Semantic Relations between Words in Naval Architecture and Maritime Languages

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Abstract

The present article aims at identifying the semantic relations that occur between words in naval architecture and maritime languages. For this purpose several specialized dictionaries as well as various textbooks and specific naval architecture documents were explored.

Both the naval architecture and maritime field-specific lexis consist of few genuinely 'unique' words and of a large number of items, not 'unique' in and by themselves, which have migrated from everyday language to become 'technical' and 'field-specific' through the role played by polysemy, metaphor and homonymy. An interesting aspect of these two specific language fields is the presence of doublets or two signifiers for only one signified.

Keywords: polysemy, homonymy, narrowing of meaning

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Introduction. Main concepts

Naval architecture is among the very few fields of human activity which has its own "language", i.e. the language of science which imposes two strands of demands. On the one hand, there is a former stand intended for the practitioner, the one who has to be able to 'read' plans, drawings, drafts, and then turn them into artifacts. On the other hand and, there is a latter strand focusing the scientist who has to confirm a hypothesis, to develop unused concepts, to reveal internal acts of being, development, associations among various phenomena, etc. in between, there is a zone of overlapping where the two categories of language users meet, the area of denominations shared only within the field of builders and explorers of ships. The language tools used, therefore, have the tendency to be objective, explicit, restricted, and emotionless, devoid of any identity.

The scientific language is very accurate, rigorously precise and objective. Its main aim is to denominate ship areas, installations and machinery, operating procedures as well as to inform about relevant issues and what particular method is used to investigate those issues.

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The subject-matter takes priority over the style of the linguistic medium in a scientific text (Close 1965). Naval architects are concerned with showing the topic and findings' accuracy rather than with using the best style of presentation. The fundamental vocabulary characteristic is denotation and it has no stylistic value. Generally, the language of science is characterized by an impersonal style (Ding 2002). The author assumes that anyone who is interested in the naval architecture can read the new findings, do the same projects in ship building following the same steps and their results will be the ones shown in the naval architecture texts written by him.

Although millions of people have been working as naval architects and used English on a daily basis, linguistic research in this field is, however, surprisingly limited. Even more, polysemy or hyponymy have hardly been studied in relation to this field. It is true that specialized texts are not rich in homonyms, but they do exist and they open new perspectives of research. The ones found show the versatility of this vast field which inspires itself from different other fields of human activity and extracts common words to enrich them with the field's peculiarities (e.g. *mai*) or names various objects according to their resemblance (e.g.: *genunchi-knee*).

Once one focuses on word meaning and words in context, it becomes evident that the naval architecture field-specific lexical items are hardly ever unique 'per se' as:

- they also belong to other semantic ESP fields;
- they mainly consist in 'general words' that take on different meanings and roles though polysemy and homonymy .

Polysemy and Homonymy in Naval Architecture Texts

Recent works on terminology structuring have focused on formal similarity to develop hypotheses on the semantic relationships between terms: while Daille (2003) uses derivational morphology, Grabar and Zweigenbaum (2002) use a number of identical characters, as a starting point, in their approaches

Up to now, the focus has been on nouns and adjectives, since these structuring methods have been applied to lists of extracted candidate terms (Habert et al., 1996, Daille, 2003) or to lists of admitted terms (Grabar and Zweigenbaum, 2002). As a consequence, the relationships considered have been mostly synonymic, taxonomic, or defined as term variations.

Polysemes (words with more than one meaning) and homonymes (variants spelled alike but with no common meaning) seem to be the basic lexical devices used to create the new elements of the 'naval architecture vocabulary' and it is the key role that they play in the corpus that makes it so difficult to identify field-specific lexis when de-contextualised in a word list.

Thus, for illustrative purposes, the word stock lexeme *floor* which in everyday speech is "(1) the part of a room on which you stand; (2) the lower inside surface of something; (3) the area of ground at the bottom of something" (www.merriamwebster.org). On the other hand, it has a field-specific usage, being used to refer to a horizontal subdivision in naval architecture. *Air draught* has nothing to do with a current of air, as one would be tempted to understand it, but it refers to *the maximum height of the ship parts above the water surface*.

'Shifts' do not only concern the meanings but also the grammatical functions of words: from adverbs or prepositions to adjectives, from verbs to nouns, etc. In general language *bow* can be either a noun (1. a bending of the head or body in respect, submission, assent, or salutation; *2.* a show of respect or submission (from www.merriamwebster.org) or a verb used either transitively or intransitively. When it is used intransitively, it may have one of the following meanings: 1a.to cease from competition or resistance**:** 'refusing to *bow* to the inevitable — John O'Hara; 1b. to suffer defeat: *bowed* to the champion **2.** to bend the head, body, or knee in reverence, submission, or shame, **3.** to incline the head or body in salutation or assent or to acknowledge applause, 4. to make a debut.

