

UDK 16 (497.6)

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**BOSNIA PORPHYRIANA  
AN OUTLINE OF THE DEVELOPMENT OF LOGIC  
IN BOSNIA AND HERZEGOVINA**

**Abstract**

*The text is a drought outlining the development of logic in Bosnia and Herzegovina through several periods of history: period of Ottoman occupation and administration of the Empire, period of Austro-Hungarian occupation and administration of the Monarchy, period of Communist regime and administration of the Socialist Republic and period from the aftermath of the aggression against the Republic of Bosnia and Herzegovina to this day (the Dayton Bosnia and Herzegovina) and administration of the International Community. For each of the aforementioned periods, the text treats the organization of education, the educational paradigm of the model, status of logic as a subject in the educational system of a period, as well as the central figures dealing with the issue of logic (as researchers, lecturers, authors) and the key works written in each of the periods, outlining their main ideas. The work of a Neoplatonic philosopher Porphyry, "Introduction" (Greek: Εἰσαγωγή; Latin: Isagoge; Arabic: Īsāgūḡī), can be seen, in all periods of education in Bosnia and Herzegovina, as the main text, the principal textbook, as a motivation for logical thinking. That gave me the right to introduce the syntagm Bosnia Porphyriana.*

**Key words:** *logic, education, Isagoge, Bosnia Porphyriana, schoolsystem in Bosnia and Hercegovina*

## 1. Introduction

*Man tamantaqa tazandaqa.  
He who practices logic becomes a heretic.<sup>1</sup>*

It would be impossible to elaborate the development of logic in Bosnia and Herzegovina without reflecting on cultural, political and social occasions in different stages of the country's development: the Bosnian Kingdom, the Ottoman Empire, Austro-Hungarian Monarchy, Republic of Bosnia and Herzegovina (as a part of the Socialist Federal Republic of Yugoslavia) and the Dayton Bosnia and Herzegovina; each of them being, in fact, historical, cultural, political and ideological sequences that have collided and confronted in this area; an area in which their interests and political geographies are intertwining even today and which cannot be rationalized as a single-principle continuum, be it of cause and effect or descriptive.

Effort placed in the production of this text is limited on the presentation of information about facts related to a scientific and philosophical discipline and the educational position it occupied or occupies in a dynamic social and political interaction. The very *dynamics of interaction between political and social ontology*, their logical structure and intentional character, ideological matrix as a regulator of contradictions and tautologies of cultural and political geography in this area, theory and history and interactions in the mentality background, will not be discussed in the text, although some reflections are inevitable.<sup>2</sup>

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<sup>1</sup> The famous sentence used by the Arabian theologians against philosophers favoring the Hellenic thought, who introduced the logic of Aristotelianism into discussions on topics in Quran. The sentence originates from a medieval discussion while Ibn Taymiyyah, in his treatise *Against the Greek Logicians* repeats this sentence, attacking the logic of Aristotelianism.

<sup>2</sup> A complete study on the development of logic in Bosnia and Herzegovina, which contains broader methodological and content-wise presuppositions for valorization of the existing material, which also introduces *critical* in place of *counterfactual doxography* in interpretation of the above-mentioned materials and which discusses the influence of ideological systems on the inception of content and form of the material, will be published by Nijaz Ibrulj in a book entitled *Bosnia Porphyriana – A Cultural Metaphor* during 2010.

It should be stated in the introduction that research and authorship in the field of logic as a science has not been present in Bosnia and Herzegovina outside schools and universities, and that the first civic Society for Development of Logic and Analytical Philosophy in Bosnia and Herzegovina was not formed until July 2 2007 in Sarajevo.<sup>3</sup> That is why it is reasonable that a natural frame for the studies of the development of logic in Bosnia and Herzegovina is that very status of logic as a discipline in the system of education of Bosnia and Herzegovina, the society which has lived through different ideological and regime systems. The content of the development worth mentioning has been abstracted in the text (chapter 3) and is entitled *Bosnia Porphyriana*, which is, by itself, a cultural and spiritual syntagm introduced here for the first time (and with good reason, I hope!).<sup>4</sup>

Just as well, broader research conducted by a significant number of authors or research papers on the development of logic in Bosnia and Herzegovina cannot be found. There are, however, two specialist research papers worth the attention: one by Prof. Dr. Amir Ljubovic, entitled *The Works in Logic by Bosniak Authors in Arabic* (Sarajevo: Orijentalni institut, 1996), and other by Academician Dr. Serafin Hrkac, OFM (Ordo Fratrum

<sup>3</sup> Association ACADEMIA ANALITICA – Society for Development of Logic and Analytical Philosophy in Bosnia and Herzegovina (<http://www.academia-analitica.org>) was founded in Sarajevo on July 2 2007. Founder and President of the Society is Prof. Dr. Nijaz Ibrulj, professor of logic, analytical philosophy, cognitive development theory, philosophy of languages, cognitive sciences and methodology at the Sarajevo Faculty of Philosophy. *The Logical Foresight* is an e-magazine published by the Society. One of the ongoing projects is also *Philosophical Textbooks: Logic 1 – 4*, that is to be published by 2012, and which will contain the following texts: *Book 1: Dialectics. Syllogistics. Logic terminorum* (Plato, Aristotle, Plotinus, Boetius, Porphyrius, Ammonius, Dexippus, Simplicius, Philoponus, Averroes, Ockham, Duns Scotus, Hispanus, Aquinas); *Book 2: Logical Atomism* (Boole, Frege, Russell, Wittgenstein, Carnap, Tarski, Quine, Gödel); *Book 3: Logical Holism and Pragmaticism* (Wittgenstein, Austin, Sellars, Strawson, Dewey, Quine, Davidson, Searle, Putnam, Rorty); *Book 4: Logic and Artificial Intelligence* (Turing, Denett, Minsky, Searle, Putnam, Churchland, Fodor, Newell, Simeon, Zadeh). In that same year, 2007, Nijaz Ibrulj founded ZINK – the first Scientific and Research Incubator in Bosnia and Herzegovina ([www.ziink.wordpress.com](http://www.ziink.wordpress.com)) at Sarajevo Faculty of Philosophy.

<sup>4</sup> The syntagm originates from the syntagm *Arbor Porphyriana* – the Porphyrian Tree, which contains all differences, in a single vertical, from bottom to the top and from top to bottom.

Minorum), entitled *Philosophical Manuscripts in Latin in Bosna Srebrena* (Mostar: Ziral, 1998). These works are, in fact, a source for understanding the activities of Bosnian writers in the field of logic in Arabic and Latin, within a broader cultural heritage created by members of the Islamic and Catholic denominations in Bosnia and Herzegovina, in a longer period. These two research papers will be used in this text extensively.

## **2. Period of Administration of the Ottoman Empire in Bosnia and Herzegovina (1463 – 1878)**

After the fall of the Bosnian Kingdom (1463) and after its territory had been occupied by the Ottoman Empire, the Ottoman Turks imposed forms of administration on different principles. The empire introduced, in all its conquered territories (Eyalets), institutional procedures and institutional laws, in place of the customary, unwritten laws. In that way, a category of state apparatus - administration was introduced together with subjects to the empire who had, on the basis of being a part of a single administration in a wider territory, both rights and obligations. On the other hand, the Ottoman administration privileged certain social classes according to their origin, wealth, administrative position and religious denomination.

### **2.1. Educational Paradigms, Schools and Subjects**

Ottoman Turks, being Muslim, took over the form and content of cultural and religious life of an Arab state and so continued erecting *mosques, mektebs and madrasahs* which were all built through donations of the sultan and other people of wealth and power. Only religious teachings had been practiced at mosques, mektebs and madrasahs until Suleiman II (1520 – 1566) came to power and amended a decree thus enabling secular teaching, primarily grammar and logic, which could have contributed the understanding and interpretation of Quran. Within such political, confessional, and cultural compression, other religious denominations existed (Jewish and Christian), tolerated by the empire and which provided education for members of their faith through administration of their own and which had frequently been in conflict with both their own hierarchy outside of Bosna Argentina, namely, in Vienna and Venice, as well as with the Ottoman administration in Bosnia and Herzegovina [Hrkać, 1998, 7-45].

The principal *educational paradigm* of the Ottoman Empire had been founded on the basis of religious denomination of the ethnic communities formed in the area of Bosnia and Herzegovina. The Empire favored Islamic faith and the entire institutional educational infrastructure was governed by that fact. Separate mektebs were formed, for men and women, providing elementary education. Logic was taught in medresahs and *ruzdijas*, together with subjects related to religious teachings, which was considered important for the understanding of religion-related issues. At the same time, Bosnian Franciscans, present over 700 years, were denied in that part of Bosnia Argentina their students and educational institutions (students of grammar, philosophy and theology existed in parts of the Provincial under the administration of Vienna and Venice) in the time of domination and exclusiveness of the Islamic confessional community, but they organized on their own training for their members in *monasteries* (Kraljeva Sutjeska, Kresevo, Fojnica) and sent their students to study abroad. [Ibid., 251].

However, one can see in students' syllabi from other parts of the Provincial, which had organized the above-mentioned educational institutions, or in the school *Elenchus Materiae* that was taught at the Franciscan institutions of education, the extent to which theological science was linked with the study of logic (*summa logicae, summulae logicales*) in different periods and with different authors. In that way, studying language and logic, that is, studying structural, semantic and pragmatic characteristics of language of the holy books played a significant role in the development of spirituality in this area in general.

Between the fall of the Bosnian Kingdom to the Ottomans (1463) and the Austro-Hungarian occupation (1878), a significant number of Muslim schools (mektebs) had been established in bigger towns, mostly in Sarajevo. It is reasonable to believe, according to some authors [Kasumović, 1999, 95], that over 100 mektebs existed in Sarajevo alone, since mektebs were erected together with mosques. As a matter of fact, every *mahala* (a town's neighborhood), which reached the number of 104 in the second half of the 17<sup>th</sup> century, had its own mekteb.<sup>5</sup> Mektebs were either all-male, all-female or coeducational.

<sup>5</sup> See the register of mektebs and more detailed information on each of the mektebs in Sarajevo, Novi Pazar, Mostar, Foca, Travnik, Banja Luka, Zenica and other towns in Bosnia and Herzegovina, at Dr. Ismet Kasumovic [20].

“In towns, during the first period of the Ottoman rule, those were the institutions which most directly participated in the gradual cementing and spread of the Oriental-Islamic culture, by introducing basic elements of Islamic education into this milieu.” [Ibid, p. 143].

*Mosques* and *masjids* gave rise to the first high schools and collegiate schools in Bosnia and Herzegovina, namely, *madresahs* and *darshanas*, in the early 16<sup>th</sup> century. Constant opening of the new schools had to do with the increasing number of conversions of the domestic population (mostly *Bogomils* and members of the Church of Bosnia) to Islam. “*Madresah*, as the Bosnian kind of junior high school and collegiate school, appeared in Bosnia and Herzegovina in the early 16<sup>th</sup> century and, just like *mektebs*, *mualimhanas* (schools for future teachers) and other cultural and educational institutions, they were erected at the initiative by individuals to function as foundations, which was a common practice in the entire Empire. To be precise, the majority of education was financed, in accordance with the organization of the Empire, from a fund known as *Sandik / Beytul-Mal il Ganaim* (Spoils of War Fund) which collected incomes from spoils of war, mines and from prisoners (one fifth).” [Ibid., 152].

According to Dr. Ismet Kasumovic’s research [1999], activities in *madresahs* were organized in three levels: beginner, focusing on the basics of grammar and synthax of Arabic; arithmetic and geometry; logic, rhetoric and apologetics. The same subjects were taught at the second level, but with more extensive textbooks. At the higher level, certain branches of the Sharia law, interpretation of Quran, corpus of the Islamic tradition, etc. The following subjects were taught in *madresahs*:

**a. traditional sciences, a higher degree of science**

**(*al-ulumu l-muqaddima*)**

1. morphology (*as-Sarf*)
2. syntax (*an-Nahw*)
3. science on notions (*al-Wad’*)
4. etymology (*al-Ištiqāq*)
5. geometry (*al-Handasa*)
6. calculus (*al-Hisāb*)
7. disputation (*al-Munāzara*)

**b. logic (*al-Mantiq*)**

1. Isagoge (*Isāgūgī*)

2. Fanari's Commentary on Isagoge (*Šarhu l-Fanārī*)
3. Compendium of Logic (*Husāmu l-Kātī*)
4. Matali's commentary (*Šarh -i Matāli*)

**c. Apologetics (*al-Kalām*)**

1. Glosses (*Hāšiyātu t-tagrīd*)

The first state, secular schools in Bosnia and Herzegovina were *ruzdijas*, “open prior to the occupation and accessible to members of all denominations in Turkey.” [Ljubović, 1965: 139].

Official language of the schools was Turkish and they were of the same rank as junior high schools; they were civil schools preceding the enrolment to *madresahs*. “In Turkey, *ruzdijas* were considered to be newer schools, according to the period of their origin. The 1287 AH (1870/71) *salnama* (Ottoman government's yearbook) mentions *ruzdijas* to have been founded in 1263 AH (1847 AD), which means they date from the time of Sultan Abdul-Medjid. In Bosnia and Herzegovina they are dated to the second half of the 19<sup>th</sup> century, the oldest being that in Sarajevo.” [Ćurić, 1965: 140].

Over 30 *ruzdijas* had existed in Bosnia and Herzegovina prior to the 1878 occupation. They served a special function compared to *mektebs* and *madresahs* as schools of a nature that is less confessional and more secular. That is why they were not as popular among Muslims of Bosnia and Herzegovina who had preferred enrolling their children to confessional schools. *Ruzdijas* were considered a novelty from Constantinople in which the “*giaur* subjects” and the “Turkish language” met. That was not a respectable program for Muslim people of Bosnia and Herzegovina at the time. It is these schools that would later be transformed into first state schools in Bosnia and Herzegovina, by the decision of the Federal Government. Author Curic lists the subjects taught at *ruzdijas*: Turkish, Arabic and Persian languages were the focus of teaching, together with calligraphy; apart from religious teachings and morality, secular subjects were taught, including history, geography, algebra and geometry. Logic was taught together with all those subjects. Textbooks for logic were *Isagudži* and *Risale-i erbea*.

“*Risale-i erbea*” is a short textbook comprising of four parts: 1) “*Dede Džengi*” (On Logic), 2) “*Risale-i vadijje*” (Introduction to Logic), 3) “*Feride*” (On Metaphor in Arabic) and 4) “*Isagudži*” (On Logic)” [Ibid., 156].



It can be seen from the above-listed subjects [Kasumović, 1999: 154] that most attention was given to the instrumentarium for exegesis and interpretation of the sacral texts and religious truths. The study of language (morphology, syntax, etymology) and science on notions was connected to the study of predicative forms and structures in logic and was, altogether, applied in the field of apologetics. Muslims of Bosnia and Herzegovina were educated at the prestigious schools and institutions of learning in Istanbul/Constantinople, Baghdad, Syria; where they gained knowledge on Arabic logic and Islamic law, and where they themselves would frequently lecture (like Mustafa Ejubovic – Sejh Jujo). During their pedagogical engagement in *madresahs*, they would pass that knowledge into Bosnia and Herzegovina by transcribing the leading scientific works of the time and by writing useful notes and commentaries.

Primary schools for members of the Orthodox faith were least documented. Existing data shows that the first separate school building for children of Orthodox faith was built and opened in 1727. Schools that opened in Banja Luka, Bijeljina, Brcko, Gracanica, Prnjavor, Stari Majdan, Cajnice and Travnik, by the approval of the Ottoman Government in 1832, "...were at a poor educational level. Elementary literacy was taught in those schools with some of the Orthodox faith moralities." [Papić, 1972: 23]. In 1854, all-female school opened in Sarajevo. Tradesmen initiated the opening of a high school (1855) which was called *general* or *trade*, later *general* (1864) and *secondary school* (1879). Staka Skenderova founded in 1858 in Sarajevo a private Serb female school and in that same year, the *preparatory spiritual school* was founded in Zitomislici, aimed to train priests for the area of Herzegovina. The Serb seminary in Banja Luka (the Pelagic Seminary) was formed in 1866. Two English women, Adelina Irbi and Mis Makenzi formed the first female high school in Sarajevo in 1869, known by the name of *Mis Irbi's Institute*.

