms are distinguished: complementary, contrary, converse and relational which are illustrated by English and Bulgarian terms. Antonyms are found more often in compounds than in single words. Binary and multiple taxonomy are distributed evenly in logistics terms giving rise to asymmetric antonyms.

The findings in this paper may be a good starting point for further research in logistics terminology. Furthermore, since it is a widely-acknowledged fact that new words are not learned mechanically, but associatively (Morgan, Rinvolucru 2004), they may serve as the basis for presenting new vocabulary in teaching. An effective verbal technique is using synonyms, antonyms, collocations to introduce new words and ask students to elicit the meaning. Another field of application is developing exercises on sense-relations. Simple matching activities may be complicated by incorporating analogy and reasoning for students to explain how terms are related. Thus, learners will master their terminological knowledge as well as improve their critical thinking skills.

References

- АРНОЛЬД, Ирина В. (1986). *Лексикология современного английского языка*. Москва «Высшая школа».
- BOLINGER, D., & SEARS, D. A. (1981). *Aspects of Language*. (3rd edition). New York; Harcourt, Brace, and World. ISBN 9780155038721
- CRUSE, D. A. (1976). Three Classes of Antonyms in English. *Lingua* 38.
- CRUSE, D. A. (1986). *Lexical Semantics*. Cambridge: Cambridge University Press. ISBN 9780521276436.
- ДАНИЛЕНКО ВАЛЕРИЙ П. (1977). *Русская терминология: опыт лингвистического описания*. Москва: Наука, 246 с.
- ГЕОРГИЕВА ВАЛЕНТИНА. (2014). Съпоставителна характеристика на българската и английската военна терминология (в областта на операциите по поддържане на мира. Дисертация за присъждане на образователната и научна степен «Доктор».
- ГИНЗБУРГ Розалия З., САРА С. ХИДЕКЕЛЬ, ГАЛИНА Ю. КНЯЗЕВА, АЛЕКСАНДР А САНКИН. (1979). *A Course in Modern English Lexicology*. Moscow: Vysšaja Škola.
- HUSTON J. A. (1966). *The Sinews of War: Army Logistics; 1775–1953*. Government Printing Office.
- КОМИССАРОВ Вилен Н. (1964). *Словарь антонимов современного английского языка*. Москва: Издательство «Международные отношения».

- КУПЦОВА Анна К., Алла Н. СТЕРЛИГОВА. (2006). Современные вопросы развития терминологии логистики. *Логистика и управление цепями поставок*, №2.
- ЛЕЕЧ, G. (1974). *Semantics*. New York: Penguin. ISBN 9780140134872.
- LINNE, M. (2006). *Constructions SVI-8/2006*. Retrieved July 21 2016 www.constructions-online.de, urn:nbn:de:0009-4-6857, ISSN 1860-2010
- ЛИРКА, L. (1992). *An Outline of English Lexicology*. Max Niemeyer Verlag Tübingen.
- LYONS, J. (1977). *Semantics* (2 vols.). Cambridge: Cambridge University Press, Online. ISBN 9780511620614
- MORGAN, J., & RINVOLUCRI, M. (2004). *Vocabulary Oxford English Resource Books for Teachers*. 2nd Edition. Oxford University Press. ISBN 0194421864.
- PALMER, F. R. (1981). *Semantics*. Second Edition Cambridge: Cambridge University Press. ISBN 9780521283762.
- ПЕРНИШКА Емилия, СТЕФКА ВАСИЛЕВА. (1977). *Речник на антонимите*. София: Издателска къща «Петър Берон», 380 с.
- РАКОВСКА МИРОСЛАВА. (2011). *Международна Логистика*. София: Университетско издателство «Стопанство», 361 с., ISBN 978-954-644-209-3.
- YULE, G. (2006). *The Study of Language: an introduction* (3rd edition) Cambridge: Cambridge University Press. ISBN 978-0521543200.
- ЗАРАТА, В. А. А. (2000). *A Handbook of General and Applied Linguistics*. Trabajo de Ascenso sin publicar. Mérida: Escuela de Idiomas Modernos, Universidad de Los Andes

Author

Galina Velikova, e-mail: galya.velikova@gmail.com, N. Vaptsarov Naval Academy, Varna, Bulgaria

Author is a Senior Lecturer in English for Maritime English and Logistics. Her major interests are linked with terminology, materials development and testing in Maritime English. Her current PhD-related work involves an investigation in Logistics Terminology in English and Bulgarian.