Transitively used, it may mean: 1.to cause to incline, **2.** to incline (as the head) especially in respect or submission, 3. to crush with a heavy burden, **4 a:** to express by bowing, 4**b:** to usher in or out with a bow (quoted from www.merriamwebster.org), but in the language of naval architecture *bow/bows* is mainly used as a noun to indicate "1.That part of a ship's side that extends aft and downwards from stem. 2. Direction between right ahead and 45° from it. 3. Bow of shackle is the rounded part opposite the jaw" (Layton 1994: 55). *After*, a time relater (preposition/adverb) in general language, is mainly used as an adjective in naval architecture to define *the rear of the ship* (i.e. *the stern or the after end of the ship*). It is also used in a clipped form acting as a prefix in formations as *aftpeak* derived from *afterpeak.*

Differently from what usually happens in semantic field analysis according to Hatch and Brown (1995: 33), polysemy is an issue even within

the same semantic field. *Port*, for example, besides referring to an *artificial harbour*, can be used to indicate an (1) *opening* and (2) the *left side of the ship*.

Discriminating between polysemy and homonymy by working out the 'core' meaning and how 'core-like' the meanings are, as Hatch and Brown (1995:50) suggest, it is not easy task to perform. Polysemes, however, seem to be more common than homonyms. For instance, *bow*, *bank*, *frame* and *after* might be defined as cases of polysemy based on shape or position, while *floor* might be a case of homonymy.

In order to reveal the presence of same terms with different meanings in Romanian naval architecture texts, we used *Dicţionarul marinăresc (1982),* as well as shipbuilding textbooks and dictionaries. 3,600 words were recorded and then semantically and contextually analysed. 19 homonyms were recorded and they are the following: *abatere, aborda, ac, amenajare, angaja, barbă, barză, boţ, chiţibuş, cocă, cuplu, declinaţie, diamant, farfurie, genunchi, iar, însura, lingură, mai*. These homonyms represent a tiny proportion of 0.25% out of the 3,600 dictionary entries.

Out of the terms belonging to the maritime language, few of them were borrowed from regional or dialectal variants of the Romanian language (e.g. *boţ* encountered in the Moldavian dialects). Some others have undergone a process of specialization or narrowing of meaning, as is the case of the word *barbă* (a word used to denote in Romanian both the *beard* and the *chin*). Other terms are part of our daily vocabulary such as *ac, amenajare, bară*, while others are present in naval architecture by conversion (the conjunction *iar* becomes a noun within the highly technical terms pertaining to this field).

Besides the words listed above, we have also explored *gruie* (French), *etambou* (French), *bigă* (Russian), and *paiol* (Russian) in order to illustrate that the Romanian language has borrowed words that are part of the international naval architecture language.

Same Meaning, Different Terms in Naval Architecture and Maritime Languages

After briefly presenting polysemy and homony in naval arhitecture, synonyms in naval architecture and maritime languages will be the next focus of the current approach. The Maritime Language, a branch of ESP, is a variety of professional specialized technical language which came into being out of the necessity of effective communication between ship and shore, between crew members and between crew and passengers in order to ensure safety at sea. Studying both the naval architecture and

maritime languages, 26 words that have the same meaning i.e., they refer, in Saussure's terms (1959: 66-67), to the same signified but differ in form, or in other words, they are different signifiers of one and the same signified. The presence of absolute synonyms contradicts the natural tendency of language to drop out one of the terms. The tabular presentation of our findings parallels the Romanian pairs of signifiers which name the one and the same signified:

Naval architecture language	Maritime language
ecuator magnetic	aclină
galion	acrostol
asietă negativă	aprovă
debarcader	apuntament
asietă pozitivă	apurare
aripă	bonetă/potantă
anteport	avantport
navă	bastiment
val de resacă	brizant
cheson	flotor de ranfulare
cheiaj	taxă de platformă
tanc	cisternă
coliziune	abordaj
cot	şapan
degaza	dănfui
debarca	deşanța
ruliu	tangaj
punte	etalon
bordaj exterior	flanc
cârlig	ganci
etravă	ghibră
filă lacrimară	gutieră
izogonă	agonă
pontil	puntac
siaj	remuu
suprastructură	castelatură

Table 1 Doublets for one signified

As illustrated in the foregoing, there are absolute synonyms in naval architecture and maritime languages, but we do not claim that the given

list does include all such doublets coming from the two related terminologies.

Conclusion

Our terminological comparison between the naval architecture and maritime languages aimed to find lexical similarities or discrepancies within the two areas of investigation. The reason for such a comparison lied in the particularity of the two terminologies proven herein, namely the coexistence of linguistic doublets for one and the same signified. In addition, the relationships of polysemy and homonymy were also a point of interest. No other answer was looked for to explain why the phenomenon does exist and we believe the study of semantic relations between words in naval architecture texts should be continued since naval architecture develops and so does the naval architecture language.

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