Convents and churches were centers of literacy and spiritual life of Catholics in Bosnia and Herzegovina. Bearers of such life and literacy were Franciscans who founded the first schools in Olovo, Kraljeva Sutjeska, Kresevo and Fojnica. In this, as well as in the case of content and forms of education of members of Islamic faith in Bosnia and Herzegovina, one can see the synergy (sometimes also asymmetry and even confrontation) of the local and regional history of education, of the system and its part, regional patch (once: the norm) and provincial application.



The paradigm (norm, patch, standard, regulation) of education of Christian (Catholic) candidates, that had been defined in institutions of the Catholic Church in Rome, acted in parts of the provincial under the authority of Vienna, Venice, Istanbul/Constantinople; while the concrete educational life was led in accordance with the local cultural and political situation which was, in the area of Bosnia Argentina under the Ottoman rule, in contradiction with the situation in the territory from which the paradigm originated. In that sense, one cannot talk about the “borrowed identities” consumed by ethnic and confessional communities in Bosnia and Herzegovina, but instead about the homogenous and interactive identities, which functioned within a paradigm, as well as those which adjusted to the local conditions, outside the paradigm boundaries.<sup>6</sup>

Many arguments were led between members of the same ethnic and confessional community, that is, between those who lived within a homogenous core community and those who lived outside it, in an interactive community of several ethnic groups. Rules, will and standards were imposed by regional or core organizations, whether political or confessional, onto the local communities in the field, which, like the Franciscans in Bosnia and Herzegovina, often disapproved them or even refused their implementation [Hrkać, 1998: 7-45].

However, once a paradigm or standard or norm of education was set, it functioned in both the homogenous and the interactive area.

“Pope Clement VIII issued a bull (*Decret Romanum Pontificem* (June 26 1603) approving the demand that in every province three schools be founded – namely, grammar, school of philosophy and of theology.

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<sup>6</sup> By introduction of instruments of national political ontology on “endangerment of peoples”, political and confessional oligarchies, today in Bosnia and Herzegovina, are asking that the identity role-models for Croats and Serbs, that is, Catholics and Orthodox living in Bosnia and Herzegovina, are set in Croatia and Serbia (mother country – mother identities), and under their influence of cultural and national oligarchy purify national languages, national historiographies, active institutional and non-institutional forms and contents from interactively-formed elements within them (interactive, adaptive identities). As a reaction to those demands and that practice, Bosniak political and confessional oligarchy is working on networking of Bosnia and Herzegovina with the Arab countries and on islamization of Muslims in Bosnia and Herzegovina, with the aim of changing the peculiarities of the Bosnian Muslims’ identity in the sense of making it more rigid in religious and cultural sense.

Franciscan education classified schools according to kind and degree. The following kinds of schools were differentiated: grammar (ranking as high schools with the task of providing the basic forms of education), philosophical or schools of logic and theological (moral theologies or dogmatism). Schools were classified as provincial (*studia provincialia*) or general (*studia generalia*), according to the degree” [Ibid., 29].

The very content of subjects was largely determined by and compatible with Christian doctrine, which means that it served the establishment and strengthening of Christian dogmatism. The aforementioned Pope also determined in the bull which subjects should be taught in the general schools.

“He allowed three professors to teach in each of the general schools. The first taught the first book of the Four Books of Sentences by Peter Lombard (called *Magister Sententiarum*), the second taught the second and third and the third taught the fourth book. In Franciscan schools of the 13th and 14th centuries, a significant role was played by the *Summa* of the first teacher of the Franciscan Order, Alexander of Hales, who at the Paris University, despite the dominant platonic orientation of Peter Lombard, promoted Aristotle’s dialectical method and included many Aristotelian elements into the *Summa*.” [Ibid., 29-30].

In an extraordinary study on this topic, Academician Dr. Serafin Hrkic, OFM, clearly names the Franciscan order and Bosna Argentina as the leaders of educational life of Catholics, emphasizing in several places the conflicts between this Order and bishoprics, their decisions and intentions in this area. (This tension has remained present till this very day). Since wars and conflicts divided Bosna Argentina into three parts (1757), governed by different political authorities, education was also of a different character.

“In a cultural sense, in the part of the provincial governed by Vienna, and later in the part of the provincial governed by Venice, schools and educational institutions were established in accordance with the guidelines of the Council of Trent (1545 – 1563) and constitutions of the Franciscan Order, which, until then, had mostly depended on initiative and ingenuity of individual monastic administrations. In the part of the provincial under Ottoman rule, Franciscans had only three monasteries (Kraljeva Sutjeska, Kresevo, Fojnica) and had no education institutions, but continued to send their candidates abroad, or to the provincial schools governed politically

by Vienna or Venice. For that purpose, a school of philosophy was founded in Slavonski Brod (1712 – 1783), so that the candidates from Bosnia would not have to travel far.” [Ibid., 251].

Friar Ilija Starcevic from Orasje founded in 1823 the first common Croat primary school. Most credit for spreading education and literacy amongst the Catholic population belongs to friar Ivan Jukic and later friar Grga Martic. One of the best known primary schools founded by traders is in Livno and has existed from 1820. “Secondary schools were, for the first time, mentioned in the early 18<sup>th</sup> century in monasteries of Fojnica, Kresevo and Sutjeska.” [Papić, 1972: 31] *The General Catholic Schools* were founded in monasteries of Siroki Brijeg and Guca Gora near Travnik (relocated later to Visoko). According to Mitar Papić, friar Grga Martic founded the school in 1865, which was attended by both boys and girls [Ibid., 32]. *The Junior High School of Fojnica* was founded in 1874.

In the mid-sixteenth century, Jews exiled from Spain and Portugal started settling all around Europe, including Bosnia and Herzegovina, where they introduced the Spanish language and literacy. Some reliable data state that only one primary school had existed prior to the late period of the Ottoman rule, which was mentioned in *the Bosnian Herald* (Bosanski Vjesnik) in 1866. There is also data on a Jewish religious school, founded around 1768. Sephardic Jews arrived to Bosnia and Herzegovina having been exiled by Christians from Spain and Portugal (in the 16<sup>th</sup> century), mostly from Cordoba and Toledo, places in which they had had inter-cultural development with other confessions, primarily with Islam.

Sephardic Jews were mainly educated religiously, in the spirit of teachings of the Bible and Talmud. With the help of a language named *Ladino*, a mixture of Hebrew, Arabic and Spanish, they were able to quickly adjust to the environment of Bosnia and Herzegovina and to create works of art and literature. The first Jewish community was founded in Sarajevo in 1565, which at the time served as the educational centre for Sephardic Jews; while the first synagogue was built in 1581 in Sarajevo (and met its doom in Eugene Savoy’s tilt. Three centuries later, during the period of Austro-Hungarian rule, Ashkenazi Jews settled and formed their own municipality, practicing different cultural habits and language (German). A number of Sephardic children were schooled in Constantinople, where they studied Turkish and other oriental languages, thus acquiring education necessary for clerical work in Bosnia and Herzegovina. Other Sephardic

children attended *Meldar* (primary school), studying Talmud, Torah and Hebrew.

## 2.2. Works on Logic in Bosnia and Herzegovina Written in Arabic

In order to gain a comprehensive insight into the origin, development and kinds of works on logic written in Arabic in Bosnia and Herzegovina, being familiar with the origin, development and ways works on logic, logical problems, logical applications in theological apologetics and legal practice (the Sharia law) were handed on, through quite a long period of development of spiritual and cultural world of Islam, is a necessity.<sup>7</sup> Works on logic written in Arabic in Bosnia and Herzegovina directly take their pattern, in terms of content and form, from the commentaries on *Aristotelian logic* and *Porphyrian isagogics*<sup>8</sup> (logical classification of propaedeutic study) written by the Arabian logicians (*al-Farabi*, *al-Kindi*, *Ibn Sina / Avicena*, *Ibn Ruzda / Averro*); that is, Arabic commentaries of these comments (written by their pupils, *al-Urmevi*, *al-Khatibi*, *al-Ebheri*, *al-Fenari*, and others).

This *writing based on a preexisting pattern* (rewriting, note-taking, adjusting, sectioning, interpreting, recommending, interpretative adjusting)<sup>9</sup> or *commenting* is not only significant for the works written in the East, in Arabic, but also for commentaries written in Greek, in the neo-Platonic school, both in the pagan Athens and in Christian Alexandria; written by Porphyry, Ammonius, Dexippus, Philiponos, Simplicius, Iamblichus, David, Elias and other followers of Plotinus. Both here and there existed the form of such *pattern based commentary* which included the well-established practice of accepting and passing over a number of

<sup>7</sup> This study focuses solely on the main works of Bosnian commentators and we assume the reader has the information on the status of Aristotelian logic and Porphyry's isagogics within the Islamic cultural tradition determined by Quran, Hadiths, the Sharia law, theological discussions etc., at the disposal.

<sup>8</sup> The Terminological coin "Porphyry's isagogics", which I have introduced here, can be applied in the sense of "classification of propaedeutic study" which became, after Porphyry's *Isagoge* a canonic part of logical discussions which obligatorily preceded Aristotelian logic and was placed in the introduction of the *Organon*.

<sup>9</sup> See footnote No. 17

*constant* questions and answers, from one commentary to another, on: what is (the real, the first, the main) issue of the work commented, where is the (real) beginning of the discussion, which is the real title of the work, what is the (genuine) content, what are the (true) meanings of some notions, why did the author of a work or discussion introduce new notions, what should the relation towards the whole and parts of Aristotel's work be, what were the reasons for writing a work in one way or another, etc.<sup>10</sup>

<sup>10</sup> Greek commentators used some minor terminological changes to pass on almost entire sections of the pattern to be commented. For example, a significant number of Aristotel's writing entitled *Categories* starts with an introduction which contains the ten inevitable questions, answered in that introduction in the way that an introduction to a commentary is longer than the writing commented on! For example, introduction to Amonious' commentary (435/445-517/526) entitled *Prolegomena to Ten Categories according to Philosopher Amonious* (Greek: ΠΡΟΛΕΓΟΜΕΝΑ ΤΩΝ ΔΕΚΑ ΚΑΤΗΓΟΡΙΩΝ ΑΠΟ ΦΩΝΗΕΣ ΑΜΜΟΝΙΟΥ ΦΙΛΟΣΟΦΟΥ) states: "Since our ask ten questions which will help us explore in succession. First: what is the origin of names of philosophical schools? Second: how should the works of Aristotle be sectioned? Third: From which point should the study of Aristotle's writings begin? Fourth: What is the evident benefit of studying Aristotle's philosophy? Fifth: What should serve as guidance towards that goal? Sixth: How should a listener of the philosophical speech prepare himself? Seventh: What is the form of such exposition? Eighth: Why was the philosopher deliberately indistinct on certain points? Ninth: How many and what kinds of presuppositions should one have to be able to study Aristotle's writings? Tenth: What should the interpreter of those writings be like?" [Translation according to the original text: Ammonius In Aristotelis Categoriae Commentarius. Commentaria in Aristotelem Graeca IV 3, Berlin 1891. Translation: Nijaz Ibrulj.] The ten questions, although distantly related to Aristotle's *Categories* had been passed on until the late 6<sup>th</sup> century, through the works of other Greek commentators, as a constant part of the commenting patchwork. Only after this section, which was supposed to provide an introduction to the entire philosophy of Aristotle and its origin (τησ' Αριστοτέλους... γενέσθαι φιλοσοφίας), does the first theme of *Categories* appear, together with a comment. The ten questions and such form of organization of the comments was taken over by Philoponus in his scholia on Aristotle's categories (cf. Philoponi in Aristotelis Categoriae Commentarium. Vol.XIII), Simplicius in his commentaries on Aristotle's Categories (cf. Simplicii in Aristotelis Categoriae Commentarium. Vol.VIII), and by others. Arabic commentators of Aristotle's *Categories* do not contain such an introduction, which is completely lost in Latin commentators (Cf. Averroes' Middle Commentaries on Aristotle's Categories and De Interpretatione. Princeton University Press, 1983).

Hasan Kafi Pruscak (*Hasan Kāfi b. Turḥān b. Dāwūd b. Ya'qūb az-Zībī al-Āqḥiṣari al-Bosnawī*, b. 1544, Prusac, d. 1615, Prusac) is considered to be the most significant author in the field of logic in Bosnia and Herzegovina, who wrote in oriental languages during the Ottoman occupation of the country. Several sources say that he was considered highly educated in several fields of science and was a well-known commentator of different works. In the field of oriental studies in Europe, Hasan Kafi was known for his work *Basis of the Wisdom of How to Arrange the World*, which has been translated into French, and which had been presented by the author himself at the sultan's court in Istanbul/Constantinople, in Arabic. Immediately after that, the author was given a recommendation to translate the work into Turkish. That piece of writing led the sultan to give him a province in Prusac, which was Pruscak's lifelong pension. "As a professor, he writes comments and glosses on issues of linguistics, even logic. As a theologian, he writes about the basic postulates of the Islamic belief. As a quadi, he is involved in legal issues. As a thinker, in the domain of politics and society, he clearly and openly criticizes the shortcomings of the society and recommends ways of healing. Finally, as a writer, he writes down significant data on himself as well." [Ljubović, Nametak, 1999: 10].

Hasan Kafi Pruscak is the author of two works in the field of logic: KAFI'S COMPENDIUM OF LOGIC (*Muḥtaṣar al-Kāfi min al-mantiq*) was written in 1580. A copy of the work is preserved in Gazi Husref-bey's Library in Sarajevo; the size of the manuscript being 19,5 x 13 cm. In this work, written as a textbook typical of Islamic tradition, Kafi deals with the issue of what logic is and what is its field of study, methods and tasks. According to him, science ('ilm) is, "... a tool with the property of law, and its use secures the mind (dihn) from mistakes in thinking (fikir)" [Ljubović, 1996: 65]. In that same place, the entire insight into Kafi's Compendium on Logic can be found:

1. *On Words (fi-al alfāz)*;
2. *On Outcomes of Notions – the Five Universalias (fi mabādi' at-taṣawwurāt-al-kulliyāt)*;
3. *On Outcomes of Notions – Interpretative Speech (fi maqāṣid at-taṣawwurāt al-qawl aš-šāriḥ)*;
4. *On Outcomes of Claims – Judgment (fi mabādi' at-taṣdīqāt al-qāḍiyā)*;



5. *On Goals of Claims – Syllogisms* (*fī maqāṣid at-tasdīqāt al-qiyās*),
  - a. *Apodictic* (*al-burhān*),
  - b. *Dialectics* (*al-ğadal*),
  - c. *Rhetoric* (*al-ḥitāba*),
  - d. *Poetics* (*aš-ši‘r*),
  - e. *Sophistic* (*al-muğālaṭa*)

COMMENTARY ON “KAFI’S COMPENDIUM OF LOGIC” (*Šarḥ Muḥtaṣar al-Kāfi min al-mantiq*), was written in 1583. Apart from an extensive introduction, this work contains the following parts:

1. *On Words* (*fī-al alfāz*);
2. *O Outcomes of Notions* (*fī mabādi‘ at-taṣawwurāt-al-kulliyāt*);
3. *On Goals of Notions* (*fī maqāṣid at-taṣawwurāt al-qawl aš-šāriḥ*)

Ljubovic states to have found this work at the Cambridge University Library, while “motifs for writing this work... are the same as before, that is, to help pupils overcome the issues of logic” [Ibid., 36]. This work, just like all others, relies on the Arab logicians like Ibn Sina and others.

