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THE ENGLISH ELEMENT IN THE DEVELOPMENT OF CROATIAN MARITIME TERMINOLOGY

ENGLESKI JEZIČNI ELEMENTI U RAZVITKU HRVATSKOGA POMORSKOG NAZIVLJA

SUMMARY

Lexical borrowing has been one of the major features in the historical development of maritime Croatian, and Croatian maritime terminology in particular. The Italian element had influenced maritime Croatian for the most part of its existence, i.e. since 8th century until World War II. The English element has been dominating the development of maritime Croatian in the more recent history, with the first instances of the English influence being recorded as early as 1852. The paper deals with the study of the English element in the Croatian maritime terminology, with particular reference to phonological, morphological and semantic change. Introduction of the English element is also studied in view of the typology of the nature of language contacts between English and Croatian.

Key words: historical lexicography, contrastive analysis, maritime terminology, lexical borrowing

SAŽETAK

Leksičko posuđivanje je trajno i povremeno intenzivno obilježje povijesnoga razvitka hrvatskoga pomorskog jezika, posebno hrvatskog pomorskog nazivlja. Talijanski su jezični elementi utjecali na pomorski hrvatski jezik u najduljem razdoblju njegova razvitka, tj. od VIII. stoljeća pa sve do Drugoga svjetskoga rata. S druge strane engleski jezični elementi, naročito leksički, dominiraju u novijoj povijesti razvitka hrvatskoga pomorskog jezika, a prvi dokazi za to javljaju se već 1852. godine. Ovaj se rad bavi proučavanjem engleskih jezičkih elemenata u hrvatskom pomorskom nazivlju s posebnim osvrtom na njegove fonološke, morfološke i semantičke promjene. Engleski se jezični elementi u hrvatskom također istražuju u odnosu na tipologiju i narav jezičnih dodira između engleskog i hrvatskoga jezika u pomorstvu.

Ključne riječi: povijesna leksikografija, konstrativna analiza, pomorsko nazivlje, leksičko posuđivanje

Today's nautical English is a curious blend of terms, the oldest of which were spoken before Shakespeare's day and hold their meaning now, and most modern of which spring fully jargoned and acronymed from the desktop computers of electronics laboratories (Lenfestey 2001: Preface)

1 INTRODUCTION

Lexis is the linguistic constituent frequently and most readily open to foreign influence. Consequently, it is also the linguistic unit most likely to undergo formal and semantic change throughout the process of linguistic borrowing and adaptation. In this paper we examine the instances and rules of lexical borrowing evidenced in the history of language contact between maritime English and maritime Croatian on the lexical level. The evidence mainly derives from the maritime lexicographic works (dictionaries, glossaries, terminology works, nautical handbooks and publications) published in Croatia in the nineteenth and twentieth centuries, and from the author's own corpus of spoken maritime English and Croatian recorded on board Croatian ships and along the Croatian seaboard.

'Maritime English' is defined communicatively, i.e. as 'the entirety of all those means of the English language which, being a device for communication within the international maritime community, contribute to the safety of navigation and the facilitation of the seaborne business' (Trenkner 2000: 7) but it also includes various aspects of sociolinguistic and pragmatic analysis of language use in the marine and maritime environment. Consequently, in addition to the specific 'nautical' or 'seafaring' terminology naming things and concepts related to ships and the sea, maritime English, as used in this paper, embraces a variety of disciplines, each with its own language features characterising the overall language used in the maritime industry and the coastal vernacular (see Pritchard 2000), e.g.:

- a specific use of English language consisting of and restricted to a number of registers (navigational, technical, legal, communicational, business, safety, etc.),
- a limited number of well-defined navigationspecific and seamanship terms,
- extended or specialised meaning and use of a relatively large number of general English lexical items

 spoken language/dialogue formulae (exemplified in typical rules governing the maritime exchange, its turns and moves)

Furthermore, any maritime language has always reflected the sociolects of restricted professional groups on board and ashore (Kramer 2000) and, more recently, a growing population of yachtsmen and other pleasure craft users (cf. "temporäre Soziolekte" – Loffler 1994: 127, and "Freizeit-Fachsprache" – von Polenz 1999: 500f). It also includes maritime terms and lexical items used in literature (e.g. J. F. Cooper, H. Melville, R. H. Dana, C. Norhoff & J. N. Hall, N. Monsarrat, etc.).

Throughout history, the language of seafarers or specific shipboard social groups has been labelled differently in order to suit either its narrower or wider use, i.e. nautical English, seafaring English, SeaSpeak vs. the all-inclusive, comprehensive variety referred to today as maritime English. This emphasises the specificity of any language of seafarers and is shown, for example, in maritime German by the opposition Seemanssprache (sailors' or seafarers' speech/genre/jar-Bergmannssprache (landlubbers' VS. speech), cf. Stedje 1989: 201 and Schmidt 1976. As a result, maritime dictionaries, monolingual or bi/multi/lingual, appeared under a number of titles such as: sailor's dictionary, dictionary of sea terms, nautical dictionary, dictionary of seafaring, marine dictionary, maritime dictionary, etc. (cf. Pritchard 1999b). This taxonomy also reflects different processes of conceptualisation and lexicalisation of the vocabulary of the sea in English and Croatian. In the former there are a number of lexical items indicating specific use of English in the various fields of maritime-related activities ('differentia specifica') with the term nautical English also used as a hypernym (the generic term maritime English only reflecting a more recent lexicalisation under the influence of 'international English', i.e. maritime English as a lingua franca of the sea). The latter tends to use the 'genus proximum' term pomorstvo and pomorski engleski/hrvatski ('maritime English/ Croatian') in the generic sense.

