The research aimed to analyse the language of publication of journals classified under humanistic sciences (humanities) at Hrčak, the portal of scientific journals of Croatia. As for their scopes, the journals were categorized into mono-disciplinary, intra-area and inter-area ones. Most journals allocated to the humanistic sciences were published either exclusively or mainly in Croatian, and English appeared to be the second most frequent publication language. The yielded results point to two directions in Croatian scientific journals in terms of the publication language. On the one hand, they aim to the international dissemination of the research results, which implies that the articles are published in English or some other widespread language. On the other hand, cultural traditions should be preserved, and one way of doing so is to publish in the standard Croatian language. Interestingly, containing articles written in English did not prove to be a factor for the inclusion of journals in the Web of Science (WoS). Ultimately, the language of the journals’ titles of the three scope categories was scrutinized for both the whole sample and the subsample of journals indexed in the Web of Science. In both cases, the predominance of the journals’ titles in Croatian was evident.
1. Introduction

1.1. Publication language in scientific work from 15th to 20th century

For centuries Latin was, although not exclusively, the language of science. As an illustration, in the 15th and 16th centuries, Nicolaus Copernicus wrote predominantly in Latin. In the 16th century, Giordano Bruno also wrote his works in Latin, but Francis Bacon wrote both in English and in Latin. René Descartes wrote Discours de la méthode (1637) in French and Principia philosophiae (1644) in Latin, and Sir Isaac Newton published Philosophiae Naturalis Principia Mathematica (1687) in Latin. In the 17th century, Galileo Galilei wrote his works almost exclusively in Italian, whereas Robert Boyle wrote predominantly in English (e.g. The Sceptical Chymist in 1661). Immanuel Kant published, for example, De mundi sensibilis atque intelligibilis forma et principiis¹ (1770) in Latin and Kritik der reinen Vernunft² (1781), Kritik der praktischen Vernunft³ (1788) and Kritik der Urteilskraft⁴ (1790) in German. Hegel wrote in Latin, but he also put a lot of effort “to find for the German language appropriate terminology and a feasible encyclopaedic path to absolute philosophy and science” (Barišić 2019: 43). In the 18th and 19th century Johann Carl Friedrich Gauss wrote mostly in Latin, but also in German (e.g. Untersuchungen über Gegenstände der höheren Geodäsie⁵ first published in 1843/1844). In the 19th century André-Marie Ampère wrote in French, Charles Darwin and Michael Faraday wrote in English, and Dmitri Mendeleev published his Osnovy khimii⁶ (1869) in Russian. In 1920 Marie Curie wrote Traité de radioactivité⁷ in French. Niels Bohr – the Nobel-prize winning physicist in 1922 – wrote in Danish, German and English, Albert Einstein wrote in German, Erwin Schrödinger in German and English (and to a much lesser extent in French), etc. According to Ammon (2012: 338), the amount of academic output in English in the natural sciences all over the world has been continuously rising ever since 1880, whereas the number of publications in French has constantly decreased from the same year, and the number of publications in German and Russian briefly increased in 1920 and 1970, respectively – however, it diminished perpetually until the year 2005 (the final year included in the analysis).

¹ The Form and Principles of the Sensible and Intelligible World
² Critique of Pure Reason
³ Critique of Practical Reason
⁴ Critique of Judgement
⁵ Research on Objects of Higher Geodesy
⁶ Foundations of Chemistry
⁷ Treatise on Radioactivity
As for the publication language practice of some Croatian scientists from the 16th century onwards, the book *Machinae novae Fausti Verantii Siceni cum declaratione Latina Italica Hispanica Gallica et Germanica* written by the Croatian inventor, engineer, linguist and bishop Faust Vrančić (1551 – 1617) was published approximately in 1615 or 1616 with texts and descriptions of pictures, as the title says, in Latin, Italian, Spanish, French and German, and his other works chiefly in Latin. The Croatian mathematician, physicist, astronomer and philosopher Ruđer Bošković (1711 – 1787) wrote predominantly in Latin. Lavoslav (Leopold) Ružička (born in Vukovar, Croatia; 1887 – 1976), the Nobel Prize Winner for Chemistry in 1939, published his works in German, English, French, and Croatian. An intricate network of factors (which will not be discussed here) occurring during the first half of the 20th century will ultimately lead to a plethora of works (be it articles, books, proceedings, etc.) being published in English.

### 1.2. Publication language in scientific work – the present time

After many scientists have researched the topic of English being used as the dominant language of international scientific discourse (e.g. Ammon 2001; Belcher 2007; Bocanegra-Valle 2013; Chien 2019; Cianflone 2014; Di Bitteti & Ferreras 2017; Ferguson 2007; Flowerdew 1999a, 2007, 2008, 2019; Hultgren 2019; Hyland 2009; Jenkins 2011; Pérez-Llantada 2012; Strauss 2017; Swales 1997; Tardy 2004, to mention a few), the statement that the majority of academic writing is nowadays written in English both by native and non-native speakers of English sounds like reinventing the wheel. That English has become a *conditio sine qua non* in scientific output is substantiated over and over again by many investigations. Already more than two decades ago Swales (1997) posed a question as to whether English is becoming too triumphant, i.e. too successful, at the expense of other languages. Nowadays we know that he was not very wrong to ask that question.