COMMENTARY OF THE SUNNY TRACTATE (*Šarḥ ar-Risāla aš-šamsiyya*) was written by Mohamed Son of Musa Allamek. He was born in 1595 in Sarajevo, graduated at Gazi Husref-bey’s Madressah, educated in Istanbul at the Sahn-i Seman educational institute, and appointed the supreme judge in Help (Syria) in 1634/35. He wrote all his works in Arabic which he also taught in different schools, together with logic. The Commentary consists of:

1. Introduction (*al-muqaddima*) which consists of two discussions (1) On the Essence of Logic and (2) On the Subject of Logic;
2. The First Article (maqala): On Individual Notions with Six Subsections: (1) On Words, (2) On Meanings, (3) On Universalia and Particularities and (4) On Definitions.
3. The Second Article, with an Introduction (On the Definition of Judgment and Its Segments) and three Subsections: (1) On Categorical Judgment, (2) On Conditional Judgments and (3) On Rules of Judgment (the direct forms of concluding)
4. The Third Article, On Syllogism, with five Subsections: (1) Definition, Its Parts and Forms, (2) On Mixed Syllogisms (Modal), (3) On Connected Syllogisms, (4) On Separated Syllogisms and (5) Supplementary on Syllogism



### 5. Conclusion (hatima), with two discussions: (1) On Content Syllogisms and (2) On Segments of the Science

Allamek's commentary of the work *The Sunny Tractate* (written by *Al-Kazvani al-Katibi* and which, according to Ljubovic is one of the most significant works of the later period in the field of logic in Arabic) was used as a textbook in logic in some of the senior-level madressahs [Ibid., p. 41].

THE NEW COMMENTARY OF THE SUNNY TRACTATE was written in 1690 by Mustafa Ejubović-Sejh Jujo who was "our most fruitful and most prominent writer in Arabic" [Ljubović, 1996: 42]. He was born in 1651 in Mostar. The form and content he uses [Ibid., 47 - 49] completely goes along with Allamek's *Commentary*, although the pattern of commenting, in both cases had probably been taken from the form and content of the *Sunny Tractate* itself, which was written by Nedzmudin al-Kazvani al-Katibi (d. 1295).

In the Ottoman Empire, logic was studied and taught, together with the basics of the Arabic grammar, speculative and scholastic theology of astronomy (*kalam*), geometry and rhetoric, in junior-level madressahs, known as *ibtida-i haridž*. [Ibid., 180]. "In most cases, Al-Ebheri's Isagoge (*Īsāgūghī*) was used as the basic textbook or some other work of the similar kind, like Kafi's Logical Compendium, written by Hasan Pruscak exclusively for his pupils, or some other "short" commentaries. At senior-level madressahs (*dahil-madressahs*, *tetims*, etc.), which are close to our notion of secondary education, logic was also a compulsory subject, for the study of which more demanding works were used, most frequently the already-mentioned Al-Katibi's Sunny Tractate (*ar-Risāla aš-šamsiyya*) or some of the comments on this work. The highest degree of education (*sahn madressahs*) treated logic not as an individual subject, but as a part of speculative theology – apologetics." [Ibid., 180].

### 2.3. Works on Logic in Bosnia and Herzegovina Written in Latin

In Bosnia and Herzegovina, works on logic written in Latin, neither in the sense of form or content, have the character of commentaries. They do not directly rely on Aristotelian logic or Poryphian isagogics (classificatory propaedeutics) but mostly on medieval resumes, summaries, logical

summae or simmulae of the Christian writers, who for their needs adapted parts of Latin scriptures related to everything that was acceptable in Aristotelian logic (epsteme). The most prominent medieval figures mentioned here are Duns Scotus, Petrus Hispanus, Petrus Lombardus and Thomas Aquinas but their thoughts are taken as a part of the accepted science of logic, not as a part of their teachings within logic.

The following manuscripts from Kresevo, dealing in most part with logic, systematized by Academician Dr. Hrkac, should be mentioned:

MANUSCRIPT 3-III-5: PHILOSOPHIE NOTIONES. The text contains about 80 pages. No data on the author is available other than I.M.S. initials written on the top of the page. Based on a thorough linguistic analysis Hrkac concluded that “it was undoubtedly written by our man.” [Hrkać, 1998: 59] A special edition of the manuscript was published in 2000 in Mostar, since the “content of this manuscript stands out from all other manuscripts from the mentioned monasteries... Other manuscripts either deal only with individual philosophical tractates, or several joint tractates. Only this one, in a way, is an outline of the entire matter of logic and ontology. It was written in the form of questions and answers and contains a very short introduction to psychology (only one text-page)” [Hrkać, 2000: III]. The manuscript is the work of a lecturer or philosophy professor, and it is his conscript of lectures for a year. In it, an ordered approach in logical and cognitive-theoretical sense to the whole of cognitive questions, in which logic dominates, can be seen.

MANUSCRIPT 3-III-23: INTRODUCTIO ET PROLEGOMENA IN UNIVERSAM ARISTOTELIS LOGICAM. The manuscript contains about 236 unnumbered pages. The name of an unfamiliar author is written on the first page: I. Pluit. According to the available content, the monument comprises of two main parts: 1. Introductio in universam Aristotelis logicam, which contains five sections with the total of 50 headings, all of which focus on predicates, statements and their elements, on the kind of statements and modules, and on syllogism and method, 2. Prolegomena in universam Aristotelis Logicam, which consists of nine headings, some in the form of questions on nature of reason and mind and on the nature of logic as science. [Hrkać, 1998: 65].

MANUSCRIPT 3-III-25: LOGICA. METAPHYSICA. PNEUMATOLOGIA. The manuscript contains 436 written, unnumbered pages. The page 182 states: Finis Logicae perscriptus per me Fratrem Blasium Pardusic

Anno 1877 Domini Mense junii. First part of the manuscript focuses on logic, second on metaphysics and third on pneumathology. In the segment on logic, the first part deals with notions and judgments, the second with statements and third with method and proof. [Ibid., 69].

MANUSCRIPT 3-IV-29: LOGICA UNIVERSA. The manuscript contains only 48 pages written in small letters. Top of the title page contains the inscription: Prima pars Philosophie, middle of the page: Logica universa, and bottom of the page: Tomus primus Die 22 Septembris Anno ab Incarnatione 1832. The following is written at the end of the page 48: Ego Frater Jacobus Ivankovich finivi hucusque die ultima Martii Milesimi octingetesimi trigesimi tertii [Ibid., 102].

Manuscripts on logic preserved in the Kraljeva Sutjeska monastery that should be mentioned here are:

MANUSCRIPT 16. LOGICA. The manuscript contains 652 pages, written by friar Antun Zderic from Vinkovci, who was a philosophy lecturer in Slavonski Brod from 1735 to 1738. The manuscript consists of two parts. First part was written in small letters on full 42 pages all dealing with *Elementa logicae parvae seu summularum*. The second part is entitled Enchyridion philosophicum in universam Aristotelis logicam. Disputationes ad mentem subtilis doctoris Ioannis Duns Scoti [Ibid., 163].

MANUSCRIPT 17. LOGICA. The manuscript contains 374 unnumbered pages. The first page contains the inscription: Spectat ad quotidianum usum Patris Philippi Kordic m. pr. Anno Domini 1879. Logica San-Severino [Ibid., 170]. It deals with teachings on syllogism, methodology, and criteriology.

MANUSCRIPT 25. SYSTEMA PHILOSOPHIAE FUNDAMENTALIS SIVE LOGICA. The manuscript contains 76 unnumbered pages. It was written in Czechoslovakia. The title page contains the inscription: descripta per...Kopich (name erased) in venerabili conventu Nitriensi ad SS.AA.Petrum et Paulum. The last page contains the inscription: 1831 [Ibid., 181]. The first part is entitled *Logica theoretica* and it deals with definition, evidence and syllogism, as well as with the sophist presentation of evidence.

MANUSCRIPT 44B. LOGICA. The manuscript contains 153 pages. It opens with: Philosophia sive Logica perscripta per fratrem Ioannem Turbic de Tesevo clericum simpliciter professum Anno Domini 1879. Sutiskae die 24 octobris Anno Domini 1880. Written on page 101 is: Ego

Petrus Turbić m.p., and on page 117: Ego fr. Raphael Barisic de Ocevija m. p. a. 1880 die 5 octobris [Ibid., 191]. The part of the manuscript stating *Pars prima: Logica formalis* contains sections on ideas and notions, on judgments, propositions and syllogism.

MANUSCRIPT 53. INTRADUCTIO IN PHILOSOPHIAM. The manuscript contains 126 pages, written by friar Mihael Franjkovic from Vares in 1866/67. It deals with the subject and notion of logic, judgments and syllogism. [Ibid., 193].

Some of the manuscripts on logic, preserved in the Fojnica monastery, include:

MANUSCRIPT 65. LOGICA. Academician Hrkic reports that the title page of this well preserved and readable manuscript contains the following inscription: Logica auctore I.B.Bouvier. Descripta per fr. I. Vujcic, lectorem philosophiae in Livno 1874. Reliquit P. Hieronymo Vladic Lectori Philosophie et suo succesori. One can see from the very content that this is a modern interpretation of medieval doctrine proprietatem terminorum, which is preceded by discussions on definition and division, on judgments and their classification, etc. [Ibid., 249].

The very content of the above-mentioned manuscripts, both in Arabic and in Latin, shows that the philosophy (logic) lecturers in monasteries focused primarily on syllogistic and formal logic, that is on instructions on the basics of logic in which the students were introduced to the notion, judgment, evidence, syllogism and method. Some newer manuscripts in Latin introduce into lectures the elements of medieval logic (*Proprietates Terminorum*) and, later, Cartesian logic. The manuscripts show and provide evidence of the content of the subject of logic taught at lower levels, and which was available in Latin in this region.

In general, the *educational paradigm* in which Muslim teachers and students participated was compatible with the educational paradigm of Catholic teachers and students in Bosna Argentina, in their colleges (whether grammar, philosophy or theology) which were founded in parts of the Provincial under the administration of Vienna and Venice.<sup>11</sup> Catholic

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<sup>11</sup> This formal compatibility within educational systems of different confessional communities in Bosnia and Herzegovina is taken by Amir Ljubovic as evidence that the "...case here is of a unique history of logic, existent in two parallel flows or language expressions and cultural or language expressions: one which developed in

students from Bosna Argentina under Ottoman rule, had studied and accepted this paradigm during their schooling abroad, only to later introduce it into educational practice in monasteries (Kresevo, Fojnica, Kraljeva Sutjeska), upon their return. During their stay in foreign countries, they were exposed to leading figures, texts and atmosphere of the European education of the age, all of which had influenced them greatly.

Istanbul/Constantinople (in some instances, Baghdad and Syria) and Rome (in some instances, Vienna and Venice) may be considered regional centers of intellectual gravity and production of educational paradigm and practice which strongly attracted people from Bosnia and Herzegovina to different sides. It is also possible to see that on that road of education, *schooling and training for the primary vocation of religious teachers and pedagogues*, those people accepted in the centers both the theoretical and practical part of education achieved by that point in history, as well as the norms of civilization that had been determined in ancient heritage through *Aristotelian logic* and epistemology and *Porphyrian isagogic*. Hence, that heritage came to Bosnia and Herzegovina from two directions, written in two languages, Arabic and Latin, and has been preserved, as we shall see, to the very day.

### 3. Bosnia Porphyriana<sup>12</sup>

Porphyry [grč.Πορφύριος ; lat. Porphyrius] is described by some authors described as “the last of the Greek philosopher” [Smith, 1974: xi; Peters, 1968: 286], or as a great Hellenistic erudite and pagan philosopher, “the most intelligent of philosophers, although the most fierce enemy

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Arabic and within the Arab-Islamic spiritual and cultural tradition, and the other in Latin (in a significantly smaller scope and in languages of the peoples), within the West-European philosophical tradition” [17, p.172]. One can only tentatively speak about “creations” in the field of logic. Perhaps it would be more precise to say that there existed *two flows of understanding of the ancient philosophical and scientific heritage*, which were *interactive* only during an *intermezzo* of medieval cultural, political and civilization interaction between philosophy and theology.

<sup>12</sup> At this point and for the first time, I introduce into our spiritual life the term *Bosnia Porphyriana*, with the aim of expressing the centuries-long presence of Porphyry’s work *Isagoge* in education and in logical thought of Bosnia and Herzegovina, regardless of religious and ethno-national affiliation.

of Christians.” [Augustin, 1995: 72-73]. Porphyry wrote a book entitled *Κατὰ Χριστιανῶν λόγοι* “Evidence against Christians”, better known as “Against Christians”, as translated from Latin *Adversus Christianos*, which was burnt in 448 by an edict issued by emperors Valentinian III and Theodosius II.

That was not a reason to forget or reject Poryphyry, either in the East or in the West. His attempts to reconcile in Plotinus’ Academy Plato’s and Aristotle’s followers through hermeneutics of his works, as well as his comments on Plato and Aristotle, became and have remained a pattern for other comments that later appeared. But, Porphyry as an educator and a great erudite who persistently applied logic (the so-called “emperor logic”, “Roman logic”) to all aspects of spiritual and cultural life, by virtue of his comments had become a pattern for the use of this philosophical form. It is his comments of manuscripts on logic and philosophy that are a reason to study his opus even today, not his struggle to preserve the state (Roman) faith (polytheism) and laws, not his struggle against the formation of monotheistic beliefs (Christianity).

Porphyry’s works (he wrote about 75 of them) came to life 1.700 years ago, in the 3<sup>rd</sup> century AD. From the time of Hellenic and early-Christian era, through the medieval period of scholasticism, until today, they remain in the center of attention: they were translated into ancient languages at first (Aramaic, Syrian, Hebrew, Latin) and then into modern languages; they have been commented and published. Already in the 3<sup>rd</sup> century, Porphyry had become a leading figure for commenting the works of Plato and Aristotle, for both commentators from the West (it would suffice to see the *curricula* of the European universities as early as 12<sup>th</sup> century until today) and from the East (see the list or index of books of Greek authors, as well as *Fihrist* compiled by Ibn al-Nadim), especially those works which concern logic.<sup>13</sup> “As a commentator of Plato’s and Aristotle’s pieces working

<sup>13</sup> Aurelius Augustinus, one of the most important apologetes of Christianity in 4<sup>th</sup> century AD, stated in his work *De Civitate Dei* that Porphyry is “the most intelligent of all philosophers, although the most fierce enemy of Christianity” (doctissimus philosophorum, quamvis Christianorum acerrimus inimicus) [16, pp.72-73]. He called him “a great enemy of Christianity” (Chistianis inimicissimo) or “Photinian heretic” (Photinianus haereticus) [16, pp.76-77], for acknowledging Jesus Christ as a person, not divinity; for Poryphyry, Hebrew God Jahwe יהוה (The One Who Is) was a true and acceptable example of monotheistic God.



and writing in 3 century AD, who was preceded by comments of Galenus, Aleksander Afrodisius, Celsus and other, Porphyry became an established figure for this genre of philosophy with commentators in the period from the 4<sup>th</sup> to the 6<sup>th</sup> century AD, like Ammonius, Iamblichus, Dexippus, Simplicius, David, Elias, Stephanus and other. Some of them had an overt pagan orientation, like in the Athens school, some were between the boundaries of paganism and Christianity, like in Rome, and some were Christian students at the neo-Platonic school, active in, for example, Alexandria. Their reception of Plato's and Aristotle's works had varied, but when Porphyry's comments surfaced, a standard was established and followed since then. " [Ibrulj, 2009: msc.].