Maritime English therefore is a specific language variety: a part of the user's communicative competence, at his disposal, to ensure him an appropriate use of the language in a specific, i.e. maritime-related situation (cf. Halliday, MacIntosh & Strevens 1964; Crystal-Davy 1969). The principal linguistic features of maritime language are the specific technically-marked vocabulary, contact-induced lexical

borrowing and semantic changes, specific lexical range and collocability of the words of general vocabulary appropriate to the subject-matter, characteristic recurrence and frequency of the vocabulary and certain grammatical structures and situational constraints on their use.

2 MARITIME LEXICOGRAPHY – A BRIEF HISTORICAL SURVEY

Monolingual and bilingual special-purpose dictionaries (multi-lingual maritime dictionaries, particularly in the case of early maritime terminology) are themselves the first, though not always the most reliable source for the study of the development of maritime vocabulary (lexicographic entries, lexical changes), lexical borrowing, the role and impact of foreign lexical elements, etc. The second major source is the maritime lexical element in general monolingual dictionaries (English, German, Italian, French or Croatian), as they tend to lexicalize and enter elements from the maritime vernacular into their wordlists (macrostructure) or more frequently as part of lexical and pragmatic information in the article of the headwords. Lexicological and terminological studies represent the third valuable source for such a study. The fourth, available for almost a century, is the recordings and transcripts of voice communication at sea. The above sources, together with a number of nautical items used in literary works, constitute the corpus for the present study.

The maritime profession is probably one of the oldest recorded human activities and so is the lexis and language of the sea. In Beowulf, for example, seventeen different expressions for the concept of 'sea' and eleven for 'ship' can be found. Therefore it is only natural that we find lists or nomenclatures, glossaries and even first dictionaries of nautical or other ship and sea related terms in the earliest written records (e.g. a thirteenth-century ship catalogue containing about 150 items denoting ship parts and ship construction, Kluge 1911: 64f). This also includes pragmatic and sociolinguistic evidence of the linguistic activity of such social groups even as early as eleventh century (e.g. 'Nomenklatur des Schiffes', cf. Opitz 1998).

Most maritime nations in Europe have recorded, developed and continually standardised their maritime terminology by inserting such terms first into the wordlists of (or supplements to) general dictionaries and subsequently by publishing specialised maritime dictionaries. Nautical and maritime-related words first appeared in bilingual general dictionaries (with Latin as headwords or translation equivalents) and later on in monolingual dictionaries. The following is a chronological list of some major early bilingual and monolingual dictionaries containing a considerable number of maritime terms. The dictionaries listed under d, e) and f) include Croatian maritime terms appearing either in the headword list or in the microstructure as translation equivalents:

- a) T. Golius (1579) Onomasticum latinogermanicum – with two chapters on nautical expressions arranged thematically, taken over from the Rostock Professor Nathan Chytraeus' Nomenclator latinosaxonicus (1582);
- b) Johann Leonhard Frisch (1741) *Teutsch-Lateinischen Wörter-Buch* with a long list of lemmatised seafaring expressions;
- c) S. Johnson (1755) A New Universal English Dictionary;
- d) F. Vrančić (1595) Dictionarium Quinque Nobilissimarum Europae Linguarum Latinae, Italicae, Germanicae, Dalmaticae¹ & Ungaricae, Apud Nicolaum Morettum, Venice the first Croatian multilingual general dictionary containing over 140 nautical, shipping, and sea-related terms;
- e) Veliki latinsko-hrvatski rječnik (Great Latin Croatian Dictionary) (1692-1703) by P. R. Vitezović (253 nautical, sea & ship related terms in the manuscript) plus two supplements: Navium nomenclatura and Ventorum Nomenclatura (32 wind names) "juxta Graecam appellationem Croatis tradita";
- f) Lochmer, A. (1906) Englesko-hrvatski rječnik (first English-Croatian Dictionary), Senj, Ivo pl. Hreljanović with numerous sea and ship-related entries and sub-entries.

2.2 Early nautical / maritime dictionaries: English and Croatian

The most comprehensive list of the history of maritime dictionaries is offered today by Marc van der Campenhoudt, Centre du recherche TERMISTI, Brussels (www.termisti.refer.org/ter-

¹ The Croatian language is referred to as 'Dalmatian'

misti.htm). An excellent web-site on sixteenth to eighteenth century naval dictionaries is maintained by L. Bruzelius (Lars.Bruzelius@udac. se). These authors quote A Sea Grammar (1626) by John Smith as the oldest printed English nautical dictionary, i.e.:

An Accidence, or The path-way to experience. Necessary for all young sea-men, or those that are desirous to goe to sea, briefly shewing the phrases, offices, and words of command, belonging to the building, ridging, and sayling, a man of warre; and how to manage a fight at Sea. Together with the charge and duty of every officer, and their shares: also the names, vveight, charge, shot, and powder, of all sorts of great ordnance. With the vse of the petty tally. Printed by N. Okes for Ionas Man and Benjamin Fisher, London, 1626 (1st). 8vo, 13.5x7.5 cm, 38 pp. RCA records (8), 42 pp & Roberts records 4to, iv, 42 pp. Other editions: 1627 (2nd) and 1636 and enlarged in A Sea Grammar in 1627, 1653, 1691, 1692, 1699 and 1705. Reprinted 1884, 1895, 1907 and 1910 in The Complete Works of John Smith. JCB has a copy with a variant dedication to Sir Robert Heath on A2.

