A BRIEF HISTORY OF ENGLISH NAVAL ARCHITECTURE TERMS

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Abstract: Our research article is an insight into the history of naval architecture terminology as well as the etymology of several most frequently used naval architecture terms. The present research article aims at identifying English terms which entered the naval architecture language at a certain point in time. In order to achieve this aim, naval terms are identified and their frequency is used to determine the use and usage.Besides, we analyze the word structure present in the naval architecture language.

Keywords: terminology, history, word structure, naval architecture

1. Introduction

Most of the historical approaches to human civilization have ascertained water to have always played a vital role in the settlement, development and wealth of any community, providing many other facilities in addition to the necessary beverage complementing our daily bread. As a source of wealth, water has been of great help in the house building process, in gardens and courts for plants and animals or has incented people to spend their time fishing or lying in the sun, travelling or cruising, in all sorts of competitions. Locally, nationally and internationally, water has most of the times provided a wide variety of jobs which were beneficial both to the actively involved individuals and to the urban or rural areas they were part of.

Science and the corresponding terminology are a late product of general development of human civilization. *"The roots of science and, as a consequence, the roots of terms run deep into the period before the appearance of civilization."(*Mason 1968,88) However, in most languages, little or no written records on ancient science and the corresponding terms, have been preserved.

Within the general framework of functional styles, naval architecture occupies a major position. However, we have to admit, scientifically and technical discourse has not yet been thoroughly investigated, especially when we refer to the very specific terms in naval architecture[1]. We have to mention Nicolae Bejan's thesis *Scientifically and Technical Terms in English.* The register of shipbuilding which investigates for the first time in Romanian discourse studies the field of naval architecture.

[1] Naval architecture was defined by McGraw-Hill's *Dictionary of Scientifically and Technical Terms*, New York, 1972, as the study of physical characteristics and the design and construction of buoyant structures, such as ships, boats, barges, submarines, and floats which operate in water; it includes the construction and operation of the power plant and other mechanical equipment of these structures.

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Since a direct relationship exists between naval architecture and the corresponging terminology, to better understand the evolution of the respective terminology, a brief historical view is essential at this point.

2. A Brief History of English Naval Architecture Terms

The history of the English language, begins after A.D.600. Everything before that is pre-history, which means that we can guess at it bun cannot prove much. Alfred the Great, the king of the West Saxons, who reign in the second half of the 9th century, translated at this time that much of the Northumbrian literature of the preceding centuries was copied in the West Saxon.

Last still, in the 9th and 10th centuries the Norsemen emerged in their ships, with the linguistic result of a considerable influx of Norse, including terms of ship construction, into the English language.

As a consequence, alongside with native terms many Scandinavian words began to be used in ship construction in those centuries and in the centuries to come.

Examples of the former, which are extensively used today, are given in alphabetic order. Most etymologies are given in accordance with Walter Skeat's *Etymological Dictionary*, while definitions are synthetically presented from McGraw-Hill's *Dictionary of Scientific and Technical Terms*, New York, 1972.

Beam

1. The breadth of a ship at the widest point.
2. A transverse structural member of the framing of a vessel used to support a deck and to brace the sides against stress. (Middle English *beem*, A.S. *beam*, a tree).

Board

1. The side of a ship. (Middle English *bord*, A.S. *bord, board*).

It is to be noticed that some terms have a probable etymology, while for some others the origin is quite obscure. This is the case of words such as **bitt, bulk,** and **ship.**

> *"Sometimes between the years 1000 and 1200 important changes took place in the structure of English and Old English became Middle English. The important political event that facilitate these changes was, by all means, the Norman Conquest in 1066." (Roberts 1967, 34).*

It is in the vocabulary that the effects of the Norman Conquest are the most obvious. All sorts of French words came into English. There were words to do with government, church, household words, food, grammar and noun words that are listed in any book on the history of English language. *"All these and thousands more poured into the English vocabulary between 1100 and 1500, until at the end of that command."* (Roberts 1967, 54). However, it was not until the

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Middle Ages and early modern times that elements of science and scientific terminology, properly speaking, came into being.

The period of Early Modern English (the 16th and 17th century), which was also the period of English Renaissance, was a time when people developed a keen interest in the past, and a more daring and imaginative view of the future. It was a time when new ideas multiplied, and new ideas meant new language.

Apparently, the English had grown accustomed to borrowing words from French as a result of the Norman Conquest; now they borrowed from Latin and Greek. Many words were words of science, a great many of which, belonged to naval architecture.