Because Porphyry's work *Isagoge* served as *an active, common educational agenda* in educational institutions of Bosnia and Herzegovina, a special chapter will be devoted to that phenomenon in this paper. In connection to this, Dr. Nijaz Ibrulj's translation of *Isagoge* from Classical Greek into Bosnian, published in Sarajevo in 2008, is important to mention [Ibrulj, 2008: 1-50]. The philosophical tradition of Bosnia has received Porphyry's *Isagoge* in two languages, *Latin*, in the works of Catholic professors of theology who teach philosophy-related subjects at faculties of Bosna Argentina, and *Arabic*, in the works of Bosnian mufti, khadi and ulemma, educated in Istanbul / Constantinople and some other university centers of the East.<sup>14</sup> What is important to note is that exactly this Porphyry's work was in many cases used as the primary and common source for both of these versions: Arabic commentators of Aristotle approached this work the same way as medieval scholastics (primarily through Boethius' 5<sup>th</sup> century translation).

The original Greek text  $\text{Εἰσαγωγή}$  was not known in Bosnia and Herzegovina, the same way it was unknown to the Arabic commentators of Aristotle or Plato or Porphyry, who were of the Islamic confession and tradition of Quran. Arabic commentators who were not Christians or Jews had an insight to Syrian, Aramaic or Hebrew translations of the Greek manuscripts, which they had obtained mainly through Nestorians, Christian translators from Syria. Greek texts were translated from Aramaic and

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<sup>14</sup> Data on authors and works on logic from this period, written in Arabic are taken from Amir Ljubovic's work *The Works in Logic by Bosniak Authors in Arabic* Sarajevo: Orijentalni institut. 1996.



Hebrew into Arabic, that is, into Persian.<sup>15</sup> Commentators like Al-Farabi, Al-Kindi, Ibn Sina (Avicenna), Ibn Ruzd (Averroes) referred to those texts in their comments. Later, around the year 1200, the texts were translated into Latin, first in Toledo and then in Cordoba.<sup>16</sup> “A very important, if not decisive role in presenting and passing on the Hellenic heritage to the Arabic world, especially of logic, belongs to Christian sects from Syria and Persia, Nestorians and Monophysites, who greatly contributed to the translation of discussions on logic into Syrian and Persian, and then into Arabic.” [Ljubović, Nametak, 1999: 26].

It was available to Bosnian students of Catholic faith at lectures in Rome, in the Latin language (probably Boethius’ or Marcellus’ translation). They were also exposed to the classic commentaries in Latin, for example, Ammonius, Elias, David, Aleksander Afrodisius, Simplicius, Philoponus. On the other hand, Bosnian students of Islamic faith, who studied in Constantinople, gained information about this text in Arabic, apart from having been acquainted with the commentaries of Arabic philosophers, primarily Avicenna and Averroes, who were the leading figures in interpretation of works they studied, that is, in the works of their students like Al-Ebheri, Taftazani, Al-Fenari, Al-Urmevi, Al-Kazvani.

### 3.1 Porphyry’s ISAGOGE in Bosnia and Herzegovina, in Works Written in Arabic

The most important work for the reception of Aristotelian logic written in Arabic in Bosnia, is *Isagoge* (*Īsāgūgī*), written by an Arabic commentator

<sup>15</sup> See: Tony Street: *Arabic Logic*. [in]: Handbook of the History of Logic. Volume 1. Greek, Indian and Arabic Logic. Edited by Dov M. Gabbay and John Woods. Elsevier, North Holland, 2004. pp.523-597. Because of many cases of reservation in connection to uncritical usage of the syntagm Arabian Logic, Tony Street holds necessary to make the title precise: ‘Peripatetic logical writings in Arabic produced in the realms of Islam between 750 and 1350, with special reference to the syllogistic’ (p.526). See also: Lagerlund, Henrik: *The Assimilation of Aristotelian and Arabic Logic up to the Later Thirteenth Century*. [in]: Handbook of the History of Logic. Volume 2. Mediaeval and Renaissance Logic. Edited by Dov M. Gabbay and John Woods. Elsevier, North Holland, 2008. pp.281-346.

<sup>16</sup> See: Burnett, Charles: *The Translation of Arabic Works on Logic into Latin in the Middle Ages and Renaissance*. [in]: Handbook of the History of Logic. Volume 1. Greek, Indian and Arabic Logic. Edited by Dov M. Gabbay and John Woods. Elsevier, North Holland, 2004. pp. 597-607.

of Aristotelian logic Esirudin al-Ebheri (d. cca 1256), which was a well-known compendium of logic in the East. The work seems to have had the strongest influence on commentators of the Porphyry's work. "It is difficult to provide the exact number of comments, supercomments and glosses written about this work (all the collections of Oriental manuscripts in the world have not been catalogued as yet), but it is quite certain that the number exceeds two hundred. That is probably the most frequently commented work on logic in Arabic, which was used for a long period of time, be it the text itself or only some of the more successful commentaries, as a textbook at different levels of education." [Ljubović, 1989: 217].

It should be mentioned that Dr. Amir Ljubovic holds that this work is neither an adaptation nor commentary of the famous Porphyry's work *Eisagoge*, but rather an original writing which talks about the same topic – the five universalia, in a concise manner, and that Porphyry's term *Īsāgūgī* was only borrowed as a title for the introductory part. [Ibid., 218-223]. This work was commented by all Bosnian writers who wrote about logic in Arabic. However, the domain of this perception was determined by educational goals: a new atmosphere in Bosnian madressahs was brought in by the teachers who had been educated in Istanbul/Constantinople and who, upon their return to the country, changed the old way of teaching – some theological matters were to be described and explained to students on the basis of rational reasons.

COMMENTARY ON ISAGOGE (*Šarḥ Īsāgūgī*) or COMMENTARY OF "ESIRI'S TRACTATE ON LOGIC" (*Šarḥ ar-Risāla al-Atīriyya fī al-mantiq*) was written in 1682 by Mustafa Ejubovic (b. 1651 in Mostar, d. 1707 in Mostar). It is a commentary of a well-known work on Logic in the East – *Isagoge* (*Īsāgūgī*), written by Esirudin al-Ebheri (d. 1256). Contents of the work:

1. *Isagoge*, p. 6 – 24, containing short tractates on words, meanings of words, relationship between words and ideas, on notions and, especially, about the five universalia (kind, gender, characteristics and accident),
2. On Interpretative Speech (*al-qawl aš-šāriḥ*), p. 24 – 27, that is, on rules of forming definitions and descriptions
3. On Judgments (*al-qaḍyya*)
4. On Syllogism, (*al-qiyaṣ*)
5. Apodictic (*al-burhān*)

6. Dialectics, (*al-ğadal*)
7. Rhetoric (*al-ḥitāba*)
8. Poetics (*aš-ši'r*)
9. Sophistics (*al-muğālaṭa*)

A USEFUL GLOSS WITH “AL’FENARI’S GLOSSES” FOR ESIRUDI’S TRACTATE ON LOGIC (*Hāšiya mufīda li al-Fawā’ id al-Fanāriyya ‘ alā ar-Risāla fī al-mantiq*«) was written by Mustafa Ejubovic (b. 1651 in Mostar, d. 1707 in Mostar). The work was completed in 1692 oju je napisao Mustafa Ejubović (1651 u Mostaru-1707 u Mostaru). The gloss (*hāšiya*) was completed in 1692 and contains the author’s notes on margins, all written with a different intention (note taking, interpretations, commenting). [Ljubović, 1996: 45].

UNCOVERING SECRETS IN COMMENTS ON “ISAGOGE” (*Faḥ al-asrār fī šarḥ al-Īsāgūḡī*). Author of this work was Muhamed Cajnicanin (b. 1731 in Cajnice – d. 1792 in Sarajevo). From 1781 until 1783 he lectured at the Djumisic Madressah in Sarajevo and was named Mufti of Sarajevo twice. About three quarters of this comment are exactly the same as comments in the work of Mustafa Ejubovic, which means that a significant part of the text was simply rewritten. At this point, Ljubovic states the following: “Although the entire opus in Arabic in the field of logic of the later period can be described as being in the spirit of idea and forms of the grand predecessors, Muhamed Cajnicanin, that is, ‘his’ work, may be described as typically epigonic.” [Ibid., 55].

COMMENTARY OF THE TEXT “ISAGOGE” BY MULA FADIL UZICANIN (*Šarḥ matn Īsāgūḡī li mawlā al-Fāḍil Ūžičawālī*). Author of this work is Fadil Uzicanin and no data is available about him. The work was completed in 1657 and it is not possible to accurately and unambiguously determine who Fadil Uzicanin was. The work is considered to be medium-length commentary of Esirudina al-Ebheri’s *Isagoge* [Ibid., 58]. Content of this work is almost identical to the above-mentioned work *Commentary of Isagoge*, written by Mustafa Ejubovic.

UNCOVERING SECRETS IN COMMENTS ON ISAGOGE FROM SCIENCE ON LOGIC (*Faḥ al-asrār fī šarḥ Īsāgūḡī fī ‘ilm al-mantiq*) This work was written by Muhammad the Son of Yusuf Bosnjak. One can see from the contents that the model of commenting is the same – probably taken from Esirudin al-Ebheri’s comment on *Isagoge*. A. Olesnicki found this, as well as the previous work and catalogued it among the Oriental manuscripts. [Ibid., 59].

Without going into details about the content of these works – which Prof. Ljubovic has done in his book – it will suffice to say that this work influenced the approach to logic in Bosnia, namely by writers who wrote in Arabic; leaving open a possibility that it was an individual research and original analysis of the same problem area.

A comparison of *Commentary on Isagoge* (1682) by Mustafa Ejubovic and *Kafi's Compendium on Logic* (written in 1580) shows that the form and content had been completely taken over, which leads to a conclusion that there had existed a primary model of content and form of the subject of logic, which was simply taken over and passed on with little changes to formulation. It is difficult to determine when and how that local stereotype emerged in Bosnia and whether Kafi was the first link in the chain, but it is clear that the stereotype can be traced back to the Arab commentators Ibn Sina (Eastern school) and Al-Farabi (Western school) and to some other Arab commentators of Aristotle and Porphyry. In fact, it is possible to determine the genesis of the comments<sup>17</sup>: (1) *on the first place* were Greek comments written in the period from 1st to 5th century by Alexander Aphrodisius, Porphyrius, Ammonius, Syrianus, Dexippus, Iamblichus, Simplicius, Philoponus; (2) *on the second place* were Latin (Themistius, Boethius) and Greco-Byzantine comments (David, Elias, Sophoniae, Michael Ephesius), written in the period from 5th to 11th century; (3) *on the third place* were the Arabian comments of Aristotle and Porphyry, written by Al-Kindi, Al-Farabi, Ibn Sina, Ibn Ruzd, in the period from 11th to 18th century; (4) *on the fourth place* were Arabian comments of their Arab pupils (*Taftazani, al-Fenari, al-Ebheri, al-Urmevi, al-Kazvani*), and (5) *on the fifth place* were Bosnian comments of Arabian comments

<sup>17</sup> Genesis of the comments should not only be spoken of, but it is also important to keep in mind the importance of the different forms of comments. *Commentaria* is the umbrella Latin term which, in a way, covers the differences in approaches to the reception of a work. At least 10 moduses of comments are distinguished with Greek commentators (cf. *Commentaria in Aristotelem Graeca*), like: 1. introduction (εισαγωγή); 2. dialogues (βι διαλόγοι, τὸ διαλογικὸν σύγγραμμα); 3. sentences (ἀφόρμαι); 4. reminders (ὑπομνήμη); 5. retellings (παραφράσις); 6. prefaces (προλήγομενα); 7. interpretations (ἐξηγησίς), 8. aporie and solutions (ἠπορήμενων καὶ λιαίτησ); 9. indicationse (ἀποσημειώσεις), 10. explanations (σχόλια). Each is characterized by its own particularities and they all have something in common (see more in: Nijaz Ibrulj. *Bosnia Porphyriana – a Cultural Metaphor*. Sarajevo, 2009).

written by pupils of the Arab commentators (Kafija, Ejubovic, Opijac, Uzicanin, Bosnjak).<sup>18</sup>

All this is quite far from the original Greek works of Aristotle and Porphyry, which were translated in Arabic around 900. And if we say that neither Ibn Sina (Avicena) nor Ibn Ruzd (Averroes) knew the Greek language and that the works on logic they read were translated by Christian translators from Syria, who had approached these works through the Alexandrian neo-Platonic school in the 5<sup>th</sup> and 6<sup>th</sup> centuries, in which, from the time of Ammonius, Christian students prevailed, it becomes clear why Ibn Sina himself had stopped directing his attention to those texts, focusing instead on the spirit or idea they represented.

### 3.2. Porphyry's ISAGOGE in Bosnia and Herzegovina, in Works Written in Latin

Owing to a dedicated scientific engagement of Academician Prof. Dr. Serafin Hrkac, OFM, a Bosnian Franciscan, and his exceptional knowledge of the Bosnian philosophical heritage we now have information allowing us to reconstruct the presence of Porphyry's *Isagoge* in education conducted in Latin in Franciscan monasteries and high schools.<sup>19</sup> How

<sup>18</sup> Having exhausted the list of data on authors and manuscripts he held important, Amir Ljubovic, in his excellent study (doctoral dissertation), gives the final opinion: "...it can be seen that notwithstanding the different structures and types of works, or more precisely, different mutual identification of questions that are analyzed in certain chapters, sections, subsections, etc., they all (apart from the glosses that represent a special form of individual opus) display common general themes and a clear orientation towards the basic problem area. The second characteristic of all these works, which is also a characteristic of the entire opus influenced by Ibn Sina, is that all the questions treated, regardless of the different classifications, are only parts of the whole of the *Arabian organon* (italics N.I.)" Still, the existence of *Arabian organon* is questionable, the same way the term *Arabian logic*, used for partial inclusion of Aristotle's scripts within corpus of Islamic theological thought which was always given the primacy, is questionable. Many of the so-called critical terms used in this field are a result of counter-factual doxography and creation of conceptual (top-down), rather than individual (bottom-up) analogies.

<sup>19</sup> All data on the manuscripts enlisted and on authors who wrote in Latin, and who belonged to Catholic confessional and cultural circle of Bosnia and Herzegovina and in the period in question are taken from the work of Academician friar Serafin Hrkac: *Philosophical Manuscripts in Latin in Bosna Argentina*. Mostar: Ziral. 1998.

is *Isagoge* present in these works? In most cases, as an introductory part to the Aristotelian syllogistic or as the main part of teachings in logic, which preceded medieval texts (*summe*, *sumulae*) on logic that were studied in these institutions.

*Isagoge* in manuscripts from the Kresevo Monastery:

MANUSCRIPT 3-III-19: COMPENDIUM LOGICAE ARISTOTELIS, ex Organo eiusdem Summulisque Petri Hispani expertum. This is the work of an unknown author – probably scripts of a high school teacher. It can be seen from contents precisely mentioned by S.H. that, in the first book, discussion 2 (*Incipit secundus tractatus*), the author of this textbook or notes deals with predictabilities in Porphyry's sense: *Caput primum*: De praedecabilibus in communi. *Caput secundum*: De genere. *Caput tertium*: De specie. *Caput quartum*: De differentia. *Caput quintum*: De proprio. *Caput sextum*: De accidente. *Caput septimum*: De quibusdam dubiis circa praedicabilia emergentibus [Hrkać, 1998: 61].

MANUSCRIPT 3-IV-16: LOGICA. METAPHYSICA. PHYSICA. Ivan Tometinovic is the author of this manuscript. The First Book (*Liber primus*), which deals with logic, was written in 1785. In the second chapter, (*Caput secundum*), prior to the discussion on Aristotle's categories, the author talks about Porphyry's general notions: De ideis universalibus Porphyrii [Ibid., 85].

MANUSCRIPT 3-IV-21: LOGICA. METAPHYSICA. According to S.H. these are a student's lecture notes. The first part deals with logic (*Logicae pars prima*). In it, in chapter two (*caput secundum*), there is a title: Appendix prima: De universalibus Porphyrii. This is followed by a lecture on Aristotle's categories. [Ibid., 94].