Before the further survey, a brief description of the *Web of Science* and *Scopus* is provided. The *Web of Science* (WoS) – formerly known as the *Web of Knowledge* – is an online citation database originally produced by the Institute for Scientific Information, then maintained by Thomson Reuters, and nowadays by Clarivate. The *Web of Science Core Collection* is a resource on the *Web of Science* platform, and it contains over 21,100 peer-reviewed scholarly journals from all over the world (Clarivate 2021a). The policy of including in the database only those articles written, for example, predominantly in English, but also to a lesser extent in French, German or Spanish was largely criticized by many scientists, which led to the shift in publication

policy in that the journals in which articles are written in the so-called minor langu-
ges also started to be included in the database. Consequently, nowadays, in WoS, more
documents are indexed than in Scopus in Spanish, Portuguese, Croatian, Catalan, Italian,
Malay, Norwegian and Turkish (Vera-Baceta et al. 2019). Apart from the three already existing
citation indices – Science Citation Index Expanded, Social Sciences Citation Index and Arts & Humanities Citation Index, another index, namely, the Emerging Sources Citation Index (ESCI) was created in 2015 and included journals in retrograde from 2005. Thus, on 25 January 2016 it contained a total of 2,589 journals (Macan 2016), some of them from Croatia: Analiza voda za povijesne znanosti hrvatske akademije znanosti i umjetnosti u Dubrovniku8, Fluminensia9, Libri et Liberi10, Medijske studije (Media Studies) and SIC11 among others.

Nowadays this database contains journals that are in the process of Clarivate Analytics initial editorial evaluation selection for the inclusion in their citation databases, and it is accessible through the Web of Science interface (Nacionalna i sveučilišna knjižnica u Zagrebu 2012a). However, Somoza-Fernández, Rodríguez-Gairínand Urbano (2018: 200) report on two articles – one from 2015 (Repiso & Torres-Salinas 2015, in Somoza-Fernández et al. 2018: 200) and the other one from 2017 (Huang et al. 2017, in Somoza-Fernández et al. 2018: 200) – which stated that the journals included in this index were primarily from the USA, England, Canada, the Netherlands and Italy. Moreover, 81% of those journals were published in English and 7.8% in Spanish.

Another database mentioned in this text is Scopus. It was launched in 2004 by Elsevier (Pranckutė 2021: 1) and nowadays Scopus is “the largest abstract and citation database of peer-reviewed literature” (Elsevier B. V. 2021). It is a multidisciplinary bibliographic and citation database that indexes resources and comprises more than 23,700 peer-reviewed journals (Nacionalna i sveučilišna knjižnica u Zagrebu 2021b). In 1999, as many as 63 Croatian journals were indexed in this database (Hebrang Grgić 2020). In the year 2015 the number grew to 120 active journals – e.g. Fluminensia, Govor (Speech), Jezikoslovlje (Linguistics), Književna smotra12, Rasprave

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8 The English translation of the journal’s title cannot be found at Hrčak. Hence, the translation of its title into English is The Annals of the Historical Sciences of the Croatian Academy of Science and Arts in Dubrovnik.
9 Fluminensia is a journal for philological research.
10 Libri et Liberi is a journal that publishes articles on “various topics in the field of children’s literature and young adult literature, on their wider cultural contexts, and on their intercultural contacts in the fields of literature and the media” (https://hrcak.srce.hr/librietliberi).
11 SIC is a journal of literature, culture and literary translation.
12 The English translation of the journal’s title cannot be found at Hrčak. Hence, the translation of its title
Instituta za hrvatski jezik i jezikoslovlje\textsuperscript{13}, Slovo\textsuperscript{14}, Suvremena lingvistika (Contemporary Linguistics) from the area of philology. In 2018, the number increased to 172 (Hebrang Grgić 2020). Nowadays, documents written in Danish, Japanese, Persian, Swedish and Russian are indexed in Scopus, whereas they are scantily present in WoS (Vera-Baceta et al. 2019). Additionally, almost ten times more documents in Chinese are indexed in Scopus than in WoS (Vera-Baceta et al. 2019). According to van Weijen (2012), research of journals indexed in Scopus from 1996 to 2011 indicated that approximately 80\% of all the journals were published in English and that authors who wrote in their national languages (Dutch, French, German, Italian, Portuguese and Spanish) engaged more in the so called ‘soft’\textsuperscript{15} sciences (80\% for the Netherlands to approximately 60\% for Germany and Portugal).

López Navarro et al. (2017: 14) report that since October 2016 as many as 91.78\% of articles indexed in the Web of Science (WoS) has been written in English. Still, although English has been an unparalleled medium of scientific communication (cf. Burgess et al. 2014: 72) in such scientific disciplines as chemistry, biology, engineering, medicine and mathematics even since 1960s (Baldauf Jr. 2001: 144-145), many researchers continued to publish their work in their native languages. As stated by Solovova et al. (2018: 1), the selection of the language in which to publish one’s academic output is predominantly affected by social norms and conventions applied by various scientific communities. The study conducted by Engels et al. (2012) confirmed that the increase in the scientific output of humanities in English was on a constant rise until the end of the first decade of the 21\textsuperscript{st} millennium. Nevertheless, it seems that the publish-in-English-or-perish frenzy has, to a certain extent, circum-

\textsuperscript{13} The translation of the journal’s title into English was *Discussions of the Institute of Croatian Language and Linguistics*. Currently, the official title of the journal in Croatian is *Rasprave: Časopis Instituta za hrvatski jezik i jezikoslovlje*. The English translation of the journal’s title cannot be found at *Hrčak*. Hence, the translation of its title into English is approximately *Discussions: The Journal of the Institute of Croatian Language and Linguistics*.

\textsuperscript{14} The English translation of the journal’s title cannot be found at *Hrčak*. Hence, the translation of its title into English is *Letter* (as a character representing a sound) and it is published by the Old Church Slavonic Institute.