However, Henry Mainwaring's *The Sea-mans Dictionary* (1644) is considered to be the oldest maritime English dictionary, since it had been written in manuscript between 1620 and 1623 (the year 1623 is now quoted as the reference year), i.e.:

The Sea-mans Dictionary: Or, An Exposition and Demonstration of all the Parts and Things belonging to a Shippe: Together with an Explanation of all the Termes and Phrases used in the Practique of Navigation. Composed by that able and experienced Sea-man Sr Henry Manwayring, Knight: And by him presented to the late Duke of Buckingham, the then Lord High Admirall of England. Printed by G.M. for John Bellamy, London, 1644 (1st). 4to, 14.5x10.5 cm, viii, 118, (10) pp. Facsimile: Scolar Press, Menston, 1972. Printed from a manuscript written between 1620-1623. Other editions: 1666, 1667, 1670 and 1675-82.

The third most influential dictionary in the history of English seamanship is William Falconer's

An Universal Dictionary of the Marine: or, a Copious explanation of the Technical Terms and Phrases employed in the Construction, Equipment, Furniture, Machinery, Movements, and Military Operations of a Ship. Illustrated with Variety of Original Designs of Shipping, in different Situations; Together with separate Views of their Masts, Sails, Yards, and Rigging. To which is annexed, a Translation of the French Sea-Terms and Phrases, collected from the works of Mess. Du Hamel, Aubin, Saverien, &c. T. Cadell, London, 1769 (1st). 4to, (440), 12 plates. First published in General dictionary of arts and sciences, London, 1765-1766. Other editions 1771 (2nd), 1776 (2nd), 1779 (4th), 1780 (4th rev.), 1784 (5th), 1787 (6th), 1789 (7th), 1802 (8th rev.). See also J.W. Noire 1804, and William Burney 1815. Reference: AW 1039; Maggs Cat. 654: 2355; Scott 342.

The oldest Croatian maritime dictionaries are of a much later date. Auguste Jal's multilingual Glossaire Nautique (1848) can be regarded as the first multilingual nautical dictionary. Among twelve Mediterranean languages it contains Croatian entries, with a total of 220 Croatian maritime lexical units. Jal's glossary was extended on a systematic basis in a recent project 'Proposal for an Historical Dictionary of Mediterranean Nautical Terms' guided by A. Hartley (www.d.umn.edu/~ahartley/Proposal_intro.html.

Other Croatian monolingual or multi-lingual maritime dictionaries relevant to this study are listed in the bibliography under Mikoč (1852), Babić (1870, 1875, 1878 & 1901), Crnić (1922), Brodska Nomenklatura (1951), Građa za pomorsku terminologiju (1955), and Vidović (1985).

It may be noted that, in line with the lexicographic practice of the time, all the above dictionaries were multi-lingual (except the last two) and frequently thematically arranged.

3 LANGUAGE CONTACTS IN THE HISTORY OF CROATIAN MARITIME TERMINOLOGY

Language contacts, both direct and indirect, have strongly influenced the development and growth of Croatian maritime terminology. The history of Croatian maritime language and terminology can therefore be divided into three major periods or, more exactly, trends: (A) early growth and establishment of genuine maritime vocabulary in Croatian, persisting and extending to the present time, (B) centuries-long period of language contacts with Italian, and (C) the more recent period of contacts with maritime English (Pritchard 1999a).

Trend A extends from the sixth to eighth/ninth century AD to the present date, and includes (i) the (pre-settlement) paleo-Slavonic era before the 6th cent. AD, (ii) settlement of Croatian tribes on the Adriatic Sea (6th to the 8th cent. AD), contacts with Greek (first in the Trans-Carpathian region and subsequently on the mainland and islands of the Adriatic Sea).

Trend B features intensive direct contacts and borrowings from maritime Italian. It started with the first Croatian settlements (6th to 7th cent.), had a strong impact on Croatian maritime language and terminology, and has been fading away, especially since the end of World War I).

Trend C – an entire century of ever increasing English-Croatian maritime contacts – can be sub-divided, in accordance with the periodical development of Croatian maritime lexicography and terminography, into four stages: (1) early contacts (before 1914), (2) occasional contacts in the period before World War II, (3) World War II, and (4) the post-war period of contacts growing in quantity and intensity. All these stages are clearly reflected in the history of Croatian maritime lexicography and terminology.

The beginnings of English and Croatian language contacts in the maritime trade and general seamanship are difficult to trace. However, the first English and Croatian contacts can be positioned somewhere in the late sixteenth and early seventeenth century (Luetić 1977). In addition, the Dalmatian/Croatian Coast and some towns along the Croatian Adriatic are mentioned in some Shakespeare's works (The Tempest, etc.) and other English poets in the sixteenth and seventeenth century. Dubrovnik's galleons were the first Croatian ships to call in English ports, notably London, and there is some evidence of the early presence of Dubrovnik's shipmasters/shipowners and tradesmen in England. They were mainly engaged in the carriage of Hampshire kersey2 in the crosstrade from England to Dutch ports. This, therefore, may be one of the first English words to have entered the spoken language of Dubrovnik's tradesmen and Croatian maritime vocabulary. On the other hand, the word argosy, the English name for the best known type of Dubrovnik sailing vessels of the time, provides the first linguistic evidence of the existence of the earliest language contacts between Dubrovnik and England and therefore represents the first trace of Dubrovnik's presence in England.³

Other evidence of early linguistic contacts between Croatia and England belongs to the field of shipbuilding and ports. Thus, the word *berton*, a type of English sailing vessel calling at Dubrovnik and other Adriatic ports during the 16th-17th century, is among the first English maritime words known to be imported into Croatia (Luetić 1977).