The following examples are given for illustration. Some of the terms, however, are more recent developments.

Anchor

1. A device usually of metal attached to a ship or boat by a cable and cast overboard to hold it in a particular place by means of a fluke that digs into the bottom. (The current spelling imitates the false Latin form *anchora*. A.S. *ancor-, ancora,* from Greek *ankura*, a bent hook).

Barge

1. Flat-bottomed boat for carrying cargo on protected waterways, usually without engines or crew accommodations. On inland river systems barges can be lashed together and either pushed or pulled by tugs and handle cargo of 60,000 tonnes or more. Small barges for carrying cargo between ship and shore are known as lighters.(Middle English *barge*, Latin *barga*, variant of *barca*).

Bilge

1. Part of the underwater body of a ship between the flat of the bottom and the straight vertical sides.
2. Internally, the lowest part of the hull, next to the keelson. (A variant of bulge. Middle English *bulge*, Old French *boulge*, a bag, Latin *bulga*, a bag).

Boiler

1. Derivative. Generator in which water is heated and converted into steam. Boil- to bubble up. (Old French *boillir*, to boil, Latin *bullire*, to bubble up, to boil).

Bracket

1. A simple rigid structure in the shape of an L, one arm of which is fixed to a vertical surface, the other projecting horizontally to support a shelf or other weight. (French *briquette,* Latin *bracae,* breeches).

Capstan

1. A retracting vertical -axed rotating machine developed for use on sailing ships to apply force to ropes, cables, and hawsers. (Middle English from Old Provensal *cabestan*, *cabestran*, from *cabestre*, a rope noose, Latin *capistrum,* halter, from *capere,* to take, seize).

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Cargo

1. Goods or merchandise loaded into a ship with carriage. (Spanish *cargo, carga*, load, Late Latin *carricare*, from Latin *carrus*, a kind of vehicle).

Carina

1. English careen. The main body of a ship, exclusive of masts, sails, yards, and rigging. (French *carine*, careen, keel, Latin *carina*, keel).

In much the same period, principally from the 14th century to the 17th centuries, the nautical relations with the Dutch brought into the English language many terms which were directly linked with naval architecture or navigation.

Bowsprit

1. A large spar extending forward from the vessel's prow. It provides an anchor point for the forestay(s), allowing the fore-mast to be stepped farther forward on the hull.

Buoy

1. Floating object that can have many purposes. It can be anchored (stationary) or allowed to drift with the sea wave. The word, of Old French or Middle Dutch origin, is (in British English) now most commonly pronounced /ˈbɔɪ/ (identical with boy, as in buoyant). In American English the pronunciation is closer to "boo-ee."

Freight

1. Goods transported in bulk by truck, train, ship, or aircraft.

Hoy

1. A heavy barge used in harbors.
2. A vessel of the 17th and 18th centuries, usually sloop rigged, used for fishing and coastal trading.

Lighter

1. A lighter is a type of flat-bottomed barge used to transfer goods and passengers to and from moored ships. Lighters were traditionally unpowered and were moved and steered using long oars called "sweeps" and the motive power of water currents.

Marline

1. Small stuff of two-fiber strands, sometimes tarred, laid up left-handed.

Skipper

1. Master of fishing or merchant vessel.

To get a better idea of the source of naval terms in Contemporary English, I first selected a small amount (150 words) of the most frequently used terms, out of an immense corpus, giving the percentage of their origin.

In the long run, the naval architecture vocabulary has been thoroughly investigated from a lexicographic point of view and adequately listed in valuable technical dictionaries. The list of lexicons we made use of for my investigation would point to the great bulk of vocabulary that has recently been piled up in their register.

Ansted, A. 1933.*A dictionary of Sea Terms*, Brown and Ferguson, Glasgow.