\textsuperscript{15} Classifications of scientific disciplines as well as the names for the groups of disciplines vary all over the world. The *soft sciences* – a term that is not used in the Croatian classification of sciences – are commonly conceptualized to deal with intangibles, suggesting that conditions in research cannot be fully controlled. Some examples of soft sciences are anthropology, archaeology, psychology, sociology (also referred to as *social/behavioural sciences*). In contrast to soft sciences, there are *hard sciences* – another term that is not used in the Croatian classification of sciences – where the conditions in an experiment can be completely controlled, and the predictions are testable. These sciences – also referred to as *natural sciences* – include astronomy, biology, chemistry, physics, etc.
vented the area which researches local, traditional matters – namely, the humanities. The predominance of national languages in arts and humanities, social sciences, etc. is attributed to the fact that subject matter in research is substantially of the local nature and therefore also culture-bound (Ferguson 2007: 17).

However, the well-established *centre/mainstream journals* and *periphery/small journals* dichotomy (cf. Guédon 2010; Marušić & Marušić 1999; Salager-Meyer 2008, 2014, 2015) – in which the names refer to both the geographical and economic position of the countries they originate from: developed/industrialized countries and developing/‘peripheral’ countries, respectively – has in the last several years become dubious. Publication in Chinese or South Korean could nowadays hardly be termed *peripheral* because research output in these two countries has risen dramatically (Kuteeva & McGrath 2014: 3). Additionally, two Nobel Prize Winners – Richard R. Ernst, who won the Nobel Prize for Chemistry in 1991, and Randy Schekman, who received the Nobel Prize for Medicine in 2013 – argued against citation indexes and academic ranking lists (Ernst 2010), as well as luxury journals as a guarantee of their excellence (Schekman 2013). In other words, in what is referred to as ‘periphery’ there is a vast realm of non-English publications emanating from non-English-speaking countries (Salager-Meyer 2014: 19).

Multifarious studies have been published related to the problems of minor journals and the ways of tackling these problems. Besides being written in local languages, thus consequently unattractive to a wider international scientific readership, there are other restrictive factors that put the small journals in an unfavourable position – a lack of financial resources, inadequate quality, lack of regularity, imperfect language, which ultimately leads to low submission of quality articles and low visibility (Marušić & Marušić 1999). Language-wise, such ‘small’ journals are inferior from the start. Needless to say, centre journals are written in English and often indexed in international databases, thus being more visible and more frequently cited. For example, approximately 80% of all the journals indexed in *Scopus* are published in English (van Weijen 2012).

In any event, this frequently implied that scientific work in the so-called ‘soft’ sciences and languages other than English was not always published in luxurious, internationally highly respected journals. Consequently, research results published in languages other than English might be undeservedly underestimated (Salager-Meyer 2008: 126) due to a small pool of scientists who understand the language in which those results have been written (Cianflone 2014: 54). Nonetheless, the publishing language phenomenon was and still is permeated by the visibility of scientists, research institutions, and scientific communities. Furthermore, the realm of visibility
and recognition of scientific output – prioritised by many scientists when searching for international recognition – was complemented by the impact factor. This statistic was introduced as a measure of journal quality. In 1955, Eugene Garfield wrote an article in which he discussed a system, i.e. a citation index “that offers a new approach to the subject control of the literature of science” (Garfield 1955: 108). It was in the year 1964 that Garfield’s Institute for Scientific Information published the first Science Citation Index, and in 1972 this bibliographer published the first journal impact factors (Garfield 1972).

This theory is based on the conceptualization that impact factors accurately measure the importance of a journal with respect to its users (Saha et al., 2003: 43). However, many scientists regard this index relying on the citation incidence of articles in a journal as only a putative measure of its quality (Saha et al. 2003: 42). Further, the impact factors for the journals indexed in the Arts & Humanities Citation Index are not even calculated. Hence, the impact factor is nowadays a controversial measure that has often been advocated for and frequently disputed since its appearance (cf. Pudovkin 2018).

The most crucial reason for the impact factor not to be a good measure of a publication is that it is an average of the citation counts for all the articles in one journal over two years. In other words, these statistics do not provide any information about the individual articles. It is well known that there are various ways to increase a journal’s citation rate. One of them is to publish review articles – systematic or meta-analysis based – of a particular topic and they are consequently cited more often than research articles (cf. Miranda & Garcia-Carpintero 2018). Hence, to say that the impact factor is an absolute indicator of the actual quality and significance of research published in a journal on scientific communities would not be precise. Namely, according to Aksnes et al. (2019: 1), since “research quality is a multidimensional concept” comprising “plausibility/soundness, originality, scientific value, and societal value”, citations might be said to reflect aspects that are pertinent to “scientific impact and relevance, although with important limitations”.

Although impact factors of journals do not depend merely on the publication language (Schaffner 2006), numerous authors considered the transition to English as a solution to improve the impact of research articles from non-English countries.

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16 The impact factor is calculated by dividing the number of the current year citations to the source items published in that journal during the previous two years (Clarivate 2021b).

17 The Institute was acquired by the Thomson Corporation in 1992, which then merged with Reuters in 2008, thus forming Thomson Reuters. In 2016 the Intellectual Property & Science of Thomson Reuters was sold and became Clarivate Analytics, and later Clarivate.
Many authors will prefer to submit their best papers to English-written journals with a high impact factor (Salager-Meyer 2015: 21). In this respect, Shao and Shen (2011) have discussed the escalating number of articles written by Chinese scientists and published by prominent international publishers, which contributes to the authors’ scholarly recognition. Does the change of language, i.e. transition to English, improve the impact of research from the peripheral countries? On the one hand, Pulišelić and Petrak (2006) revealed that the language shift (to English) increased the journals’ visibility to the global medical community. However, the reported results apply to a journal from biomedicine, not humanities. On the other hand, Kirchik et al. (2011) questioned the transition to English-only publication in Russia. They found that the publication format mentioned earlier did not result in increasing the scientific impact.