Inscriptions on the reliefs in Dubrovnik and Korčula in the 15th and 16th century indicate the occasional presence of English ships and tradesmen, noblemen, soldiers and other dignitaries on the Croatian Adriatic. This is evidenced by the words *king* (*kyng*) and *mercy* inscribed in the Latin text on a 15th century bronze stand in the Dubrovnik cathedral, cf.:

HENRICE MEMENTO QUIA MORIERIS KYNG. IHESU MERCY.

Cvito Fisković (1977: 166) explains the inscription as probably relating to king Henry VIII. These instances are described in the book *Dubrovnik's Relations with England* (Filipović 1977).

As shown above, the history of the English element in the Croatian maritime language can be studied by analysing the development of the Croatian monolingual, bilingual and multilingual lexicography. They invariably reflect three processes:

- a) lexical borrowing
- b) lexical change and adaptation
- c) sociolinguistic impact of the foreign (English) element on the Croatian maritime vocabulary and language.

The study of the English element in maritime Croatian reveals the following features of the English-Croatian contact on the lexical level:

English words appear (a) as headwords on the left-hand side of Croatian-English dictionaries and (b) as translation equivalents in English-Croatian dictionaries.

The form of these lexical units follows two principles:

 $^{^2\,}$ kersey "a kind of coarse narrow cloth woven from long wool, usu. ribbed" (NODE).

³ argosy "a large merchant ship, orig. esp. from Ragusa (now Dubrovnik) or Venice. Etymology prob. It. Ragusea (nave) Ragusan (vessel)" (*NODE*).

- (i) the original orthography and
- (ii) orthography resulting from phonological adaptation in Croatian

the process of adaptation (phonological and morphological) of the English element in Croatian is not uniform, though three stages or degrees of adaptation can be traced: (a) zero adaptation (code-switching, etc.), (b) partial adaptation (the word form retaining elements of donor and borrowing language), (c) complete adaptation (process of adaptation more or less completed; the word is integrated in the Croatian phonological / orthographic and morphological system).

In the analysis of Stage 1 (early contacts, 1852-1914), the following dictionaries were studied⁴:

Rječnik Rukokretni (Ship Handling Dictionary), the first Croatian maritime dictionary compiled in manuscript by J.A. Mikoč in 1852, published a century later by B. Jurišić (1958), and

Riečnik morski ('Dictionary of Sea Terms') by Božo Babić published in 1870 – the first published Croatian maritime dictionary.

As expected, the analysis shows the prevailing presence of italianisms in Croatian maritime terminology. Only two anglicisms were listed as headwords: koter ("cutter"), via Italian cottero, and vinchs ('winch'), obviously a misspelling of winch (Cr. 'mlinčić'). It is difficult to account for the plural form of the latter unless this, too, is a printing error. The two words have survived to present time but the distribution of their usage shows different patterns. The word winch (spelt today as 'vinč' and pronounced /vintS/) is restricted to spoken maritime Croatian whereas *cutter* (spelt today as kuter and pronounced /kuter/) underwent semantic change by specialising its meaning to "a yacht, sailing craft for pleasure" restricted in use today to elderly generations, the alternative terms being krstaš ("racing yacht", lit. "cruiser") or *jahta* ("sailing boat used for pleasure"), also extending its meaning by depreciation ("luxurious"). The English element, however, was not confined to dictionaries only. It could be traced in other lexicographic and lexicological works (terminological studies, glossaries, lists of terms, etc.) and technical writings (handbooks, manuals on nautical and other maritime topics), e.g.: bum, log-plavčica, pičpajn ('boom', 'speed-log', 'pitch-pine').

In Stage 2 (beginning of the 20th century until World War II) the number of anglicisms rose significantly due to increased sailings from the Adriatic to Northern Europe and America, and because of the expansion of British and American shipbuilding, and shipping industry and expertise. Thus the Croatian - German - Italian Maritime Dictionary (Pomorski rječnik) published in 1922 (Crnić 1922) introduced fourteen new English maritime terms in its headword list: bum, log, derić, dok, ekonomizer, kingstonov ventil, kingston, kuter, lubrikator, mesender, slip, slipdok, špring, škuna, i.e. phonological and morphological adaptations of the citation forms 'boom', 'log', 'derrick', 'dock', 'economizer' (in steam engines), 'Kingston valve' ('sea valve'), 'cutter', 'lubricator', 'messenger' (line), 'slip'(way), 'slip dock', 'spring' (i.e. a mooring line), 'schooner'. The pronunciation /'Skuna/ for *schooner* most probably comes from a combination of the German and English pronunciation and also reflects the so-called feminine tendency in the morphological adaptation of English words in Croatian. The metonymous term kingston, an elliptical form in Croatian for Kingston(ov) ventil, represents a pseudo-anglicism (there is no term in maritime English such as Kingston('s) valve) and is used in Croatian as an appellative noun, deriving its form from the proper name (Kingston) for the manufacturer of sea or inlet valves. Metonymy and ellipsis seem to be a frequent feature in the process of linguistic borrowing from English Croatian: other examples of metonymy are / mek'gregor/ for hatch covers (from 'hatch covers' made by McGregor Co.), /pa'tSeko/ 'Paceco' from Paceco container gantry cranes, etc).