*Isagoge* in manuscripts from the Kraljeva Sutjeska Monastery:

RK. 12B. TRADITIONES IN UNIVERSAM ARISTOTELICO-SCOTICAM PHILOSOPHIAM. The manuscript was written in the period from August 29 1726 to May 28 1729. Friar Filip Lastric from Ocevija (b. 1700, d. 1783) is the author. Problem area has been classified in the discussion (*disputatio quinta - decima*) of the so-called grand logic (*Incipiunt disputationes in Logicam magnam*).

*Disputatio quinta: De universali logico: 1. An detur universale logicum et in quo consistat eius ratio constitutiva? 2. Per quem actum intellectus fiat universale logicum? 3. Quot sunt universalia seu predicabilia?*



De praedicabilibus in particulari-Disputatio sexta: De genere: 1. Utrum genus bene definiatur a Porphyrio? 2. Quomodo genus praedicetur de individuis? 3. Utrum genus posist salvari in unica specie et species in unico individuo?

Disputatio septima: De specie, secundo praedicabili: 1. An species bene definiatur a Porphyrio? 2. Per quodnam constituatur species in esse universalis? 3. An individuum bene definiatur a Porphyrio? An ab omnibus individuis possit abstrahi aliqua ratio communis?

Disputatio octava: De differentia, tertio praedicabili: 1. Quid et quotuplex sit differentia? 2. In ordine ad quid differentia constituatur in ratione universalis et tertii praedicabilis? 3. Utrum differentia includat genus et differentia superiores, et e contra?

Disputatio nona: De proprio, quarto praedicabili: 1. Quod sit proprium et per quid constituatur in ratione quarti universalis? 2. An proprium distinguatur et possit separari suo obiecto?

Disputatio decima: De accidente, quinto praedicabili: 1. An accidens legitime sortiatur rationem universalis seu quinti praedicabilis? In qua et de eius definitione discutietur. 2. Quibus naturis conveniat universalitas accidentis? Et responsum quorundum.

Section dealing with Aristotle's categories (Tractatus de praedicamentis seu categoriis Aristoteles) follows the aforementioned part. [Ibid., 150].

*Isagoge* in manuscripts from the Fojnica Monastery:

MANUSCRIPT XXX. TRACTATUS LOGICAE TOTIUSQUE PHILOSOPHIE CURSUS. In the work entitled Incipit tractatus de universalibus Porphyrii, disputatio prima: De universali in communi. Disputatio secunda: De universali logico. Disputatio tertia: De genere. Disputatio quarta: De specie. De individuo. Disputatio quinta: De differentia. Disputatio septima: De proprio. Tractatus de praedicamentis seu categoriis Aristotelis follows this part. [Ibid., 203].

MANUSCRIPT 40. SUMMULARUM LIBRI TRES. Author is unknown. In the work entitled Dissertationes ad Logicam pertinentis, dissertatio septima, de genere (127), De specie (127) De differentia (128) De proprio (129) De accidente (130) Sectio unica: De decem Aristotelis categoriis (137) follows this part. [Ibid., 221].

MANUSCRIPT 51. ISAGOGE IN ETHICAM CHRISTIANAM. The manuscript contains 168 pages. Finis is written in the end. Vacii scripsit



Bon. Marainovich die 2. Ianu. 1827. In 3ii Anni Thgia. Continuatur. Sequitur ethica Prticularis was also written and traced over. [Ibid., 235].

### 3.3 Porphyry's ISAGOGE in Bosnia and Herzegovina, in Bosnian

Original Greek text ΠΟΡΦΥΡΙΟΥ ΕΙΣΑΓΩΓΗ ΤΟΥ ΦΟΙΝΙΚΟΣ ΤΟΥ ΜΑΘΗΤΟΥ ΠΛΩΤΙΝΟΥ ΤΟΥ ΛΥΚΟΠΟΛΙΤΟΥ (Porphyrii Isagoge et in Aristotelis Categorias Commentarium, ed. A. Busse, CAG, Vol. IV (1), 1887) and its Bosnian translation, entitled *Introduction of Porphyry Phoenician, Pupil of Plotinus from Licopole (ISAGOGE)* were published in Sarajevo in 2008. The text was translated by Dr. Nijaz Ibrulj, fulltime professor of logic and methodology at the Sarajevo Faculty of Philosophy [Ibrulj, 2009: 1-50]. Almost 17 centuries after Isagoge was written and after Muslim and Catholic scholars of Bosnia and Herzegovina wrote studies about it in Arabic and Latin, this work has been translated from Classical Greek into Bosnian.<sup>20</sup>

The translation of Porphyry's original text, written in Classical Greek, was complicated by the fact that at least three interpretations are possible. In that sense, one could present the claim of Anthony C. Lloyd who states in the book *The Anatomy of Neoplatonism* that a special kind of semantics functions in the works of Porphyry. According to Lloyd, one semantic level exists in PORPHYRY'S COMMENTARY ON ARISTOTLE'S CATEGORIES (Εἰς τὰς Ἀριστοτέλους Κατηγορίας), in which expressions are related to expressions; while, in the text of ISAGOGE (Εἰσαγωγή), another semantic level functions, in which expressions signify or represent conceptual agenda. [Lloyd, 1998: 53].

We could partially accept this claim and add: Porphyry uses the *semantic triangulation* in his works in an undifferentiated manner. In his text ISAGOGE, expressions such as gender (γένος) and kind (εἶδος) represent or are related to (1) the natural beings or natural kinds or genders, (2) themselves as expressions about which a claim is presented in an

<sup>20</sup> Introduction of Porphyry Phoenician, Pupil of Plotinus from Licopole (ISAGOGE), a parallel edition of original text in Classical Greek and translation into Bosnian. Sarajevo, Dijalog 1/2008, p. 1 – 50. Edited and translated by Nijaz Ibrulj.

utterance and (3) notions of gender and kind as parts of a well-defined content of the notion (definitions). Thus, expressions in Porphyry's work represent either items or expressions or notions. However, the very conception of Porphyry's ISAGOGE depends on interpretation of his semantics.

“One of the conceptions of interpretation of Porphyry's text ISAGOGE could be marked as ontological: genders and kinds are observed in the meanings of genders and kinds of natural beings. That means that the concept of identity is seen as the relationship between things or beings or items, and then the predicative scheme is observed and interpreted as the relation between beings (τὸ ὄν) and such characteristics or passivities (πάθη, ἴδια πάθη) that belong to it *per se* (τὰ τούτω ὑπάρχοντα καθ' αὐτό). To interpret all logical generalities as real genders or real kinds of beings, not as parts of the predicate (κατηγορία, κατηγορούμενον) and as parts of the subject (ὑποκειμένον) of an expression (λόγος, λόγος ἀποφαντικός) within a kind of the predicate, leads to ontological interpretation. Such interpretation is seen, for example, in translations by Eugen Rolfes in German, Jonathan Barnes in English and, in part, Hans Günter Zekl's German translation.

The second conception of interpretation and translation is, in most part, linguistic-analytical or rhetorical-grammatical: it is about citing the terms or expressions and their usage in marking of genders, kinds, characteristics of kinds, possessive characteristics and differences. It is about the meaning of the expression for gender ('a living being') or expressions which determine the kind ('human'), difference, peculiarity (of a kind), possessive (characteristic). Meaning of an expression is an analytical hypothesis of, in this case, translation. The focus is on what, for example, the expression 'man' means or to which expression (predicate) that expression (subject) refers. Such is the example of Italian translation by Giorgio Grigenti, as well as, in a large part, French translation by Alain de Libier and Alain-Philippe Segonds. This kind of translation emphasizes the use of language as means of description.

Third conception of interpretation is, in most part, formal-logical: it is the division and differentiation between logical generalities, i.e. the treatment of predicates as logical parts of a definition, their position in the definition and mutual relationship. Such interpretation is seen in E.W. Warren's translation in English. Here, the basic principle of interpretation

of ISAGOGE is emphasis on structure depositions/definitions and on description of arrangement of its parts (subject and predicate). All predicabilities are interpreted from the standpoint of structural predication. Model for this translation must have been the Boethius' Latin translation of ISAGOGE." [Ibrulj, 2009: mns.].

It had been necessary to find one's own way through the three key interpretations, understandings and translations of this short work. One curiosity should be mentioned at this point: so far, three English translations have appeared (Warren, 1975; Spade, 1994; Barnes, 2003) in which three different translations of the same text can be found! Translation of Porphyry's ISAGOGE by Nijaz Ibrulj is a part of his grand monograph entitled *Porphyry's Legacy*, which is in preparation. In that translation, 250 notes have been added, containing the relevant places of Greek and Arabic commentators, namely, Alexander Aphrodisius, Ammonius, Simplicius, Porphyrius (commentary of the Categories), Philoponus, David, Elias, Iamblichus and Averroes and Avicena (*Commentaria in Aristotelem Graeca IV 3*, Berlin, 1891).<sup>21</sup>

<sup>21</sup> In preparation of his translation, Dr. Nijaz Ibrulj consulted many other translations of this text into different European languages: *Latin translation* (Porphyrii Isagoge. Translatio Boethii. Aristoteles Latinus. I 6-7, ed. L. Minio-Paluello, ad. B.G. Dod, Bruges-Paris. Desclée de Brouwer, 1966). *German translation* (1) Porphyrius Einleitung in die Kategorien. In: Aristoteles Organon, übersetzt und erläutert von Eugen Rolfes. Band I, Felix Meiner Verlag. Unveränderter Abdruck 1948, der zweiten Auflage von 1925. *German translation* (2) Porphyrios : Einführung in die Kategorien des Aristoteles (Isagoge). In : Aristoteles Organon. Band 2 : Kategorien / Hermeneutik oder vom sprachlichen Ausdruck. Griechisch-Deutsch. Hrsggegeben, übersetzt, mit Einleitungen und Anmerkungen versehen von Hans Günter Zekl. Velix Meiner Verlag, 1998 p. 155-188. *Italian translation* (Porfirio Isagoge. Prefazione, introduzione, traduzione e apparati di Giuseppe Girgenti. Testo greco a fronte. Versione latina di Severino Boezio. Rusconi Libri, Milano, 1995) *French translation* (Porphyre Isagoge. Texte grec et latin, traduction par Alain de Libera et Alain-Philippe Segonds. Introduction et notes par Alain de Libera. Paris : Librairie Philosophique J.Vrin, 1998) *English translation* (1) Porphyry The Phoenician Isagoge. Translation, Introduction and Notes by Edward W. Warren. Teh Pontifical Institute of Medieval Studies, Toronto, Canada, 1975. *English translation* (2) Porphyry the Phoenician, the Pupil of Plotinus of Lycopolis Isagoge. Translated and Edited by Paul Vincent Spade. In: Five Texts on the Mediaeval Problem of Universals. Porphyry.Boethius.Abelard.Duns Scotus.Ockham. Hackett Publishing Company.Indianapolis/Cambridge, 1994. *English translation* (3) Porphyry's Introduction by Jonathan Barnes. Oxford University Press, 2003.

Academician Vladimir Premec, professor of ancient and medieval philosophy at the Sarajevo Faculty of Philosophy since 1976, commented the Bosnian translation of *Isagoge* by saying:

“Unlike the Latin who, owing to Boethius, had a translation of Porphyry’s tractate as early as first quarter of 6<sup>th</sup> century AD, peoples of Bosnia and Herzegovina, as well as the entire region of South-East Europe and beyond, with the exception of Hellas – Greece, had waited for a Bosnian translation until early 2008. That is why Nijaz Ibrulj’s translation is, *per se*, a manifold cultural and scientific fact and value.” [Premec, 2009: 129].

What is the status of these “Bosnian commentaries” of Porphyry’s *Isagoge*? One could say that they are commentaries of commentaries, i.e. that the textual base of these commentaries are some of the Arabic or Latin commentaries, written in Baghdad or Istanbul, that is, in Rome or Padua, not only commentaries on Porphyry’s work (in any language). Perhaps it would be best to say that the contents of this text has been accepted as part of education in confessional communities, which functioned within curricula as an obligatory content of a textbook. “For example, in the collection of manuscripts of the Sarajevo Institute for Oriental Science, out of 5263 caudexes, about 300 manuscripts were in the field of logic. It would be interesting to mention that, out of that number, about 80 manuscripts are either Al-Ebheri’s *Isagoge* (*Isagugi*), or commentary or super-commentary of this work... This, in a way, shows which authors in our area were most widely read.” [Ljubović, Nametak, 1999: 30].

What I have named in this text as *Porphyrian isagogics* or *Porphyrian classification of propaedeutic* could also be named as *Porphyrian definitorium*, an ability of determining meanings of terms and their relations in a logical and linguistic sense, their ontological status and use, characteristic of these commentaries. I will here mention only two introductory sentences<sup>22</sup> from his work *Isagoge* [Porphyrius, p.1]:

<sup>22</sup> [1.1.] ὄντος ἀναγκαίου, Χρυσόοριε, καὶ εἰς τὴν τῶν παρὰ Ἀριστοτέλει κατηγοριῶν διδασκαλίαν τοῦ γινῶναι τί γένος καὶ τί διαφορὰ τί τε εἶδος καὶ τῆ ἴδιον καὶ τί συμβεβηκός, εἰς τε τὴν τῶν ὀρισμῶν ἀπόδοσιν καὶ ὅλως εἰς τὰ περὶ διαιρέσεως καὶ ἀποδείξεως χρησίμης οὔσης τῆς τούτων θεωρίας, σύντομόν σοι παράδοσιν ποιούμενος πειράσομαι διὰ βραχέων ὥσπερ ἐν εἰσαγωγῆς τρόπῳ τὰ παρὰ τοῖς πρεσβυτέροις ἐπελθεῖν, τῶν μὲν βαθυτέρων ἀπεχόμενος ζητημάτων, τῶν δ’ ἀπλουστέρων συμμέτρως στοχαζόμενος.

“[1.1.] Since it is necessary, Chrysaorius, even for the doctrine of Aristotle’s predicates, to know what is a genus and what a difference and what a species and what a property <of an substance> and what an accident [substratum] <in an substance>, and when reasoning about those <terms> is useful for determining [defining] and, in whole, for division <of terms> and for demonstration, I will try to briefly summarize, as is suitable for an introduction, a short description of discussions of the old <predecessors> sayings on those <terms>, refraining from complex issues, still making judgments on the simpler ones.

[1.2.] For example, do genera and species subsist [exist] or are they only creation of empty thought, and are they, if subsistent [existent] corporeal or incorporeal, and, finally, are they are separate from or within something sensible: these <questions> I avoid to consider, since such a investigation is by far the deepest and requires some other, more complex examination. I will try now to present to you discussions on these and issues stated earlier by old <philosophers>, more prone to logical <way of thinking>, especially the Peripatetics. [33, p. 2 ].”

Bosnian philosophical tradition had Porpyry’s *Isagoge* available in Latin and Arabic, and today, it is available in Bosnian. Sadly, the ones who knew *Isagoge* and used it in their lectures, both in Latin and in Arabic (even in Turkish); both in monasteries and seminaries and in madressahs, considered translating that work, even from those languages into Bosnian (or into one of the languages spoken in Bosnia and Herzegovina), unimportant.