Subsequently, a shift in the inclusion policies of Web of Science and Scopus resulted in increasing the number of journals published in languages other than English and the number of languages in which the indexed journals were published. Thus, Fukuzawa (2017: 1010) found that on February 19, 2015, the Web of Science listed journals in 49 and Scopus in 54 languages.

Regardless of the scientific area, it seems that the whole publication-language debate comes down to two juxtaposed points of view (and finances permeate the whole supposition) reflected in the research conducted by Muresan and Pérez-Llantada (2014: 53). Despite being carried out for the area of social sciences, their results might be extrapolated and applied to a broader scientific community. On the one hand, scientists more or less agree that there is a need for a shared language of research and, on the other, that the dominance of English yields one-sided leverage to scientists who are native speakers of English. Moreover, some authors researched into the possible far-reaching consequences of comparable monolingual science format such as *domain loss* (Cianflone 2014; Ferguson 2007), *loss of specialized registers* (Swales 1997: 376) of the other national languages or *lexical impoverishment* (Cianflone 2014: 53), and ultimately appealed for the preservation of multilingual science in order to nurture local, regional and national languages.

As for previous research on the publication language of Croatian scholarly journals, little can be reported. Macan et al. (2012) conducted a study which, among other foci, addressed the publication language of articles in 25 Croatian journals from the area of social sciences and arts and humanities listed in the Web of Science’s Social Science Citation Index (SSCI) and/or Arts & Humanities Citation Index (A&HCI) in the period 2008 – 2010. They found that most journals from Arts & Humanities were in Croatian (64.3%), whereas only two (14.3%) titles were in English and two in Latin. Similarly, 65.2% of articles were in Croatian, 31.1% in English and only 3.7% in
other languages. Their research presented the basis of our analysis. Another subject matter related to publication language concentrates on the language of journal titles. Although research into this topic is somewhat rare, two studies were found to contribute to its elucidation. Apart from the already construed one conducted by Macan et al. (2012), the second one was carried out by Buchner (2018), who conducted a bibliometric analysis of social-science Central European journals indexed in the *Web of Science* in the period 2012 – 2015. In the former, the most frequent language of the journals’ titles was Croatian, whereas the titles either in English or in Latin appeared equally frequently. In the latter research, Buchner (2018: 98) found that of 27 journals, eight titles were in a local language, i.e. Slovak or Czech, three had a title which was a combination of a local language and English, and other journal titles were in English.

2. **AIM OF RESEARCH AND METHODS**

Appertaining to but with a significant difference in methodology (allocation of journals into three scope categories – mono-disciplinary, intra- and inter-area ones in this analysis) from the research conducted by Hebrang Grgić (2011), Mitrović (2013), Macan et al. (2012), and Jokić and Sirotić (2015), the aim of our research was two-fold. Firstly, the goal was to analyse the publication language of journals classified under *humanistic sciences* (i.e. humanities) at *Hrčak*[^18] – the portal of scientific journals of Croatia (https://hrcak.srce.hr/?lang=en) – with regard to the above-mentioned three scope categories. The second aim was to analyse whether publishing in English was a factor of inclusion of the journals in the *Web of Science* (WoS). Finally, the language of the journals’ titles was scrutinized in terms of frequency across the three domain categories both for the whole sample and for the subsample of journals indexed in WoS.

The sample for our research totalled 134 journals from the humanities (i.e. *humanistic sciences* as termed at *Hrčak*). Inspection of the inclusion of all journals from the sample in the *Web of Science* (Clarivate Analytics 2020) was done in January 2020. Of the total sample, 41 journals were indexed in the *Web of Science* in 2019. The humanistic sciences (humanities) area at *Hrčak* was comprised of the following

[^18]: The name of the portal is a partial blend of the syntagma **HRvatski + Časopis(ni)j** (portal), i.e. **Croatian + Journal (portal)**. *Hrčak* exists as a word in Croatian and it means *hamster*. On 9th July 2020, when the data for our research were collected, there were 492 Croatian scientific and professional journals – totalling 17,670 published issues and 226,826 open-access full-text articles at *Hrčak*. 
subcategories: history; archaeology; philology; philosophy; art sciences; ethnology and anthropology; theology; religious studies, interdisciplinary humanistic studies, and history of art. The publication year under consideration was 2019, and we have employed four inclusion criteria. The first criterion implied that the journal’s status at Hrčak was active, the second that the issues for the year 2019 had been placed at Hrčak, the third that the journal is published in Croatia and the fourth excluded students’ journals. Since the journals differ in terms of the number of issues published annually, the incidence of articles in various languages in academic periodicals was expressed in relative values, i.e. in percentages, to avoid any imbalances in data interpretation. As for the language of publication, four variables were used for the analysis – the percentage of articles published in Croatian, the percentage of articles published in English, the percentage of articles published both in Croatian and in English, and the percentage of articles published in other languages.

In their scopes, the journals (as specified by the journals themselves) were categorized into three groups in congruence with the journals’ domains specified at Hrčak. The first group of journals was termed mono-disciplinary, i.e. their scope covered a topic from one scientific discipline only, e.g. philology, history, etc. The second group was comprised of journals designated as intra-area ones. In other words, the scopes of those journals did not go beyond the scope of the scientific area in question (humanistic sciences/humanities) – they covered more than one scientific discipline within the area under consideration. The third group of journals was considered inter-area journals since their scopes stretched across two or more scientific areas – for instance, humanities and social sciences; humanities, social sciences, biomedicine and healthcare, etc. We preferred to categorize the journals in this way – and not by scientific disciplines – to avoid any possible unclear results because many journals included in our sample publish articles from more than one scientific discipline.