The importation of English naval terms continued in Stage 3 (World War II). Thus such terms as *komodor*, *konvoj*, *radar*, *sonar* and *kruzer* ('commodore', 'convoy', 'radar', 'sonar', 'cruiser') were imported and integrated phonologically and morphologically. The Croatian spelling partly follows L1 pronunciation, whereas the pronunciation in Croatian is an adaptation from the English orthographic form (*komodor*). These terms also became lexicalized and were found in the post-war dictionaries, nautical wordlists, glossaries, textbooks, nautical journals, as well as in the ordinary press.

The most recent period, from the Second World War up to the present date (Stage 4), is characterized by a continuous inflow of English

⁴ The study also includes Croatian maritime terms found in A. Jal's multilingual *Glossaire nautique* in 1848 (Jal 1848).

maritime terms into Croatian. This, in the case of the presence of the English element in maritime Croatian, is the result of indirect contacts through trade and 'cultural conquest' (Carnie 2000: online), i.e. modern transport technologies, communications, and information science, rather than direct contacts through bilingualism as in some instances of Italian-Croatian contacts. Whole lexical sets with items belonging to the same maritime-related semantic field were imported and underwent various degrees of adaptation. As a result, numerous terms were inserted in the macrostructure of maritime dictionaries and maritime wordlists published in the nautical journals and periodicals in the 50s and 60s, etc. These include electronic navigation systems (arpa, Consol, Loran, racon, radar, ramark, satnav, transponder), the marine and shipbuilding technology (koper 'copper-paint', koferdam 'cofferdam', slip propelera 'slip of the propeller', ejector 'ejector', monitor, balsa, barel 'barrel', bilge, bulbasti pramac 'bulbous bow', lift (elliptic form of 'fork lift truck'), sprinkler sistem 'sprinkler system', Liberty-brod 'Liberty-ship', dingi 'dinghy', vinč 'winch', lok 'lock', ston 'stone', shifting boards, etc.), maritime law and economics of shipping (as fast as can, at shipper's risk, Act of God, cesser clause, delivery order, demurrage, freight, forward, no cure-no pay, broken stowage, port authority), maritime communications (satcom, scanner) etc. The examples show various degrees of interference, adaptation and occasional integration of the English element into the Croatian language, ranging from instances of code-switching (both in speech and writing), partial adaptation to full integration. The new words from English had the important function of filling the gaps, referential and lexical, arising out of the improvement and recent achievements of shipping and transport technology, communications, and electronic navigation. In the technical vocabulary used by the officers and ordinary seamen on board Croatian ships and in ports (i.e. nautical terms and terms pertaining to general seamanship, marine diesel engines, human relationships on board, basic maritime law, etc.), there has been a constant presence of a specific terminological di- or even tri-glossia, a frequent co-existence of two or three terms (of different origin) for one and the same concept, each of these fulfilling a particular cognitive and sociolinguistic function:

(i) the standard Croatian term (used for scholarly purposes, taught at nautical or maritime schools, academies and colleges; reluctantly used in spoken communication on board)

- (ii) an Italian loan-word adapted from nautical Italian or some Italian local dialects through direct and indirect contacts (used predominantly as a term of preference in ordinary spoken communications on board and ashore for the more essential nautical, ship construction and general seamanship concepts; considered nonstandard and often strongly discouraged, especially from the 1950s to the 1970s.
- (iii) an English maritime loan-word, borrowed and adapted from nautical English through direct contacts and recently through both direct and indirect contacts. Such terms have gained a high status of lexicalisation in Croatian and are being increasingly introduced in contemporary dictionaries despite occasional purist tendencies in Croatian language policy.

The wordlists from various modern, post-Second World War lexicographic works and sources⁵ reveal further intensive penetration of English maritime terms into both written and, on a much larger scale, spoken maritime Croatian, especially in the fields of shipbuilding, marine electronics and communications, marine engineering, shipping technology, maritime-related IT, maritime law and shipping (e.g. bunker, špring/spring, lanča/launch, radar, jib, trim, trimming, muring/mooring, genaker/gennaker, cunningham, vang, štoper/stopper, treveler/ traveller, antifauling/anti-fouling, impeler/impeller, *čarter*/charter, abbreviations *MMSI*, ETA, ETD, IMDG, etc.). However, the modern Croatian maritime dictionaries, monolingual and bilingual, tend to insert only phonologically and morphologically adapted terms into their wordlists.

Following the sections above, it can be concluded that the professional / technical vocabulary and the spoken language of the Croatian seafarer has, over the last sixty years, been a mixture of core Croatian terms, Italian loanwords, increasingly recurrent English loanwords, vested in a language policy recommending the use of standardised maritime vocabulary based on the genuine terminology which has

⁵ Cf. *Pomorska enciklopedija* (Croatian Maritime Encyclopaedia), Zagreb, Jugoslavenski leksikografski zavod "Miroslav Krleža" (1972-1989)

Rječnik pomorskog nazivlja (Croatian-English Dictionary of Maritime Terms) (M. Urbany ur.). 1991, Zagreb, Školska knjiga B. Pritchard (2012) An English-Croatian Maritime Dictionary. www.pfri.uniri.hr~bopri

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Croatian websites and blogs on yachting, racing, shipping, marine technology, etc. (e.g. www.Nautica-Portal.com, etc.)

been systematically compiled over the past five decades in the Croatian seaside provinces. This can be shown in the example of line handling terms: 'head line': provijera (sailors' jargon, from dialectal Italian 'prodiera') and pramčani konop (standard Croatian); 'breast line': tresina (It), bočni konop (Cr); 'spring': špring /spring/; 'single up': single up (English form used exclusively, Croatian pron. /"singel 'ap/). A sample of lexical borrowings from English into maritime Croatian is given in the link English loanwords in maritime Croatian on the author's web page www.pfri.uniri.hr/~bopri where English loan-words are compared with a list of English and Italian loan-words in modern Greek compiled by Alan M. Hartley (www.d.umn. *edu*/~*ahartley*).