#### **The Period of Administration of the Austro-Hungarian 4. Monarchy in Bosnia and Herzegovina ( 1878 - 1918)**

After the occupation of Bosnia and Herzegovina (1878), the Austro-Hungarian Monarchy came across a social structure which had collapsed

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[1.2.] αὐτίκα περὶ τῶν γενῶν τε καὶ εἰδῶν τὸ μὲν εἴτε ὑφέστηκεν εἴτε καὶ ἐν μόναις ψιλῶν ἐπινοίαις κεῖται εἴτε καὶ ὑφεστηκότα σώματά ἐστιν ἢ ἀσώματα καὶ πότερον χωριστὰ ἢ ἐν τοῖς αἰσθητοῖς καὶ περὶ ταῦτα ὑφεστῶτα, παραιτήσομαι λέγειν βαθυτάτης οὐσης τῆς τοιαύτης πραγματείας καὶ ἄλλης μείζονος δεομένης ἐξετάσεως· τὸ δ’ ὅπως περὶ αὐτῶν καὶ τῶν προκειμένων λογικώτερον οἱ παλαιοὶ διέλαβον καὶ τούτων μάλιστα οἱ ἐκ τοῦ περιπάτου, νῦν σοὶ πειράσομαι δεικνύναι.

from within because of the anarchy and corruption of authority in provinces. On the other hand, the Monarchy introduced a new politically constructive ideology and new patterns of institutional life. Firstly, Austro-Hungarian monarchy had tried, for a long period of time and through their representative in Bosnia Benjamin Kalaj, to realize the project of Bosnian nationality (the process which continues to this very day!), but the resistance of both Serbs and Croats, that is Orthodox and Catholics, was immense. Secondly, the Monarchy considered Bosnia and Herzegovina a part of the old Roman Empire and a part of Christendom, which is why it favored Christianity, primarily Catholic Church. Thirdly, during a century-long presence in Bosnia and Herzegovina, the Monarchy failed to implement a unified system of civil education and a unified legal system, but succeeded in putting down all movements for religious-educational autonomy of Serbs and Muslims [Kraljačić, 1987: 367-429].

The Austro-Hungarian monarchy found highly developed confessional schools in Bosnia and Herzegovina, as well as poorly developed civil schools. By opening more civil schools, the monarchy tried to change that situation. Such attempts were resisted by confessional communities in different ways, although some of them, Catholic, for example and partly Orthodox, were favored by the regime. In the early days of the Austro-Hungarian occupation, there were about 54 Catholic schools with 56 teachers and about 2.295 students [Papić, 1972: 30].

#### **4.1. Clerical Institutes, Madressahs and Ruzdijas in the Monarchy**

Confessional schools were known as clerical institutes: Orthodox and Catholic theological schools in Sarajevo and Sharia Law Judiciary School.

*East Orthodox Seminary* opened in Reljevo, in 1882. The curriculum was based on theological subjects. “Lower class students of this school, as well as of Catholic theological schools, were granted special scholarships by the National Government, because of their decision to enroll seminaries. One can see from this example as well that the regime favored these over other schools.” [Ibid.,151].

*Roman Catholic Priest Seminary in Sarajevo* was formed under the influence of the Monarchy, which wanted to control activities and work



of the Catholic Church from the Vienna Court and in that way decrease the influence of Rome onto the local population. Bosnian Franciscans were, in fact, constantly in opposition to such attempts because the act of nominating the Vrhbosna Archbishop by Vienna deprived them their parishes, while the Jesuit order supported the Archbishop and the regime (in Vienna), not the Church authorities (in Rome). Prior to the opening of the seminary in Sarajevo, the Catholic Archbishop High School in Travnik had been formed in 1890. It is interesting that the curriculum contained, apart from theological subjects, many courses in Oriental languages (Hebrew, Arab, Syrian-Haldeic) and in philosophy.

*The Sharia Law Judiciary School in Sarajevo* was formed by the National Government's Decision in 1887 and existed for five years. Its curricula contained, among other subjects, Logic, Rhetoric and Stylistic, Dogmatic, European Law and Sharia procedural law.

Majority of ruzdijas that had been formed in the period of Ottoman rule, and which had been financed from the *meriaf-sanduk* fund (adopted and transformed by the Austro-Hungarian regime) ceased to exist, with the exception of the reformed ruzdijas in Sarajevo, Mostar, Tuzla, Brcko, Bihac, Banja Luka or Travnik. In 1906, a special, unified curriculum was prescribed to these schools (religious instruction, Turkish, Arabic, Reading of Quran, Arabic alphabet, Serbo-Croatian, calculus, geometry, calligraphy, geography and history, natural sciences). Ruzdija had been founded in the time of the Ottoman rule in Bosnia and Herzegovina, as a special kind of school, or as "a peculiarity in education of Bosnia and Herzegovina" [Ibid.,156], that is, as a preparatory school for madressah, characterized by a more secular curriculum. However, in 1906, a new curriculum was introduced, giving these schools a more confessional character, an increased number of lessons in oriental languages and Islamic religious instruction. In 1913, the National Government passed an order on the abolition of these schools and their transformation into regular primary schools, open for pupils of all denominations. [Ibid.,157 ].

Madressahs were financed from the local foundations (Tur. vakuf), while the National Government showed no interest in their work, treating them exclusively as confessional schools. "The majority of madressahs existed in and around Sarajevo and Tuzla and the least in and around Mostar and Bihac. Gazi Husref-bey's Madressah in Sarajevo was the best organized. This school is peculiar because it has been continuously open



for over 430 years, which is rare both in this country and in the world. In its time, it was an institution of higher religious education. In the same way as Catholic teachings dominated the curricula of Western higher education schools in the time of their forming, so has Islamic teaching dominated the curriculum of this, in a way the first higher education school in Bosnia and Herzegovina.” [Ibid.,158 ].

#### 4.2. Individual Works and Authors

Josip Stadler (b. 1843 – d. 1918) was appointed Archbishop of Vrhbosna in 1881. Stadler had previously been a professor of fundamental theology and philosophy at Zagreb Theological Faculty. He graduated on philosophical and theological studies in Rome, at the Jesuit Collegium Romanorum. Upon arriving to Bosnia and Herzegovina, he developed good relations with Benjamin Kalaj, whose children he secretly christened in Ilidza, and it is largely thanks to him that the Catholic Church gained a favored status.<sup>23</sup>

While still in Zagreb, Stadler translated Tongiorgi’s *Logic*, a textbook about which he stated the following in his Foreword: “...believe me, you will not find issues made clearer and better classified anywhere but in this logic, known to the whole of Europe, in this book written by praiseworthy Tongiorgi, un this book taught from at many a university. Because I am personally assured by this book, I did not want to engage into writing logic of my own (...). I felt obliged to add a note here and there and to leave out something here and there, and to give other shape to some things” [Stadler, 1904: 427]. Stadler’s (Tongiorgi’s) *Logic* consists of two parts:

LOGIC, PART 1. DIALECTICS. IN SARAJEVO: PUBLISHED BY VRHBOSNA CHAPTER, 1904. In this part, Stadler deals with formal or basic logic and methodology, focusing on Aristotelian syllogistic, partially amending it with knowledge related to medieval theory on properties and roles of terms (*proprietas terminorum*). This part consists of four books. Book One: On the First Activity of Our Mind, that is, On Under-

<sup>23</sup> Josip Stadler, the Archbishop of Vrhbosna, was accused in many controversial cases of conversion from Islam into Catholicism. One such example was christening of underage Fata Omanovic in Mostar, which triggered the national uprising of Muslims in Herzegovina.

standing; Book Two: On the Second Activity of Our Mind, that is, on Judgment; Book Three: On Third Activity of Our Mind, that is, On Conclusion and Its Meaning. Book Four: On Proving and Scientific Method. In a way, Stadler (or Tongiorgi) implicitly follows the structure of Aristotle's *Organon*, starting with Porphyry's tree and Aristotle's *Categories*, through meanings of words and sentences (On Interpretation), discussion on syllogism (*The First Analytics*), discussion on errors in concluding (*Sopist denial*). It is unclear why Stadler named this entire part of logic Dialectics.

LOGIC, PART 2.CRITIC OR NOETICS. In Sarajevo, Published by Vrhbosna Chapter, 1905. In the second part of his logic, Stadler deals with issues related to the theory of cognition in widest sense of the word, from empirical, psychological and phenomenon-related, to cognitive and, finally, theoretical aspect. This part consists of three books. Book One: On Nature of Logical Truth and Security. Book Two: On Sources from Which the Truth of Our Mind Is Drained or on Way It Is Achieved. Book Three: On Meaning of Truth and Principle of Security. Unlike the first part (Dialectics), in the second part of his logic, Stadler provides referent names of authors cited. This part is mostly based on Descartes' attitudes presented in his manuscript Rules of Method [Stadler, 1905]. Stadler's Logic, as he himself said, is not an authorial work, but it is a valuable compendium written in our language which could have been of profound use for a student of theology to get acquainted with the basic concepts of logic, theory of meaning, cognitive and theological nature of objects and cognitional subject. In that sense, it was, in its time, a valuable work.

### **5. The Period of Socialist Regime in the Republic of Bosnia and Herzegovina (1945 – 1992)**

The University of Sarajevo was formed by a decree in 1949 and has a rich prehistory.<sup>24</sup>

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<sup>24</sup> University of Sarajevo has a prehistory in pre-university forms of education in Bosnia and Herzegovina, which are compatible with the institutions of the West. The Bosniak sources state that "in 1531, Gazi Husref-bey founded Hanikah in Sarajevo, which is a higher school of sufi philosophy and which was supplemented in 1537 by an institution in which Islamic sciences were studied. In that sense, three disciplines of

*The Faculty of Philosophy in Sarajevo* was formed on November 11 1950, by the Decision of the Assembly of Bosnia and Herzegovina. The Department of Philosophy and Sociology was formed in 1956, as the Department Section for Philosophy formally became independent, and the following subjects were taught: logic, dialectics, ethics, esthetics, philosophy, sociology, methodology, etc. Logic, as an individual subject, with its curriculum and certain number of classes, was introduced to the curriculum. Muhamed Filipovic taught logic from 1962 until his retirement in 2002. From 1990, Nijaz Ibrulj has been teaching the subject, together with analytical philosophy, language philosophy, cognitive science, communication sociology. Since 2008, Kenan Sljivo has been an assistant on the subjects of logic, cognition theory and cognitive science.<sup>25</sup>

In high schools throughout the country a significant number of classes were provided for formal logic, philosophy and psychology. Although the socialist regime favored the communist party and the ide-

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the classic Catholic universities were fostered here: theology, law and philosophy, with the addition of the university library. In the Austro-Hungarian period, more precisely, in 1887, the Sharia Law Judiciary School was founded as a five-year collegiate school. The newer history of Sarajevo University started with opening of the first civic institutions of higher education, just before and during the World War Two (Faculty of Agriculture and Forestry, 1940; Faculty of Medicine, 1944 – its work had been revived in 1946; Faculty of Law and Collegiate Pedagogical School also opened. In 1948, Faculty of Agriculture and Forestry started working again. In 1949, Faculty of Technical Engineering opened. On December 2 that same year, appointment of the first Rector marked the beginning of University of Sarajevo. With the opening of Faculty of Philosophy in 1950 and Economic Faculty in 1952, the initial stage of formation of the Sarajevo University was completed.” (<http://www.unsa.ba>)

<sup>25</sup> Kenan Sljivo has so far published a text *Quine's Ontological and Epistemological Relativity* (Sarajevo, Sophos, 1/2009). His other two texts are being edited: *Intentionality and interpretation* (an essay on philosophy of mind); *Representation and Communication. A research on Structural and Semantic Essences of Communication* (an essay in the field of philosophy of communication). So far, two of his translations have been published: *On Referring* (P.F. Strawson), Dijalog, Sarajevo, 2008; *The Mind – Body Problem* (W. G. Lycan), from *Blackwell Guide to the Philosophy of Mind* (2003), Blackwell Publishing, Oxford, p. 47. – 65., published in the Sophos Magazine, Sarajevo, 1/2008, p. 107. – 125. Another two translations of Kenan Sljivo will be published soon: *Entity and Identity* (P.F. Strawson), from *Entity and Identity* (2000), Oxford, p. 21. – 52., Dijalog, Sarajevo, 2009. *Universalis*, (P. F. Strawson), from *Entity and Identity*, (2000), Oxford, p. 52. – 64., Sophos, Sarajevo, 2009 (in print).

ological basis of Marxism – Leninism, from which all the dogmatic frames of philosophy, logic and scientific theory were inserted into curricula; although the orthodoxy of such ideology brought to life forms and contents of subjects taught in high schools, collegiate schools and faculties (dialectic materialism, Marxism, etc.), this regime never banned the formation and work of confessional schools, but had other means of controlling them, and at other levels.

*The Islamic Theological Faculty* was founded in Sarajevo, by the Decision of the Grand Assembly and the Grand Islamic Seniority of the Islamic Community of the Socialist Federative Republic of Yugoslavia in 1977. Today, logic is not taught at this faculty, unlike philosophy, psychology and research methods. The Franciscan Theology (Franciscan Theological Faculty)<sup>26</sup> was formed in 1968 as part of the Sarajevo University. The Catholic Theology of Vrhbosna, formed in 1890, is active today, in full capacity.<sup>27</sup>

### 5.1. Authors and Works in Logic

In 1968, a comprehensive study on contemporary logic entitled **PHILOSOPHICAL PROBLEMS OF CONTEMPORARY LOGIC**

<sup>26</sup> A Catholic source provides a description of prehistory of the university education. “From the 14<sup>th</sup> century onwards, one can speak of the university-level education within the Franciscan Provincial of Bosna Argentina. In the period after the Council of Trent, Bosna Argentina had several of its higher education institutions in Budim, Pozega, Sibenik, Osijek and elsewhere. Bosnian Franciscans had also acquired education in Italy and in the countries of Habsburg Empire. In 1851, higher education institutions were founded in Fojnica and Kresevo, which marked the beginning of modern higher education in Bosnia and Herzegovina in general. In 1905, in Livno monastery, theological studies for the entire Bosna Argentina was unified. Theology moved to the St. Anthony’s Monastery in Bistrik, Sarajevo. In 1942, theological faculty for all Croat Franciscans was founded in Kovacici, Sarajevo. However, in 1947, the authorities nationalized that building, so Theology Department was moved back to Bistrik. Since the conditions there were not suitable for the study of theology, in 1965, construction works began for the building of Franciscan Theology, in Nedzarici, Sarajevo. In 1968, the construction works were completed and Theology Department started working in the new building.” (<http://www.wikipedia.com>)

<sup>27</sup> In the time of writing of this text (August 2009), Monsignor Vinko Puljić and Rector Faruk Čaklović held talks in Sarajevo about inclusion of the Vrhbosna Catholic Theology in the system of Sarajevo University.

THEORIES by Muhamed Filipovic was published in the Sarajevo Faculty of Philosophy's collection of works. The author, for the first time, presents in the text facts related to the contemporary theories of logic, which primarily developed from philosophy of mathematics and set theory, and then from philosophy of language, predicate calculus and statement calculus seen in Gottlob Frege, Bertrand Russell and Ludwig Wittgenstein. In fact, the text was written after a series of seminars on Wittgenstein's *Tractatus* which Professor Filipovic held in the period of several years at Sarajevo Faculty of Philosophy [Filipović, 1968].

Book entitled PHILOSOPHY OF LANGUAGE – I by Prof. Dr. Muhamed Filipovic was published in Sarajevo in 1987. The book provides a comprehensive insight into philosophical and theoretical discussions on the essence of language from the point of view of ancient and medieval philosophical theories on language; as well as an insight into the nature of rational thinking, logical forms and connection between language and forms, through questions on the essence of nature and mental world of the man. The discussion on language mainly corresponds to philosophical theories of tradition and with development of modernist philosophical systems [Filipović, 1987].

The first complete work on Ludwig Wittgenstein's philosophy entitled PHILOSOPHY OF LUDWIG WITTGENSTEIN was published in Sarajevo, in 1978, and is a result of Professor Jelena Berberovic's engagement in doctoral thesis. In the period from 1965 to 2007, Jelena Berberovic taught gnoseology (theory of cognition), at Sarajevo Faculty of Philosophy's Department of Philosophy and Sociology. Her book encompassed all the crucial aspects of Wittgenstein's philosophy and philosophy of logic in his *Tractatus* and in *Logical Investigations* (translation of this work was published in Belgrade, containing an introduction by Professor Berberovic). [Berberović, 1978].