Data were also collected for the language of journals’ titles and indexing in the Web of Science, thus following the research format of indexing in the Web of Science, publication language and journal titles as applied by Macan et al. (2012). The Chi-square test, whose significance level was at p < 0.05, was used to determine if the containing (regardless of whether exclusively or in part) articles in English influenced their indexing in the Web of Science. Cross-tabulations of the language of journals’ titles by scope category for the whole sample and the subsample of journals indexed in the Web of Science were expressed in counts and percentages.
3. Results and Discussion

3.1. Publication Language across Scope Categories

As for the three scope categories of journals (Table 1), the first find was that both mono-disciplinary and intra-area journals mostly took account of the topics that belong to the scope of the scientific area in question, i.e. humanities. Interestingly, however, the second find pointed to the evidence that the number of journals whose scopes exceeded the limits of their primary scientific area was quite significant (44.03%), which— together with the previously mentioned results for intra-area journals’ scopes—speaks in favour of interdisciplinary features of sciences today.

Table 1. Counts and percentages of journals per scope categories

<table>
<thead>
<tr>
<th>SCOPE CATEGORY</th>
<th>Count</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intra-area</td>
<td>49</td>
<td>36.57%</td>
</tr>
<tr>
<td>Inter-area</td>
<td>59</td>
<td>44.03%</td>
</tr>
<tr>
<td>Mono-disciplinary</td>
<td>26</td>
<td>19.40%</td>
</tr>
</tbody>
</table>

The results displayed in Figure 1 show that in all three scope categories the journals favoured the publication of articles most frequently in Croatian only. Such a result derives from the point that journals whose primary subject matters are the Croatian language and Croatian history publish articles mostly in Croatian, thus aiming at the preservation of the Croatian language and historical tradition. The comparable type of publication language orientation in the humanities has also been detected by Sto-
janovski (2012) for the year 2012. Sivertsen (2016: 362) also suggests that the publications in humanities are more frequently in native languages than is the case, for example, with natural sciences. The journals that published in languages other than Croatian (predominantly in English) addressed subject matters (more often) from the realms of other languages (e.g. a mono-disciplinary journal Govor (Speech) – 62.5% of articles published in English in 2019), from maritime science and technology (e.g. an inter-area journal Naše more (Our Sea) – 95.4% of articles published in English in 2019), Croatian history (e.g. a mono-disciplinary journal Review of Croatian History – 100% of articles published in English in 2019), etc. In contrast with the previously stated percent of articles published in English in 2019 for the journal Review of Cro-
atian History, some philosophy journals published articles exclusively in Croatian. For instance, an inter-area journal Filozofska istraživanja (Philosophical Investiga-
tions) continues its 100 percent publication in Croatian policy already identified by Macan et al. (2012: 511) for the publication period 2008 – 2010. The reason for the
latter to publish exclusively in Croatian is to be found in the fact that the journal accepts articles written on research into Croatian philosophical heritage. These two examples point to the changing tendencies as regards the language of publication in journals focusing on regional topics. Prolegomena, another philosophy-oriented but mono-disciplinary journal published articles, in 2019, either in Croatian (36.4%) or in English (63.6%), which substantiated the results obtained by Macan et al. (2012: 512) although with some differences in the ratio regarding the publication language. Such a publication dichotomy points to two publication-related orientations as regards philosophical journals. On the one hand, the increase in the percentage of articles published in Croatian aims at investigation and consequently preservation of Croatian philosophical tradition. On the other hand, philosophical thought is published in English both for the author(s) and institutions they work at to be able to have a place in a wider academic community. Yet, the journal Disputatio Philosophica, also allocated to the category of intra-area journals, published in 2019 exclusively in English, whereas, e.g., in 2018 three articles were in English and one in German. Bearing in mind that the foci of philosophy are on knowledge, truth, cognition and being, i.e. on universal categories, the geography of philosophical thought should not know any boundaries, linguistic ones included. To this end, the language of publication should comply with two critical aspects – the internationalisation of knowledge and the preservation of the local language and cultural tradition.

**Figure 1** Frequencies of percentages of articles published in Croatian per scope category
In the opinion of Schluer (2014: 1), in linguistics, three factors influence the decision of researchers as regards the language in which they are going to write and publish – the target audience, the subject matter, and their self-assessed language competence. The first two might be said to affect the publication language choice in our research as well. Of the philological journals whose scope was categorised either as mono-disciplinary or as an intra-area one, four published articles written exclusively in Croatian – three in intra-area journals: Čakavska rič\textsuperscript{19}, Kaj\textsuperscript{20} and Književna smotra\textsuperscript{21} (the research by Macan et al. (2012: 512) yielded the same result) and one mono-disciplinary journal – Jezik\textsuperscript{22}. Such a result is logical because three of them\textsuperscript{23} deal primarily with the Croatian language and are aimed at its preserving and nurturing. As stated by Zrinščak (2011: 176-177) on this matter, there is no development without science, and there is no science without journals, international but also domestic ones that look after national culture and language. Furthermore, other philological journals publish articles in Croatian, but also those written in English. All the same, some articles in those journals were written in German (e.g. one article in the mono-disciplinary journal Strani jezici (Foreign Languages) and one in the mono-disciplinary journal Casopis Rasprave: Časopis Instituta za hrvatski jezik i jezikoslovje\textsuperscript{24}. All articles in the inter-area journal Zagreber germanistische Beiträge (Zagreb Contributions to German Studies) were published in German. In the end, such findings regarding the journals from the humanities are only natural since, according to Ammon (2013: 1), the role of national languages in humanities remains to be of paramount significance owing to text style, different traditions and corresponding terminology, but also, as Hryniuk (2017) portrays, to writing style.