4 LEXICAL CHANGE

This study examines the presence of the English lexical element in maritime Croatian as recorded in available lexicographic works, notably dictionaries and terminological works published in technical (maritime/nautical) periodicals, textbooks and manuals in Croatia. The study revealed a high and growing presence of anglicisms. Thus, in the journal *Pomorstvo* (1960-1975) a total of 638 different anglicisms were recorded. The word *container*, with its many variations of form in Croatian is the most frequent English loan-word (over a thousand occurrences). This is followed by such basic items as *deadweight*, *radar*, *tanker*, *bulk carrier*, *dock*, etc.

Lexical and semantic change are important topics in historical linguistics. Most changes arise out of sociolinguistic reasons but indirect contact-induced language changes are more relevant for the study of the English element in maritime Croatian. The English-Croatian contacts were studied in Croatia under a major research project guided by Rudolf Filipović: "The English Element in European Languages" (Studies and Reports), cf. Filipović 1990, 1991 and 1996.

The English lexical element has contributed to the growth and development of Croatian maritime vocabulary and has at the same time been subjected to changes. As in any case of language contact on the lexical level, two processes can be discerned in this study: (a) lexical innovation, enrichment, i.e. appearance of new words through borrowing, calquing under for-

eign language influence, and creation of new words and development under L1 influence, and (b) disappearance of old/new words due to obsolescence, avoidance of homonymy and taboo (cf. Stump 2000). Here we shall deal with some changes on three levels: phonological, morphological and semantic.

4.1 Phonological change

On the phonological level, contacts are both direct and indirect. The earliest contacts (late 19th and early 20th century) were only occasional and rarely direct, involving very few people, so only indirect contacts will be considered here, i.e. those occurring through cultural, technological, and civilisational interference. Contacts on this level are difficult to trace with great reliability, as the adapted phonological forms mainly follow the orthographic form, or the so-called spelling pronunciation. In the history of Croatian there were two orthographic tendencies in importing foreign elements:

- etymological orthography, with a much longer history within the general language; it has been particularly practised over the last three decades, and
- sound-based writing system (term adopted from Singleton 2000: 141) following the phonological principle (a single symbol/letter for one phoneme).

The major causes of phonological change in the maritime terminology studied are: language contact, differences in the two phonological systems, which affect the ease or difficulty of learning, and imperfect learning. The study of the corpus material reveals that the theoretical framework of contacts established for the general vocabulary is also applicable to the specific lexical change in English-Croatian language contacts.

Three degrees of change are present on the phonological level: complete, partial and free transphonemisation, i.e. replacement of an English with a corresponding Croatian phoneme. The extent of change depends on the similarities and differences of the two phonological systems.

Complete transphonemisation with very little change (save for phonetic features exhibiting a lower degree of distinctiveness in Croatian, e.g. aspiration, plosiveness etc.) is evidenced in the case of English vowels, e.g. bikon, pik, voki-toki,

cif, marinci ('beacon', 'peak', 'talkie-walkie', 'Chief', 'the Marines'); derić, feri, feribot, trend, spreder (derrick, ferry, ferry-boat, trend, spreader); balker, damping ('bulker', 'dumping'); order, suport (order, support); bum, monsun ('boom', 'monsoon'). Similar rules are valid for the transphonemisation of most consonants. Even a superficial survey of the examples given here will show that in some instances transphonemisation is based on the rules of direct contact or through learning (bikon 'beacon', pik 'peak'), whereas in other cases orthographic pronunciation or orthographic transfer prevails and it is in these examples that adaptation is complete and integration is possible.

In the process of partial transphonemisation, where significant differences apply to the phonetic features of the phonemes between English and Croatian (articulation, position, opening, etc.), following the principle of pronunciation and orthography, the English phonemes are replaced with the closest Croatian vowel phonemes, e.g. menadžer 'manager', balkerijer 'bulkcarrier', hendikep 'handicap', tanker 'tanker'; barter 'barter', target 'target', marker 'marker', čarter 'charter'; boks 'box', dok 'dock', doker 'docker', plotter 'plotter'; buking 'booking', čartrum 'chartroom'. Instability in the forms of transphonemisation (cf. English /æ/ into Croatian /e/ or /a/) may be attributed to dialects or even idiolects in the transfer of English words into the Croatian maritime vocabulary, but orthography still remains the main source of adaptation.