Influenced by the ideas and mentorship of Academician Muhamed Filipovic, an important siècle of researchers and authors formed in Bosnia and Herzegovina, showing an enormous interest in research on heritage. In 1984, Amir Ljubovic defended his doctoral thesis at the Sarajevo Faculty of Philosophy, entitled THE WORKS IN LOGIC BY BOSNIAK AUTHORS IN ARABIC, which was later (1996) published as a book, translation of which was published in english in 2008, by the Brill publishing house in Amsterdam. This monograph is the most important source on

works in the field of philosophy and logic, written in Arabic in Bosnia and Herzegovina. Amir Ljubovic, together with Fehim Nametak, also wrote two comprehensive monographs on Hasan Kafi Pruscak's thought and works.<sup>28</sup> [Ljubović, Nametak, 1999].

In 1989, Nijaz Ibrulj defended his masters thesis at the Sarajevo Faculty of Philosophy, entitled PHILOSOPHICAL CONTENT OF GOTTLob FREGE'S LOGICAL-MATHEMATICAL AND SEMANTIC RESEARCH. The author proved in his thesis the claim that logical, mathematical and semantic research of the professor of mathematics from Jena, Gottlob Frege, who is also considered the father of analytical philosophy, are undoubtedly characterized by philosophical content in questions on sense and meaning of statement, in concept writing<sup>29</sup> as language of pure thought, in observing the attitude or statement as function, in contextual definition, in differentiating the *signe* and *signifie*, in treating the true value of a subject. This work, the first scientific account on Gottlob Froge in former Yugoslavia, introduced for the first time the original text and interpretation of the issue of logic and analytical philosophy, thus setting aside the Marxist and dialectic research on logic (as the property of material) of reflection [Ibrulj, 1989].

<sup>28</sup> In the monograph edited by Ljubovic, Amir/Nametak, Fehim (1999): Hasan Kafi Pruscak. Sarajevo-Publishing, authors state the following on p. 26 . 27: "The emergence of first translations of Aristotle's logical discussions and Porphyry's *Isagoge* is mostly thought to date back to the first half of the 9<sup>th</sup> century. However, some researchers emphasize that Ibn al-Muqaffa (d. cca 757) was first to translate Aristotle's *Categories* (Al-Maqulat), *On Interpreting* (Al-Ibara) and *Analitics* (Al-qiyas)." Authors here refer to Carl Brockelmann and his work *Geschichte der arabischen Literatur*, Vol. I, Meimar 1898, p.158. At this page, Carl Brockelmann speaks of Ibn Al Muqaffi as of a translator of *Khalila and Dimna*, works from Indian tradition (panchatantra).

<sup>29</sup> It is interesting that a copy of Frege's book *Begriffsschrift* appeared in Sarajevo not earlier than 1989. The copy was brought to Sarajevo by the author of the masters thesis, having found it in Zagreb, at School of Engineering. That was, at the time, the only copy of this book in libraries of former Yugoslavia. After that, the author collected and brought other Frege's works from Germany and England. Until then, nobody had written a monography on Gottlob Frege's philosophy in former Yugoslavia. In 1989, author's translation of Frege's study entitled *Der Gedanke. Eine logische Untersuchungen*, published in 1966 in a collection *Logische Untersuchungen*, edited and published by Günter Patzig, was published in Sarajevo (Dijalog, 1/1989).



## 6. The Dayton Bosnia and Herzegovina (1995 - 2009)

In the period from 1992 to 1995, the Yugoslav National Army of the former Socialist Federative Republic of Yugoslavia and local Serb insurgents (chetniks) from Bosnia and Herzegovina, assembled around a national party – the Serb Democratic Party, waged aggression against the Republic of Bosnia and Herzegovina. The Socialist Republic of Bosnia and Herzegovina ceased to exist and the state of Bosnia and Herzegovina, which had remained within its borders, was divided and reduced to a state community of two entities, one of them being the so-called Republic of Srpska, the authorities of which are continually conducting the policy of separation from Bosnia and Herzegovina; while within the other entity (Federation of Bosnia and Herzegovina), the political leadership of the Croat people are continually demanding the formation of a third entity, which means Bosniaks and Croats should divide their entity in two parts.

### 6.1. Separate Educational Institutions

In late 1995, the University of Sarajevo (which never ceased to exist or function formally) renewed its material activities at faculties and by curricula. After the Dayton Agreement defined Bosnia and Herzegovina as a state consisting of two entities, a number of ethnically clean schools were formed in the Serb entity, while a phenomenon of separate educational systems based on ethno-national programs (two schools under one roof!) came to life in the entity in which Bosniaks and Croats share political authority. Ethno-national and ethno-confessional schools and universities were formed everywhere, as well as a significant number of private universities in recent times.

During the aggression against Bosnia and Herzegovina, on November 11 1994, the Catholic School Center “St. Joseph” was founded in Sarajevo by the Archbishopric of Vrhbosna. Apart from this center in Sarajevo, the Archbishopric of Vrhbosna also founded Catholic school centers in Tuzla, Zenica, Konjic, Travnik and Zepce. As part of this activity <sup>30</sup>, primary

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<sup>30</sup> Two schools have been formed within the *Catholic School Center “St. Paul” in Zenica*, which opened in the fall of 1995. They are the Primary and General High School, counting 545 pupils at the beginning of 2001/2002 school year. *Catholic School Center*

schools have also been opened within the Catholic School Center, consisting of 28 classes, as well as the general secondary school and Medical High School, consisting of eight classes, with the purpose of preparing the students for two vocations: nurse – technician and physiotherapeutic technician.

As part of bilateral cooperation between Bosnia and Herzegovina and the Republic of Turkey, a significant number of joint educational institutions in Bosnia and Herzegovina has opened. Thus, the Turkish – Bosnian College was formed as a private educational institution which exists and acts within the Bosna – Sema educational institution, founded in 1996, with the aim of providing assistance to education institutions in Bosnia and Herzegovina. In the course of several years and within this institution, the Sarajevo College, the Una – Sana College, the International Primary School of Sarajevo, the International Primary School of Tuzla and Zenica were founded. At the fourth year of studies, one school hour of logic is planned in the curricula of the college and international schools. Two school hours are reserved for philosophy and sociology. Half of the teaching staff is from Turkey and lessons are held in Turkish and English.

After 1995, several new universities have been formed in Bosnia and Herzegovina, both “state” (cantonal, almost municipal) and private. Apart from that, a number of new departments have been formed at universities which had formed earlier. In the Federation of Bosnia and Herzegovina (the bigger entity), University of Bihac, University of (West) Mostar (there, at the Department of Philosophy, logic is taught as a subject: *Logic I* and *Logic II*), University of Zenica, which also consists of Islamic Pedagogical Academy (Zenica), Faculty of Philosophy (Tuzla), Faculty of Humanities (East Mostar). University of East Sarajevo, which consists of a significant

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*“St. Francis” in Tuzla* was formed in the fall of 1995. Then, the general High School was opened and in 2001 the Primary School was also formed. In 1998, the *Catholic School Center “Peter Barbaric” in Travnik* was formed and is still active in the building of once widely-known General High School of Travnik. Teaching process is conducted in two schools: Primary and General High School. Along with the General High School, a seminary was opened for priest candidates, as well as a boarding school for pupils from other parts of Bosnia and Herzegovina. *The Catholic School Center “Don Basco” in Zepce* was formed in 1999. It consists of Vocational School, attended by cca 250 pupils, General High School with about 240 pupils, and the General High School branch in Usora with about 100 pupils and about 40 professors.

number of faculties (Faculty of Philosophy, where *Logic I* and *Logic II with Methodology* are taught), University of Banja Luka, which also consists of a number of faculties, including Faculty of Philosophy, have all been formed in the smaller entity. Interestingly, simultaneously with the formation of universities in Bosniak cantons, the Faculty of Islamic Science (Bihac) and the Islamic Pedagogical Academy (Zenica) have been also formed.

Apart from the universities mentioned, a number of private universities and schools of higher education have opened.<sup>31</sup> Not a single of the universities mentioned is characterized by a systematic treatment of any of the branches of logic as science, while the subject Contemporary Philosophy provides only the basics in the field.

However, in spite of the developments, there are still parts of the society and institutions of Bosnia and Herzegovina that remained multicultural and multinational, both in the sense of the policy of enrolment and curricula. University of Sarajevo is one such institution, especially Sarajevo Faculty of Philosophy, with all its departments. That enabled the works of Aristotle and Porphyry to be studied in Greek; as well as the study of mathematic (symbolistic logic) in works of Cantor, Frege, Russell, Gödel, Carnap, Wittgenstein; the study of philosophical logic, philosophy of languages and analytical philosophy in the original works of Quine, Austin, Strawson, Davidson, Putnam; the study of cognitive science in the works of Searle, Churchland, Dennet, Block, Minski, Fodor; all regardless of the pressure of nationalists and apartheid followers, who seek ethnically clean education, based on their (by genocide or by ethnical cleansing conquered) territory, and in spite of the demands to teach, for example Arabic logic.

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<sup>31</sup> Private institutions of higher education in Bosnia and Herzegovina are: International University of Sarajevo, Sarajevo School of Science and Technology, American University in Bosnia and Herzegovina, Faculty for Public Management, Sarajevo; International University of Central Europe, Sarajevo; the Philip Noel-Baker International University, Sarajevo; Sarajevo Graduate School of Business, Sarajevo; Franciscan Theology, Sarajevo; the Aperion University, Banja Luka; Faculty of Communication Sciences, Banja Luka; Faculty of Business Engineering and Management, Banja Luka; Faculty of Cosmetics and Esthetics, Banja Luka; Faculty of Safety and Protection, Banja Luka; University of Business Studies, Banja Luka; Faculty of Entrepreneurship and Business, Prijedor; the „Janjos“ College for IT and Management, Prijedor; The „Singerija“ University, Bijeljina; Faculty for Faculty of Service Management, Doboj; the Gradiska College for Business Management; the „Slobomir“ University, Bijeljina.

## 6.2. Authors and Works in Logic

In 1999, PHILOSOPHY OF LOGIC by Nijaz Ibrulj was published in Sarajevo. The book raises a number of questions in a new way on logic and its three main fields (starting from of ontological and epistemological presuppositions): (I) the field of ontological or metaphysical concept of logic (the basic concepts of pre-Socratic henologic, Plato's dialogism/dialectics, Aristotelian syllogistic and Porphyrian isagogics); (II) the field of atomistic concept of logic (the basic insights into symbolic logic of Gottlob Frege, Rudolf Carnap, Bertrand Russell, Ludwig Wittgenstein, Alfred Tarski), and (III) the field of holistic or holophrastic concept of logic (logic and philosophy of logic of Quine, Austin, Strawson, Davidson, Putna). In this book three different critical and analytical idioms are put in relation at the way of problematising the question of the representation of the multiple logical generalization. The fourth part of the book is entitled *Principle of the Logical* and is the author's heuristic analysis of the problem of conceptual scheme description.<sup>32</sup> [Ibrulj, 1999].

In that period, and as a result of such initiatives, interest of researchers in Bosnia and Herzegovina for the issues of epistemology and methodology increased, thus the status of logic in contemporary philosophical and scientific research also. One extraordinary work should be emphasized at this point, namely, RATIONALITY, LANGUAGE, COMMUNITY: THE TRADITIONAL MODEL OF KNOWLEDGE VS. PLURALISTIC EPISTEMOLOGY by Senadin Lavić, PhD, methodology professor at the Faculty of Political Science in Sarajevo. The work was published in 2004 in Sarajevo and it represents a significant contribution to the study of role and status of logic in methodological and epistemological field [Lavić, 2004].

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<sup>32</sup> In that part, the author proposes several new views: principle of the logical is an ideal matrix of identification and re-identification of the logical principles (identity and contradiction need to permanently be identified in each sentence); it serves for detection of logical stereotype in every construction of thought and language. Logical sequences (if – then) of the stereotype stimulate the language sequences of its expression. The stereotype is realized as a network of *intra*-conceptual, *inter*-conceptual and *extra*-conceptual aspects of content and true values that are determined sequentially. By multiplication of the notion content, by generalization and individualization of its form, we reach orthonimy, orthology and orthography of a logical stereotype.

In the seventeen chapters of the book entitled PHILOSOPHICAL RESEARCH: LOGIC, PHILOSOPHY, LANGUAGE, Academician Muhamed Filipovic<sup>33</sup> presented the internal relation between logic and history of logic, history of problems of logic and its relations with other fields of science, primarily its relation with philosophy to which it necessarily belongs. In the *Preface*, Filipovic situates logic as a philosophical discipline and its place in the system of education in Bosnia and Herzegovina, influenced by the Ottoman culture and language, noticing that logic of that period was tied to the theological discourse (exegesis) in both Catholics and Muslims. On the other hand, the connection between logic and other disciplines, primarily mathematics and linguistics, resulted in the detachment of grand flows of philosophical thinking and logic [Filipović, 2005].

As part of research within the European Programs (6 EURP) a monograph by Nijaz Ibrulj entitled A CENTURY OF REARRANGING: ESSAYS ON IDENTITY, KNOWLEDGE AND SOCIETY (Sarajevo, 2005) was published. The book is dedicated to conceptual research on *logic of social triangulation* which consists of identity, knowledge and social ontology. The essays selected in the monograph deal with interaction of the basic logical notion, the notion of identity and knowledge in logical, linguistic, scientific, technological, social, metaphysical, mathematical, ontological and literary area.<sup>34</sup> The book mentions for the first time the importance of Zadeh's *fuzzy logic* and *soft computing* in the sphere of cognitive and psychological research, and, for the first time also, *nanotechnology* and *nanoscience* are brought into connection with philosophy, metaphysics and social ontology, via their connection with logic and artificial intelligence, Computing with Word and Computing with Perception [Ibrulj, 2005].

In 2005, at Sarajevo Faculty of Engineering (Information Technology), Nedžad Dukic defended his dissertation EQUIVALENCE OF FUZZY FUNCTIONAL AND FUZZY POLYSEMIC DEPENDENCIES WITH

<sup>33</sup> Academician Muhamed Filipovic, professor of philosophy and logic at Sarajevo (from 1967 to 2002) is an author of numerous texts and books in the field of philosophy, sociology, historiography and political science.

<sup>34</sup> Several basic and new conceptual syntagms have been introduced in the essays, such as: "knowledge-based society", "intelligence space ambience", "programmable substance", "information technology", "tolerance-lead society", "transnational identity", "century of rearranging".

FUZZY LOGIC. Author of this doctoral dissertation set a task of finding equivalence between the parts of two fields: the fuzzy relation bases on the one hand and a part of fuzzy logic on the other. He achieved his goal through formulas in fuzzy logic, by conjoining certain fuzzy formulas with the fuzzy dependencies, that is, he proved that if fuzzy functional dependency is true, then it meets the conditions of the conjoined fuzzy formula and vice versa. Furthermore, the author of this doctoral dissertation proved that “if from one set of fuzzy dependencies follow some other dependencies, than it follows that from that set of fuzzy formulas some other, suitable fuzzy formula follows and, of course, vice versa.” [Dukić, 2005: vi].

A group of researchers, assembled in the society Academia Analytica, showed interest in artificial intelligence, cognitive science and fuzzy logic. The book FUZZY LOGIC IN ENGINEERING APPLICATIONS by Zikrija Avdagic (Sarajevo, 2008) represent such interest. Zikrija Avdagic is a professor at the Sarajevo Faculty of Electrical Engineering, Department of Computer Science and Informatics, where he teaches artificial intelligence and bioinformatics. Focus of his research is methods and algorithms of fuzzy computing, neuron networks, evolutionary computing, biomedical engineering and real time systems.<sup>35</sup> The book *Fuzzy Logic in Engineering Applications* focuses, in the form of technical-technological handbook (or university textbook), with complex issues of techno-rational procedures, description of methods and techniques of operating with phenomena of logical designing and informational production of intelligent systems and with logic and mathematics, which support that description by offering representative evidence for them. The author speaks of origin and application of the fuzzy logic, on rules of concluding and approximate reasoning, on fuzzy models and algorithms, on fuzzy management, on computer modeling, on fuzzy control in different technological applications [Avdagić, 2008].