Figure 2 derives from the previous results, i.e. English is most frequently wholly avoided as the publication language by intra-area and mono-disciplinary journals. In contrast, the comparison among all three scope categories in terms of 100% publication in English – although its incidence is very low – is most evident for articles published in inter-area journals, e.g. The Holistic Approach to Environment “related to the responsible and ethical use of natural resources and human knowledge” (HAE); Tourism which scrutinizes a sector that is of utmost interest to the Croatian economy; The Bulletin of the International Association for Paleodontology which deals with

\textsuperscript{19} ≈ Chakavian Word (Chakavian = a Croatian dialect).
\textsuperscript{20} Kaj is the Kajkavian (a Croatian dialect) word for what.
\textsuperscript{21} ≈ Literary Review.
\textsuperscript{22} The Croatian word jezik means language.
\textsuperscript{23} Apart from the journal Književna smotra (Književna smotra: Journal of World Literature).
\textsuperscript{24} The English translation of the journals title cannot be found at Hrčak. Hence, the translation of its title into English is Discussions: The Journal of the Institute of Croatian Language and Linguistics.
the study of teeth of early life forms within the sphere of dental medicine; *Collegium Antropologicum*, whose scope involves topics from clinical medical sciences, public health and health care, dental medicine as well as ethnology and anthropology. Such a result is consistent with these journals’ fields of interest.

![Figure 2 Frequencies of percentages of articles published in English per scope category](image)

**Figure 2** Frequencies of percentages of articles published in English per scope category

Regarding the previously presented data, a general result is obvious – namely, that in Croatia, the journals from the area of humanistic sciences (i.e. humanities) opt for Croatian as the predominant language of publication. This is very similar to the results for Spain and France obtained in van Weijen (2013) – namely, arts and humanities researchers from these two countries appear to prefer to publish in their own language. As Meneghini and Packer (2007: 114) claim, science is a component of culture and is hence necessary to formulate *scientific semantics* within a national scientific community and in the native language.

Simultaneous publication of articles in Croatian and English, thus aiming at a local and international readership, proved rare (Figure 3). In other words, bilingual publication policy has not been accepted as practical, presumably due to a lack of financial resources needed for translation, reviewing, editing and publication of an ever increasing number of pages. At any rate, some journals have chosen analogous publication formats despite all possible barriers, thus aiming at greater ‘visibility’ worldwide and striving to access a broad(er) scientific community.
Etnološka istraživanja (Ethnological Research) (a journal that publishes articles addressing “ethnology, cultural anthropology, museology and the related sciences” – Ethnological Research) belongs to the intra-area scope category as do Diadora\textsuperscript{25} (which publishes articles covering the fields of history of art, history and archaeology), Miscellanea Hadriatica et Mediterranea, Vjesnik za arheologiju i povijest dalmatinsku (Journal of Dalmatian Archaeology and History) and Starohrvatska prosvjeta\textsuperscript{26} on the one hand, and on the other, Histria Archaeologica and Prilozi Instituta za arheologiju u Zagrebu (Contributions of the Institute of Archaeology in Zagreb) allotted to the mono-disciplinary scope category have all adopted the bilingual Croatian + English publication format. Several of the previously listed journals contain the word archaeology in their titles, allowing for the conclusion about the dichotomous viewpoint on disseminating archaeological research results. Firstly, the archaeological matters are presented to the domestic public, and secondly, they are accessible to the vast scientific community.

Figure 4 shows that few journals published articles in languages other than the two previously mentioned. An example of the journal that publishes articles entirely in German is the inter-area journal Zagreber germanistische Beiträge (Zagreb Contributions to German Studies). In 2019 some other journals sporadically published articles

\textsuperscript{25} Diadora is the journal of the Archaeological Museum of Zadar.

\textsuperscript{26} ≈ Old Croatian Enlightenment
in Italian (e.g. Dubrovnik Annals), Slovene (e.g. Filologija\textsuperscript{27}), Slovak (e.g. Folia Onomastica Croatica), etc. Comparatively, the journal Colloquia Maruliana, an intra-area journal devoted solely to the survey of life and works of Marko Marulić, a Croatian poet and Renaissance humanist born in Split in the 15th century, published articles in 2019 exclusively in Croatian. In contrast, in 2018, it published six articles in Croatian and four in English, and in 2017 the distribution was seven articles in Croatian, two in English, two in French and one in Latin. In other words, the publication tendency is irregular in terms of language.

3.2. Publication language vs being indexed in the Web of Science

Further scrutiny addressed the relationship between the percentage of articles written in English on the one hand and being indexed in the Web of Science (WoS) on the other. The Chi-square test showed that containing articles written in English proved to have made the difference – $\chi^2 (1, N = 134) = 5.7$, $p = 0.017$ – between being and not being included in the Web of Science. Contrary to the expected, the statistical significance was in favour of indicating that the articles written in English were not (no = 61.73% vs yes = 38.27%) a decisive criterion for inclusion of the journals in WoS (Table 2). This find

\textsuperscript{27} Philology
is contrary to the (still) existing but frequently debated practice, which reflects the paradigm (predominantly in sciences, but also to a certain extent in humanities) that journals should strive to publish either all or at least some articles in English to be included in a highly respected database, which according to the proponents of this paradigm, would eventually result in the possibility of receiving international recognition in terms of scientific output. Furthermore, we believe our finding substantiates the results obtained by other researchers (cf. Gehrmann & Rončević 2015: 27, van Weijen 2013).