A number of English phonemes have no counterparts or are non-existent in the Croatian phonological system. In this case free transphonemisation applies and involves central vowels: /ə/ and / ə: / (bojler 'boiler', čarter 'charter', tanker 'tanker'; fertilizer 'fertiliser', inert plin 'inert gas', terminal 'terminal'). The examples shown here almost invariably follow the orthography of the original and yield syllables /-er/ and /-er-/ in Croatian. Fidelity to the original orthography has been a recent trend due to higher exposure to English language and to improved education. The diphthong /ei/ is rendered in Croatian diphthongs /ej/: /kon'tejner/, /dis'plej/, /'dedvejt/ - 'container', 'display', 'deadweight', or reduced to vowels /e/ /kon'tener/) and /a/ /'radar/, /ope'rator/, proving again that more frequent words are likely to cause difficulties in phonological adaptation through diversity of use and users.

Often, the most frequent words are likely to cause a great deal of difficulty offering a

number of phonological renderings in Croatian. The word *container* has the following written and pronunciation forms for the stressed diphthong /ei/: *kontejner, kontajner, container* /kon'tainer/, *konteiner, kontener, kontenjer*/, here ordered according to frequency. The first one is today accepted as the standard form thus introducing an innovative medial consonant group or cluster /jn/ into Croatian.

4.2 Morphological change

Morphological change in the English-Croatian maritime language contacts resembles very much and follows the rules and patterns of the changes in general language borrowing.

4.2.1 Nouns

Source language nouns normally retain their citation form when used in maritime Croatian and occur as a free morpheme. These are the examples of zero transmorphemisation or primary adaptation (derrick, fathom, hatch, pier, shelf) where the original orthography of the model noun is retained. The adaptation is facilitated by the fact that in some nouns the orthography is the same (bar, bark, drift, flat, slip, slop, spot, star, trend, trim) or similar (boks 'box', brik 'brick', fiks 'fix', dok 'dock') in both languages. Citation form endings in '-i', '-y', pronounced /i/, and the final consonantal groups '-lb', '-ft', '-nč' /nÍ/, 'mp', and '-nd' are specific phonological innovations in Croatian, cf.: dingi 'dinghy', feri 'ferry', Liberty (ship), Victory (ship); bulb, snajp 'snipe' (sailing boat), drift, inč 'inch', tramp, trend (complete transmorphemisation). Some of these are liable to secondary adaptation by contamination, i.e. suffixing the Croatian bound morpheme '-aš' (libertaš 'Liberty ship', linijaš 'cargo liner'), '-ac' (finac 'Finn'), '-ov-ina' (tikovina 'teak').

In the adaptation of gender in maritime Croatian, the masculine tendency prevails and in this respect reflects the same type of change valid for English nouns in general Croatian (cf. Filipović 1996). This is the result of the different nature of the category of gender in the two languages (natural vs. grammatical gender) and because the imported words predominantly denote objects and concepts rather than persons, professions etc. In the process of transmorphemisation, as a rule, neuter nouns become masculine in Croatian (kontejner, spreder, špring, štoper, kliper). Although no importation of English femi-

nine gender nouns was recorded, in the course of secondary adaptation a number of English neuter nouns receive the Croatian feminine gender suffix '-a': baksa 'box', dredža 'dredge', džunka 'junk' (a Chinese sailing boat), ganga 'gang' (a group of dockers), jahta 'yacht', koferdama 'cofferdam' (a partition space in a ship), marka 'mark' (sea marks such as buoys, lights, etc.), pulpa 'pulp', ruta 'route', konzola 'console', škuna 'schooner', lanča 'launch', fajla⁶ 'file'. This tendency was highly pronounced in the beginning of the contacts (early 20th century).

In a few nouns the category of number results in redundant plural marking, i.e. Croatian plural endings (e.g. '-i') are added to the English plural forms, e.g.: brokersi, containersi (in writing only), fidersi 'feeders', incotermsi 'Incotermsi', windowsi . The same holds for the nouns involving the change of the root-vowel ('-man' - '-men'): barmeni 'barmen', pumpmeni 'pumpmen', vinčmeni 'winchman', vočmeni 'watchmen', in spoken maritime Croatian.

4.2.2 Verbs

Verbs are rarely borrowed from English into maritime Croatian. In the second adaptation the Croatian infixes are inserted into the infinitive form, i.e. '-ira-' (balastirati 'ballast' (carry in ballast)), bunkerirati 'bunker' (take in fuel), bukirati 'book' (cargo space in a ship), čartirati 'charter', dragirati 'drag', konvojirati 'convoy', kontejnerizirati 'containerize', markirati 'mark', plotirati 'plot' (a ship's position on a chart), stokirati 'stock' (goods), kotirati (quote prices), '-ova-' (dokovati, trimovati, plotovati 'to dock', 'trim', 'plot'), or, rarely, '-a-' (trimati 'to trim', boksati 'tug's bow pushing against the ship's side'). The frequency of occurrence of this limited number of verbs is, however, high.

4.2.3 Affixation

Though few in number, the occurrence of some Greek or Latin suffixes through English ('anti-', 'super-', 'non-', 'semi-', 'sub-', 'trans-'), is comparably high in maritime Croatian: *super-tanker, super-kargo* 'super cargo ship', *superin-tendant* 'super-intendant', *super-tajfun* 'super-typhoon'; *antifauling* 'anti-fouling paint', *transatlantic* 'transatlantic liner', *subčarter* 'sub-charter').