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Depending on the context, that is, on the level of the text being analyzed, some terms are of a very great frequency of occurrence, while others are occasionally used. The following terms are of a low frequency of occurrence: *anchor, apparatus, bunker, crane, equipment, installation, lining, maneuverability, radio, rudder, steam, tank, winch, ballast, barge, burner, draft, engineering, freeboard, freight, funnel, generator, gyrocompass, helm, knot, life-boat, life-jacket, mast, motor, pallet, piston, pitching, radar, refrigerator, heavy sea, shell, stabilizer, stoker, tug, trimmer, windlass, vibration.* Whereas, the following terms are of a high frequency: *vessel, ship, cargo, tonnage, fuel, engine, capacity, liner, deck, aft, unit, machinery, accommodation, deadweight, speed, turbine, buoy, oil, tanker, bridge, derrick, forward, hull, stores, astern, beam, container, crew, hatch, hold, load, port* and *steam.*

We have also investigated a naval architecture text, namely *High Speed Small Craft*[2]by Peter Du Crane, where we divided the terms into three distinct levels:

1. Special terms= 138 (13%)
2. General technical terms=42(4%)
3. Common terms=870(83%)

Our further investigation in the naval architecture terminology revealed that Duch has given the English language a series of words, such as:

1. Avast, from *hou vast*, meaning *hold fast*.
2. Drill, from the verb *drillen*, to train/instruct
3. Freebooter (Pirate), from *vrijbuiter*.
4. Yacht, from *jacht* meaning *hunt*
5. Pump, from *pomp*.
6. Sloop, from *sloep*.
7. Skipper, from *schipper* meaning someone who ships.
8. Keel, from *kiel*
9. Maelstrom, from *maalstroom* meaning "strong current" (borrowed via a Nordic language)
10. Forlorn hope, from *verloren hoop* "lost hope".
11. Cruiser, from the verb *to cruise* from Dutch *doorkruisen* meaning to sail across or go through.
12. Brandy, from Dutch *brandewijn*, distilled wine.

3. A list of English loanwords, examples of usage and comments

This part of the study contains a set of 14 English words. Each word will be dealt with separately and listed in alphabetical order. The part of speech and gender will be given in parenthesis after

[2] Peter Du Cane 1956. *High Speed Small Craft*, London

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the headword. The corresponding English term is then cited followed by the phonetic transcription in English.

The following list of terms and expressions is in no way an exhaustive register of the English words used in the field of naval architecture around the turn of the 20th century. The list only contains examples of the main terms. Also, the collection of sources consulted is in no way an exhaustive list. Many words were considered as possible candidates but were omitted primarily because examples of usage were not considered adequate or were not found in reliable written sources.

Bag rope

Etymology: [bag + rope]

bag [Early ME. bagge: cf. ON. baggi ‘bag, pack, bundle’ (not elsewhere in Teutonic); also OF. bague, Pr. bagua baggage, med.L. baga chest, sack. The Eng. was possibly from the ON.; but the source of this, as well as of the Romanic words, is unknown; the Celtic derivation suggested by Diez is not tenable: Gaelic bag is from English. Of connexion with Teutonic *balgi-z, Goth. balgs, OE. b£l, bæl, bæli, whence belly, bellows, and the cogn. Celtic bolg, balg, there is no evidence.]

rope [Common Teut.: OE. ráp masc., = OFris. râp (in silrâp; WFris. reap, EFris. rôp, but NFris. riap:—*rêp), MDu. and Du. reep, MLG. rêp, reep, reip (LG. rêp), OHG. and G. reif, ON. reip neut. (Icel., Fær., Norw. reip, Sw. rep, †reep, Da. reb, †reeb, reeff, etc.), Goth. raip (in skaudaraip shoe-thong). In the Lex Salica (c 490) the Old Frankish form appears to be Latinized as reipus (only in a transferred sense), and from early Teutonic the word passed into Finnish as raippa rod, twig.]

Backstrop/back strop

Etymology: [back + rope]

back [Common Teut.: OE. bæc (neuter) is cogn. with OS. bak, OFris. bek, MDu. bak, LG. bak, ON. bak.—OTeut. *bako-(m); not found in Gothic or OHG., and now lost in Du. exc. in derivatives, such as achterbaks, bakboord. Cf. ridge.]

strop [OE. strop (once only) = (M)Du., (M)LG. strop, OHG. strupf masc. (a derivative of the same meaning is MHG., mod.G. strüpfe fem., LG. strippe: strip n.2), prob. a WGer. adoption of L. struppus, stroppus, strap, band (? a. Gr. στρόφος), whence OF. estrope (mod.F. estrope, étrope), Pr. estrop-s, Cat. estrop, Pg. estropo rowlock-strap, It. stroppa strap, band.]

Bar

Etymology: [ME. barre, a. OF. barre (= Pr., It., Sp., Pg. barra):—late L. barra of unknown origin. The Celtic derivation accepted by Diez is now discredited: OIr. barr ‘bushy top,’ and its cognates, in no way suit the sense; Welsh bar ‘bar’ is from Eng., and Breton barren ‘bar’ from Fr. (The development of sense had to a great extent taken place before the word was adopted in English.)]