Table 2. Contingency table for being indexed in WoS x containing articles written in English variables

<table>
<thead>
<tr>
<th>Indexed in WoS</th>
<th>Not containing articles written in English</th>
<th>Containing articles written in English</th>
<th>Row totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Count</td>
<td>43</td>
<td>50</td>
<td>93</td>
</tr>
<tr>
<td>Column percent</td>
<td>81.13%</td>
<td>61.73%</td>
<td></td>
</tr>
<tr>
<td>Row percent</td>
<td>46.24%</td>
<td>53.76%</td>
<td></td>
</tr>
<tr>
<td>Total percent</td>
<td>32.09%</td>
<td>37.31%</td>
<td>69.40%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Count</th>
<th>No</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Count</td>
<td>10</td>
<td>31</td>
</tr>
<tr>
<td>Column percent</td>
<td>18.87%</td>
<td>38.27%</td>
</tr>
<tr>
<td>Row percent</td>
<td>24.39%</td>
<td>75.61%</td>
</tr>
<tr>
<td>Total percent</td>
<td>7.46%</td>
<td>23.13%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Count</th>
<th>All groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>Count</td>
<td>53</td>
</tr>
<tr>
<td>Total percent</td>
<td>39.55%</td>
</tr>
</tbody>
</table>

Of the 41 journals indexed in the Web of Science, as far as the year 2019 is concerned, ten published articles exclusively in Croatian and three solely in English, whereas two decided on the bilingual format in Croatian and English (each article in these two languages), and one exclusively in a language (German) other than Croatian and English. As for the remaining journals, as many as 17 contained articles written in Croatian as well as articles written in English; six were comprised of articles written in Croatian, English or some other language and three journals in Croatian and bilingually in Croatian and English. Finally, one journal contained articles in English or another language (not Croatian), and one journal issued articles in English, bilingually in Croatian and English or in other languages. These results point to a large variety of publication language practice in the humanities, at least regarding the Croatian scholarly journals at Hrčak. Because of differing methodologies in terms of the publication language of articles indexed in WoS, our results cannot be compared to those of Macan’s et al. (2012).
The results presented in Table 3 show that, as expected, inter-area journals were the journals most frequently (41.5%) indexed in the *Web of Science*. At the same time, as much as 36.6% of all journals in humanities included in our research and indexed in the *Web of Science* belonged to the group of intra-area journals, i.e. journals whose scope remained within the limits of humanities. That only nine mono-disciplinary journals were indexed in WoS in 2019 was also an anticipated perception.

<table>
<thead>
<tr>
<th>Scope category</th>
<th>Indexed in WoS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Count</td>
<td>Total percent</td>
</tr>
<tr>
<td>Intra-area</td>
<td>15</td>
</tr>
<tr>
<td>Inter-area</td>
<td>17</td>
</tr>
<tr>
<td>Mono-disciplinary</td>
<td>9</td>
</tr>
</tbody>
</table>

When interpreting the results, one important detail must be kept in mind. Namely, since not all Croatian journals from humanities are to be found at *Hrčak*, the total number of all Croatian journals from humanities is in fact larger than the number of journals included in our sample.

### 3.3. Language of the journals’ titles – the whole sample and the subsample of journals indexed in WoS

As for the choice of language of the journals’ title\(^{28}\) across scope categories, most journals’ titles were in Croatian, followed by the number of journals in Latin (Table 4). However, although the incidence of titles in English was low in the whole sample, their frequency distribution for mono-disciplinary and intra-area journals was unsurprisingly lower than for the inter-area ones. These results arise from the specifics of the scientific area under consideration. In other words, the humanities include research subject matters of interest both locally and globally. The former facet is displayed in the feature that most titles of journals were in Croatian, and the latter that the second most frequently selected language for a journal’s title was Latin – the universal language in all scientific areas, i.e. the terminology of many scientific areas (cf. Nybakken 1959), humanities included.

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\(^{28}\) *Hrčak* offers the English translations of the names of many journals. The journals’ titles for which there was no official translation at *Hrčak* were translated into English by the authors of this article.
Table 4. Cross-tabulation for scope category x language of the journal’s title – total sample

<table>
<thead>
<tr>
<th>Scope category</th>
<th>Croatian</th>
<th>Latin</th>
<th>English</th>
<th>Other</th>
<th>Row totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Count</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Column percent</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Row percent</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Total percent</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

The equivalent course of incidence of journals' titles in Croatian and Latin was repeated for those periodicals indexed in the *Web of Science* (Table 5). Of 41 journals indexed in the *Web of Science*, the titles of 25 were in Croatian, eleven were in Latin, and the remaining five were either in English (n=3) or in another language (German or Italian). Thus, the inter-area journal *Zagreber germanistische Beiträge* was not included in WoS even though its name – together with all the articles published in it – is in the second most widely spread language (German) by native speakers (97 million) in Europe (Worldatlas.com).

Table 5. Cross-tabulation for scope category x language of the journal’s title – group of 41 journals indexed in WoS

<table>
<thead>
<tr>
<th>Scope category</th>
<th>Croatian</th>
<th>Latin</th>
<th>English</th>
<th>Other</th>
<th>Row totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Count</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Column percent</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Row percent</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total percent</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Count          |          |       |         |       |           |
| Column percent |          |       |         |       |           |
| Row percent    |          |       |         |       |           |
| Total percent  |          |       |         |       |           |
These results overlap in only one point with the results obtained by Macan et al. (2012: 511). Both in our and their analysis Croatian was the most frequent choice as the language of journal titles. In our research this was the case for the total sample as well as for the subsample of journals indexed in the *Web of Science*. However, the second choice of language in our research was Latin, unlike in the research by Macan et al. (2012: 511) where titles in English and Latin were equally represented. These results clearly justify our preference of intra-, inter- and mono-disciplinary journal allotment for the purpose of a less ambiguous interpretation.