4.2.4 Composition

The most significant features of English – Croatian maritime contacts on the compositional and syntactic level can be studied in the field of the syntax of the noun phrase and the collocational range of certain nouns and verbs. This study involves both noun composition, multi-word lexical units and word formation and can therefore combine the morphological, syntactic and lexical levels. The most prominent feature in nominal composition within the English-Croatian maritime language contacts is the attributive use of the noun in primary adaptation, in which an English word represents the first (i.e. attributive element) and the Croatian word the second element of a compund noun: kontejner brod/container ship, loran uređaj/loran navigator, slop nafta/slop oil, sprinkler uređaji 'sprinkler system', input-output analiza 'input-output analysis', off-shore objekti 'offshore facilities', door-to-door servis 'door-todoor service', cash plaćanje 'cash payment', futržište 'futures market', cross-trade brodarstvo 'cross trade shipping', etc. The noun brod ('ship') is most frequent as the second element in such hybrid compounds. Though extraneous to the general principles of word composition and the syntax of nouns in Croatian, such compounds and multi-word nouns (attributive noun + headword noun) have proved to be very frequent and productive over the last thirty years, e.g. noun + noun compounds (paket mjera 'measure package', tržište budućih zaključaka 'futures market') and verb + object noun collocations (pokriti rizik 'cover the risk').

Other instances of morphonological change of English words in Croatian include: acronyms (radar, sonar, scuba), blends (ro-ro, satcom, satnav, hazmat), derivational compounding (panamax, aframax, suezmax), etc.

4.3 Semantic change

Semantic changes in the history of English and Croatian maritime contacts include semantic extension, narrowing, ellipsis, loan translation, metonymy and pejoration. Pejoration and semantic borrowings are only sporadic. Borrowing English maritime terms into Croatian has been motivated by the general rule valid for most language contacts, i.e. need to nominate and denote new or innovative things and concepts (cf. Weinreich 1968, Thomason 2001), in particular by the lack of a native word, desire for a more technical expression and, to a much

⁶ Pronounced recently in the same way as the English word *file* under the influence of IT

lesser extent, desire for more prestigious terms. In the case of English-Croatian maritime contacts, these terms were developing in different technological and civilisational settings, leading in many instances to lexical interference.

In addition to the examples discussed in 4.1 and 4.2, the types of semantic change are exemplified here by some of the more frequent loanwords. The word container (a vessel, box, cask, carton, bottle, tank, etc., for holding particular things) is restricted in maritime Croatian in number of senses and refers only to: a large boxlike receptacle of standard design, usu. 20 or 40 ft in length, for the transport of goods, esp. one readily transferable from one form of transport to another, cf. COD, CED). In the secondary adaptation, however, through ellipsis of container vessel, the same word has expanded its meaning into a 'ship carrying containers', particularly in spoken maritime Croatian. In maritime as well as general Croatian tanker denotes a ship principally designed for carrying crude oil, whereas in maritime English tanker is a 'genus proximum' term, and compounds are used to express more specific kinds of tankers (e.g. oil tanker, chemical tanker, product tanker etc.). Another example is the loan-word dok (dock) – 1 an artificially enclosed body of water for the loading, unloading, and repair of ships. 2 (in pl.) a range of docks with wharves and offices; a dockyard. 3 US a ship's berth, a wharf. 4. dry dock). Here, by means of semantic narrowing, only meaning No. 4 was first transferred into Croatian. Later, in secondary adaptation, the meaning was further narrowed through ellipsis to denote a 'floating dock'.

Ellipsis is a frequent form of semantic change of English loan words in maritime Croatian. Examples are: liner pronounced /'lajner/ ('cargo liner'), liberti – libertaš ('Liberty ship', after Croatian linijaš, krstaš 'liner ship', 'cruise ship', etc.), feeder where the second element of the compound, i.e. ship, is left out giving rise to the semantic expansion of the first. The word koper (copper) extended its meaning in the secondary adaptation to denote <special anti-fouling paint for the ship's bottom> through ellipsis of copper paint, and is used today in spoken general Croatian (e.g. dao sam dvije ruke kopera = 'I applied two coats of copper paint'. The word lift, an anglicism in the spoken variety of Croatian, has widened its meaning in maritime Croatian through ellipsis of fork lift truck. The

word *docker* has undergone a certain degree of pejorization of meaning in the Croatian *doker*, which is not evidenced in maritime English. Therefore the Croatian equivalent for the English *docker* is the sociolinguistically unmarked *lučki radnik* and not the loan-word *doker*, which in Croatian is only used for the purposes of stylistic expression (i.e. deprecating connotation).

Semantic borrowing is evidenced mainly in the Croatian words of Latin or Greek origin which have changed their meaning under the influence of English. The meaning of the Croatian word konferencija was extended through ellipsis of liner conference to denote a shipowners' pool on a certain shipping route or line. The same holds for the Croatian term industrija, extended in meaning, under the influence of English, to a more generic term, i.e. 'any branch of economy' (e.g. brodarstvo 'shipping industry', otpremništvo 'forwarding industry'), quite different from the traditional, more specific meaning of industrija ('steel/heavy industry').

5 CONCLUSION

The study of the corpus shows a continuous and constantly growing process of lexical borrowing of English maritime and sea-related words into the Croatian maritime vocabulary throughout the history of contacts between maritime English and maritime Croatian, particularly over the past fifty years. This is a feature also corroborated by the presence of English nautical terms in other maritime nations (French, German, Italian, Greek etc.,) as shown in Supplement 1.

In addition to lexical borrowing on the phonological, morphological and semantic level, the analysis also emphasises high pragmatic relevance of the sociolinguistic aspect of linguistic contacts in the history of maritime Croatian. Therefore, a diachronic study of maritime vocabulary is both necessary and useful in the compilation of any future monolingual or bilingual maritime dictionary.

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⁷ Adapted from *CED*.

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