Becket

[Etymology unknown. Du. bogt, bocht ‘bend’ of rope, has been suggested. Falconer Dict. Marine, thought it ‘probably a corruption of bracket.’]

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Bloke

Etymology 1: [Origin unknown: Ogilvie compares 'Gypsy and Hind. loke a man.']

Etymology 2: [Mid-19th century. From Shelta, a secret jargon used by Romany people in Britain and Ireland.]

Bracket

Etymology: [The earliest form bragget appears to be (either directly or through F. braguette) adaptation of Sp. bragueta, dim. of braga:—L. braca, sing. of bracæ breeches; the form bracket is a corruption, perh. influenced by It. bracheta, dim. of braca:—L. braca.]

Bulk

Etymology: [Of complicated etymology. The coincidence in meaning with ON. *bulki, Icel. búlki 'heap, cargo of a ship' (Vigf.), Da. bulk lump, clod (cf. mod.Icel. búlka-st to be bulky), suggests that the word, though not recorded before 15th c., may (in the senses 'heap', 'cargo') be of Scandinavian origin. Within a few years of its first appearance, bulk occurs in the senses 'belly, trunk of the body', due app. to confusion with bouk, which it has entirely superseded in literary English. (Cf. however, the Flemish bulck 'thorax' in Kilian.) The sense of 'size' (branch III) seems to have been evolved chiefly from the notion of 'body', though it may be partly due to that of 'heap' or 'cargo'. The form boak, used by N. Fairfax 1674 indiscriminately with bulk in the sense of 'magnitude', is apparently:—ME. bolk.]

[1400–50; late ME bolke heap, cargo, hold < ON bulki cargo, ship's hold]

Davit

Etymology: [Formerly also David, and app. an application of that Christian name, as in the case of other machines and tools. Cf. F. davier, the name of several tools, etc., altered from daviet (Rabelais) = Daviet, dim. of OF. Davi David; the tool was still called david by joiners in the 17th c. (Hatzfeld and Darmesteter).]

Dock

Etymology: [Found early in 16th c., also in 16th c. Du. docke, mod.Du. dok. From Du. and Eng. it has passed into other langs., Da. docke, Sw. docka, mod.G. dock, docke, mod.F. dock, in 1679 doque. Ulterior origin uncertain.It has been variously compared with rare Icel. dökk, dökð pit, pool, Norw. dokk hollow, low ground, med.L. doga ditch, canal (Du Cange), Gr. δοχ receptacle. See Skeat, E. Müller; also Grimm, and Diez s.v. Doga.]

Ejector

Etymology: eject (v.) [adaptation of L. Uject-Qre, frequently of UjicSre to throw out, f. U out + jacSre to throw; or directly f. Uject- ppl. stem of UjicSre. As in many other Eng. vbs. identical in form with L. ppl. stems, the precise formation is somewhat doubtful; the senses are derived partly from UjicSre, partly from UjectQre.]

Haul

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Etymology: [A variant spelling of hale v.1, in 16th c. also hall; representing a different phonetic development of ME. hale (hA;l): cf. small, beside OE. smæl, ME. smal, smale, Sc. smale, smail. For the spellings au, aw, which date only from 17th c., cf. crawl.]

Quarter

Etymology: [a. OF. quarter, -ier (12th c. in Littré):— L. quartar-ius a fourth part (of a measure), f. quartus fourth: see quart n.2 and -er2 2.]

Steam

Etymology: steam (v.) [OE. stéman, stýman:—prehistoric *staumjan, f. *staum- steam n.] steam (n.) [OE. stéam = WFris. steam, Du. stoom:—OTeut. type *staumo-z, of obscure origin.]

Trawl

Etymology: [Origin and age obscure. If quot. 1481–90 belongs here, trawelle might be related to rare MDu. traghel drag-net (in Teuthonista 1475), referred by Verwijs and Verdam ult. to L. tragula drag-net. But the MS. reading is indistinct, and some would read tramelle.Apart from quot. 1481–90, the vb. appears earlier than the n., and may be its source, but is no less obscure in origin. The forms troul, trowl were perh. due to confusion with trowl, troll, another fishing term.]

4. Conclusion

Every profession and every science builds up its own specialized language use and terminology. Technical terminology differs from the terminology of professions in being more systematic and based on taxonomy. Naval architects approach language strategically, actually preferring clarity to obscurity.

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