Ultimately, our study has given several main contributions. Although our research addressed the Croatian open access journals from the humanities to be found at the portal of Croatian scientific journals only, our sample was significantly larger than the samples in the analyses conducted by Macan et al. (2012) and Hebrang Grgić (2011). Consequently, our results might be regarded as more compelling. In accord with the delimitation of journals’ scopes as specified by the journals themselves, we constructed three groups of journals using the domain criterion. In our opinion, such a composition sheds more light on the underlying rationale relevant to the scrutinised subject matter. Namely, the intra-, inter- and mono-disciplinary categorisation of journals made it possible to preclude any discrepancies and subsequently unclear results which might arise from categorisation by scientific discipline. To clarify once again, it is common practice that many journals publish articles dealing with subject matters from more than one scientific discipline, which blurs the publication language status by the journal’s scope. The yielded results approved the choice of such an avenue of our research.

Further, the allocation to the three domain-related categories and their cross-tabulation with the language of journal-title groups provided valuable and more objective information on the relationships among them, e.g. the Croatian – Latin – English – other languages title incidence sequence. Publication language policies in the humanities in Croatia continue to pursue the trend perceived both by researchers on the global scale a decade ago (cf. Flowerdew & Li 2009) and by researchers in Croatia in almost the same period (cf. Hebrang Grgić 2011; Macan et al. 2012) – namely, that although English did
and still does permeate the publishing strategies in the humanities, the local language – Croatian, as demonstrated in our analysis – remains a frequent recurrent choice. In other words, the scientific output in the humanities in Croatia defies and successfully escapes the publication-in-English-only approach. Such a find allows for careful anticipation of humanities not changing the publication language policy, at least in the near future.

4. Conclusion

Firstly, most of the selected journals specified their scopes as either intra-area or mono-disciplinary ones. In other words, their policy was to cover a broader range of topics, either from a single or from several scientific disciplines within one scientific area. Secondly, many journals allocated to the humanistic sciences (humanities) at Hrčak publish exclusively or mainly in Croatian. Such a result is understandable within a broader diachronic context of the scrutinised scientific area. While natural sciences, for example, have always been more outward bound, i.e. more international, the humanities have always been more culture-bound and directed towards local traditions, language included. Cultural traditions should be preserved since a native language reflects different traditions and text styles, and provides the corresponding terminology, which is extremely important in humanities. As for the Croatian academic community, one way of doing so is to publish in the standard Croatian language.

Thirdly, being included in the Web of Science is of utmost importance for Croatian journals. Yet, as our study has shown, containing articles written in English was not the only factor for their inclusion in the database mentioned above. Another one complemented this find. Namely, most journals’ titles were in the Croatian language, followed by Latin in all three specified scope categories. This ultimately contributed to the assertion that the field of humanities in Croatia continues to care for and protect the Croatian language and tradition, thus resisting the publish-in-English-to-be-indexed-in-highly-respected-databases avenue. In doing so, only a moderate concession is made to publishing in English. This paper being in English is not an attempt to make the paper’s authors visible, but to make the obtained research results more accessible to a broader scientific community. The results show that English-only publication language format need not be (and is not) the principal criterion for the inclusion of journals in highly respected databases, at least in the case of the humanities. Additionally, the number of inter-and intra-area journals included in our research and indexed in the Web of Science was almost the same, thus refuting a possible presumption that the more locally bound journals fail to be indexed in such databases.

Future research will hopefully supply more information on this subject matter, thus making it possible to track the upcoming perceptions.
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WorldatLAS.com. The Most Widely Used Languages in Europe. URL: https://www.worldatlas.com/articles/most-widely-used-languages-in-europe.html (10 October 2019)

Cilj istraživanja je bio analizirati jezik objavljivanja u časopisima klasificiranim u humanističke znanosti na Hrčku, portalu hrvatskih znanstvenih časopisa. Časopisi su prema domeni bili kategorizirani u tri skupine: monodisciplinarni, unutarpodručni te međupodručni. Većina je časopisa uključenih u skupinu humanističkih znanosti radove objavljivala isključivo ili uglavnom na hrvatskom jeziku, dok je drugi najčešći jezik na kojemu se objavljivaju radovi bio engleski. Dobiveni rezultati ukazuju na dva trenda u hrvatskim znanstvenim časopisima. S jedne strane, časopisi nastoje distribuirati istraživačke rezultate na međunarodnoj razini, što podrazumijeva da radovi budu objavljeni na engleskom ili nekom drugom jeziku koji govori veliki broj ljudi. S druge pak strane, valja sačuvati kulturalnu tradiciju a jedan je način da se to postigne objavljivanje na standardnome hrvatskom jeziku. Zanimljivo je da činjenica da su u časopisu objavljeni radovi na engleskom jeziku nije utjecala na uključivanje časopisa u citatnu bazu Web of Science. Na kraju je, također s obzirom na tri domene časopisa, analiziran jezik na kojemu su bili nazivi časopisa, i to za cijeli uzorak, kao i za poduzorak časopisa indeksiranih u Web of Science. Rezultati su pokazali da su u oba slučaja nazivi časopisa bili najčešće na hrvatskom jeziku.

Ključne riječi: akademski časopisi, domena, humanističke znanosti, jezik, nazivi, objavljivanje