Since 1995 onwards, international community in Bosnia and Herzegovina has several times attempted to establish an educational system based

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<sup>35</sup> Professor Dr. Zikrija Avdagic realized, through international cooperation (UNCC Charlotte - U.S., Erlangen-Nuernberg-BDR, Paderborn-BDR, Bristol - UK), a number of researchs, the results of which have been published in collected papers, journals and books, all indexed at referential databases (IEEE - Explorer, Inspec, Ebesco, Mathscinet, ACM Digital Library and Eurographics).



on the principles of constitutionality and equality of peoples, languages, confessions and cultures in Bosnia and Herzegovina. Attempts made through the non-governmental organizations and their interventions (assistance) in the process of creating common basis and standards in the field of primary, secondary and higher education have been futile, in part because of the (inner) obstruction of the concept of peoples' constitutivity. Both governmental and non-governmental organizations have contributed delegitimation of the educational concept, for they engaged, each for their own reasons, various "experts" for writing student textbooks, who lacked the elementary academic education (research papers, expert papers, masters thesis, doctoral thesis) and who simply rewrote old and stale, someone else's textbooks (which is an incredibly spread phenomenon in the academic life of Bosnia and Herzegovina!).<sup>36</sup>

### Conclusion

In Bosnia and Herzegovina, there is not only one truth or theory, true or false, on anything, including education and development of individual sciences. That fact is not, by itself, negative, but has not been accepted or realized as a need for radical interpretation of identity<sup>37</sup> of the other and of the different; an interpretation which would open a possibility for *interpreting* the other identity the way it interprets itself and to *re-interpret* it in intercultural coexistence. The study of logic in different ideological and political systems, in the environment of confessional and cultural differences, within differently based and oriented traditions and educational paradigms, could not have offered more than the local ("ejalet-like", "provincial") adoption of some regional forms and contents, that were adjusted to the local milieu and educational system defined by a ruling regime.

If some compatible elements have ever existed in educational agenda and form in any period of time, in *an interactive reaction* such was the medieval period in Europe, in Mediterranean, in Byzant and Near East in

<sup>36</sup> "Authors" of those "textbooks", even the ones that concern logic, are not worth mentioning in this text.

<sup>37</sup> On radical interpretation of identity, see N. Ibrulj (2008): *Radical Interpretation of Identity* (<http://www.academia-analitica.org>)

the time of the Middle Age, or in the midst of differently composed matrix within a culturally, ethnically, politically, nationally, linguistically diverse and interactively formed “geographical” bolster such is Bosnia and Herzegovina and its history, then Aristotelian logic (syllogistic) and prophyrian propedeutic classification (isagogic), as part of the ancient heritage, played a significant role in the educational base, which, again, was used differently in the process of development of ethnical and confessional identities through education, giving, in the end, different civilization results. One could conclude that Aristotelian logic (syllogistic) and prophyrian isagogic, which were primarily discussed here, had influenced the development of Christian and Islamic culture in general, to a greater extent than the Christian and Islamic culture contributed the development of logic and classificational isagogic (logical propedeutics).

The basic insight into education, into the content and forms of education in the Ottoman period in Bosnia and Herzegovina (1463 – 1878), shows that the paragon or paradigm for all ethnical and confessional communities was in a culture and in a political system of a regional character; while those paradigms were implemented locally, under cultural and political conditions of a territory in which members of ethnical and confessional communities in Bosnia and Herzegovina lived. That was the situation in education as well, and with the development of logic: works on logic written by Islamic authors in Bosnia and Herzegovina, in Arabic, were extracted from the Arabic logic, or, better yet, from the Islamic logic, which consisted of Al-Kindi’s, Ibn Sina’s or Al-Farabi’s comments of Aristotle’s or Porphyry’s manuscripts that were transferred to Bosnia and Herzegovina through comments of those comments; more precisely, through works written by Sadudin Taftazani, Al-Fenari, Al-Ebheri, Al-Urmevi, Al-Kazvani (all pupils and followers of Ibn Sina and Ibn Rushd). Those works were available to Muslims of Bosnia and Herzegovina, during their schooling in Istanbul / Constantinople.

In the same way, works on logic written in Latin by our people (Franciscans, lecturers, philosophy professors) had a paradigm of their own, namely, in the works studied in Rome, Vienna or in Venice; works that were also written by commentators of Aristotle and Plato, or works of medieval scholars like Duns Scotus, Thomas Aquinas, Peter Lombard or Peter of Spain, all of whom wrote *summe* and *summulae logicales*. Those were mostly textbooks, notes, systematizations, thesis, syllabi for lectures, rather than the original and author works in the field of logic.

One can only conditionally speak of originality and authorship of the manuscripts written in both Arabic and in Latin. Those are compendiums, textbooks, notes of lecturers or student notes and transcripts from books. Their only purpose was in the teaching process in Bosnia and Herzegovina at the time. However, they are an important testimony on the kind of educational agenda available to the people in education. Apart from that, the existence of these manuscripts, both in Latin and in Arabic, testifies of a significant advantage of studying logic compared to the other branches of philosophy and (non-theological) science. It is possible that this focusing on logic (syllogistic) and its application in the frame of theological issues, contributed the interruption of development of Islamic sciences, while the Renaissance and humanist issues outside that circle of questions contributed the development of modern positivistic sciences, as well as humanistic and social sciences in the Western world, with logic playing one of the leading roles both then and today.

As we can see from the above-presented account, one cannot trace an individual development of logic and authentic contribution to the science of logic in Bosnia and Herzegovina, although the fact that logic had become a part of the teaching process in both confessional and state schools is very important. Rise of interest in logic in today's time (works on logic written in *the Bosnian language* and translations of works on logic from Classical Greek) are more of an exception to the rules of scholars of Bosnia and Herzegovina, whose interest has been higher in confessional than in expert activities, in historical, metaphysical and speculative knowledge, confessional dogmas and political practice; in other words, in ideology which has always been a speculative structure (structure of the structure of the society) within which there is a possibility of realization of a society which would contain social groups or individuals who are beyond the effect of social principles they themselves defined as valid.<sup>38</sup>

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<sup>38</sup> Contrary to some authors' claims, the society of Bosnia and Herzegovina is not divided, nor is the state unstable. The society is irrational (which does not mean non-rational) and that is why the state is dysfunctional. A society is irrational if it is inconsistent and incoherent because it systematically endangers the principles it had, by itself, defined, which altogether leads to the loss of fact of the set of norms and rules and deontic values upon which the objects, facts and processes of social and political ontology are based (social and political institutions and their decisions). And because it does all that consciously.

The regimes that would come and go in Bosnia and Herzegovina, whose origin has almost always been regional, beyond the country itself, favored one confessional or political community and subordinated schools and cultural institutions of the community by the decrees and activities in the field of education: the Ottoman empire favored the Islamic confessional community with mektebs, madressahs and ruzdijas; Austro-Hungarian Monarchy favored the Catholic confessional community and, in part, the Orthodox community, encouraging the work of seminaries and divinity colleges; Socialist Republic favored the Communist party, whose programs (dialectical materialism) were used to derive university and school curricula and their secular (once secularist) orientation. The Dayton Bosnia and Herzegovina, the territory of which, as a whole, does not have a single regime or ideology, has opened a Pandora's box in the field of education: satisfying single-national, confessional paradigm in its territory, under the authority of its own, without any criteria and at any cost.

In the end, what can be said of works on logic written in Arabic and on manuscripts from the Bosnian monasteries written in Latin? What can be said about the philosophy of language, the philosophy of logic, about the fuzzy logic and about Bosnian translations from Classical Greek and works on logic written in the Bosnian language? What should the relationship towards heritage and what should the relationship towards the contemporary times be like? They are a part of our culture and a part of our intellectual and spiritual world, showing by their mere existence that Bosnia and Herzegovina is capable of interaction with forms and contents that appear and disappear within the world, global, civilizational community of the peoples who, apart from the periods of mind depravation, know of the great eras of humanistic, spiritual and social development in which logic plays a decisive role.

*Bosnia Porphyriana* is not a *heretic metaphor* for Bosnia and Herzegovina, although the biggest heresy in the country is to claim that civic, multinational and multicultural society is possible. That is neither a *Unitarian metaphor*, which centers one people and one identity as the base, through a privileged national monologue or through a privileged counterfact historiography. It is rather a call for an interactive (constitutional)<sup>39</sup>

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<sup>39</sup> See more in: Nijaz Ibrulj, *National Dogmatism or Logic of Consociation?*, Pregled, 1-2, Sarajevo, 2006. Some authors in Bosnia and Herzegovina have come to

participation in a civilization favoring freedom as the goal and rationality, ethics of responsibility, tolerance, radical interpretation of identity and transnational socialization as means; all this regardless of confessional and ethnic affiliation; all at the same time and in the same territory. *Bosnia Porphyriana* is a *cultural metaphor* for an *open source* country; the source which should be kept open for all the people, whether Christian, Islamic, Jewish, Buddhist, atheistic or for any other “language” of today’s time. Neither of them is foreign or alien and neither is incomprehensible or beyond understanding and interpretation. In spite of all, or because of all, this text emphasizes that part of the heritage and that moment of contemporariness of Bosnia and Herzegovina in which logic was or is a part of philosophical educational agenda and in which the work of Porphyry, ISAGOGE, was taught at schools and is taught at universities today, by all ethnic and confessional communities. That is why I am of the opinion that the syntagm *Bosnia Porphyriana* should become a part of the index of notions which characterize this country.

## BIBLIOGRAPHICAL REFERENCES

1887

[1] ΠΟΡΦΥΡΙΟΥ ΕΙΣΑΓΩΓΗ ΤΟΥ ΦΟΙΝΙΚΟΣ ΤΟΥ ΜΑΘΗΤΟΥ ΠΛΩΤΙΝΟΥ ΤΟΥ ΛΥΚΟΠΟΛΙΤΟΥ . [in:] Porphyrii Isagoge et in Aristotelis Categorias Commentarium, ed. A.Busse, Commentaria in Aristotelem Graeca, Vol.IV (1), 1887.

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understand the concept of consociation as the concept of congregation (myth – 1), not as the concept related to the peoples’ constitutivity and primordialism of an individual, the issue of private ownership, human rights and liberties at the same territory in the same time and for any concept of the society and state. Others have left the concept of constitutivity of peoples seeing it wrong and are now representing the concept of primordial status of a people for the past and future of Bosnia and Herzegovina (myth – 2). I think both opinions are wrong and that Bosnia and Herzegovina needs a rational and functional state model, not the model of ideology formed on a myth – 1 or myth – 2, that is, the one made in either political geography or political historiography.

**1891**

[2] Ammonius. In Aristotelis Categorias Commentarius. Commentaria in Aristotelem Graeca IV 3 (Berlin, 1891).

**1904**

[3] Stadler, Josip. Logika. Dio 1: Dijalektika. Sarajevo: Kaptol vrhbosanski, 1904.

**1905**

[4] Stadler, Josip. Logika. Dio 2: Kritika ili noetika. Sarajevo: Kaptol vrhbosanski, 1905.

**1965**

[5] Ćurić, Hahrudin. Školske prilike Muslimana u Bosni i Hercegovini, 1800-1878. Beograd: Srpska akademija nauka i umetnosti, 1965.

**1968**

[6] Filipović, Muhamed. Filozofski problemi suvremenih logičkih teorija. Sarajevo: Filozofski fakultet u Sarajevu. Radovi. Knjiga IV, 1966 /67. Poseban otisak, 1968, pp.229-263.

[7] Peters, Francis . Aristotle and the Arabs : the Aristotlian tradition in Islam. New York : New York University Press, 1968.

**1972**

[8] Papić, Mitar. Školstvo u Bosni i Hercegovini za vrijeme austro-ugarske okupacije. Sarajevo: Veselin Maselša, 1972.

**1974**

[9] Smith, Andrew. Porphyry's Place in the Neoplatonic Tradition. A Study in Post-Platonian Neoplatonism. The Hague: Martin Nijhoff, 1974.



**1978**

[10] Berberović, Jelena. Filozofija Ludwiga Wittgensteina. Sarajevo: Svjetlost, 1978.

**1987**

[12] Kraljačić, Tomislav. Kalajev režim u Bosni i Hercegovini (1882-1903). Sarajevo: Veselin Masleša, 1987.

[13] Filipović, Muhamed. Filozofija jezika I. Sarajevo: Svjetlost, 1987.

**1989**

[14] Ibrulj, Nijaz. Filozofijski sadržaj logičko-matematičkih i semantičkih istraživanja Gottloba Fregea. Magistarski rad. Sarajevo: Filozofski fakultet u Sarajevu, 1989, p.147.

[15] Ljubović, Amir: Da li je Al-Abharijevo djelo »*Īsāghūgī*« adaptacija Porfirijevog "Eisagoge". Prilozi za orijentalnu filologiju. Orijentalni institut u Sarajevu. Sarajevo 1989. Vol.38. Str.217.)

**1995**

[16] Augustin, Aurelije. O državi Božjoj. De Civitate Dei. Latinski i hrvatski tekst. S latinskog izvornika preveo Tomislav Ladan. Drugo izdanje. Zagreb: Kršćanska sadašnjost, 1995.

**1996**

[17] Ljubović, Amir. Logička djela Bošnjaka na arapskom jeziku. Sarajevo: Orijentalni institut, 1996.

**1998**

[18] Hrkać, Serafin . Filozofijski manuskripti na latinskom jeziku u Bosni Srebrenoj. Mostar: Ziral, 1998.

**1999**

[19] Ibrulj, Nijaz. Filozofija logike. Sarajevo: Sarajevo Publishing, 1999.

[20] Kasumović, Ismet. Školstvo i obrazovanje u bosanskom ejaletu za vejjeme osmanske uprave. Mostar: Islamski kulturni centar Mostar, 1999.

[21] Ljubović, Amir / Nametak, Fehim. Hasan Kafija Prušćak. Sarajevo: Sarajevo Publishing, 1999.

**2004**

[23] Handbook of the History of Logic. Volume 1. Greek, Indian and Arabic Logic. Edited by Dov M. Gabbay and John Woods. Elsevier, North Holland, 2004.

**2005**

[25] Filipović, Muhamed. Filozofska istraživanja: logika, filozofija, jezik. Sarajevo: Sarajevo Publishing, 2005.

[26] Dukić, Nedžad . Ekvivalentnost fuzzy funkcionalnih i fuzzy višeznačnih zavisnosti sa fuzzy logikom. Doktorska disertacija. Sarajevo: Elektrotehnički fakultet. Odsjek za računarstvo i informatiku, 2005.

[28] Ibrulj, Nijaz. Stoljeće rearanžiranja. Sarajevo: Filozofsko društvo Theoria, 2005.

[29] Berchman, Robert M. Porphyry Against the Christinans. Leiden, Boston: Brill, 2005.

**2008**

[30]: Handbook of the History of Logic. Volume 2. Mediaeval and Renaissance Logic. Edited by Dov M. Gabbay and John Woods. Elsevier, North Holland, 2008. pp.281-346.

[31] Šljivo, Kenan. Quineov ontološki i epistemološki relativitet. Sarajevo, Sophos, 2008, br.1, pp. 9-25.

[32] Avdagić, Zikrija. Fuzzy logika u inženjerskim aplikacijama. Sarajevo: Sarajevo Univerzity Press, 2008.

[33] UVOD PORFIRIJA FENIČKOG UČENIKA PLOTINA IZ LIKOPOLA. ISAGOGE. Isagoge. Paralelno grčko-bosansko izdanje teksta. Priredio i sa starogrčkog izvornika preveo dr. Nijaz Ibrulj. Sarajevo, Dijalog, 2008, br.1. pp. 1-50.

### 2009

[34] Premec, Vladimir. Kulturnoznanstvena vrednota. Sarajevo, Dijalog, 2009,br.1, pp.128-132.

[35] Ibrulj, Nijaz. Porfirijevo naslijeđe. Sarajevo, 2009 [rukopisna građa].