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LOGIKOS MOKSLAS PAGAL JOKŪBĄ ORTIZĄ

The Science of Logic According to Diego Ortiz

SUMMARY

The article analyzes one of the most significant aspects of logical legacy of Diego Ortiz (Jacob Ortizius, 1564–1625), the professor of Vilnius University, also of Lublin, Poznan and Pultusk Jesuit Colleges. The article concentrates on the metalogical level included in Ortiz's lectures on logic delivered in Poznan Jesuit College and Vilnius University. This level includes questions about the logic's status, object and origin. The article concludes that, in explaining the status and object of logic, Ortiz became a participant of the scholastic controversy, siding with the Occamists in the first dispute and with the Thomists in the second. As for the origin of logic, Ortiz was faithful to the scholastic tradition that derived logic from the reflexive human experience. Ortiz also proclaimed Aristotle as the first and final creator of logic, by asserting that everything that was invented and written in logic after Aristotle could be easily derived from what *magister dixit*.

SANTRAUKA

Šiame straipsnyje analizuojamas Vilniaus universiteto, taip pat Liublino, Poznanės ir Pultusko jėzuitų kolegijų profesoriaus Diego Ortizo (Jacob Ortizius, 1564–1625) vienas reikšmingiausių loginio palikimo aspektų. Susitelkiama į metaloginį lygmenį, atrandamą Ortizo logikos paskaitose, skaitytose Poznanės jėzuitų kolegijoje ir Vilniaus universitete. Šis lygmuo apima logikos statuso, objekto ir kilmės klausimus. Prienama prie išvados, kad Ortizas, aiškindamas logikos statusą ir objektą, įsitraukė į scholastinius ginčus: pirmajame ginče palaikė okamistus, o antrajame – tomistus. Kalbant apie logikos kilmę, Ortizas liko ištikimas scholastinei tradicijai, išvedusiai logiką iš refleksyvos žmogiškosios patirties. Ortizas taip pat paskelbė Aristotelį pirmuoju bei galutiniu logikos kūrėju, teigdamas, kad viskas, kas buvo sugalvota ir užrašyta logikos moksle po Aristotelio, gali būti lengvai kildinama iš to, ką teigė pats Mokytojas (lot. *quod magister dixit*).

RAKTAŽODŽIAI: logika, Ortizas, metaloginis lygmuo, okamizmas, tomizmas, *ens reale*, *ens rationis*.

KEY WORDS: logic, Ortiz, metalogical level, Occamism, Thomism, *ens reale*, *ens rationis*.

INTRODUCTION. THE 9TH PROFESSOR OF VILNIUS UNIVERSITY

Diego Ortiz (Jacob Ortisius, Jakob Ortiz, Jokūbas Ortizas) was the ninth professor at Vilnius Jesuit College and later – Vilnius Jesuit Academy, or Vilnius University, who delivered the course of philosophy. He taught philosophy in Vilnius University 1594–1598. His course of philosophy traditionally included lectures on Logic, Physics, or natural Philosophy, and Metaphysics. He also was supervisor of series of philosophical theses, prepared by students at Vilnius University.

As the previous professors of Vilnius Alma Mater, Ortiz was not a citizen of the Grand Duchy of Lithuania. Vilnius University, possessing faculties of philosophy and theology, had to invite the professors from abroad because of lack of local personnel. As prominent historian of Lithuanian philosophy Romanas Plečkaitis (1994: 231) noted, “Society of Jesus did not use to send to Vilnius University the elite professors, as specialists of such a caliber worked in the most prestigious universities of this Society, for example, Roman College or University of Coimbra”. So, Vilnius University was contented to receive the professors of medium level. Nevertheless, those persons were well educated scholars well versed in the classical and Second scholasticism. They were as well familiar with the novelties of the science at that time to communicate those novelties to a greater or lesser extent to their students.

Ortiz was one of the envoys of the mighty Kingdom of Spain. Namely, the third one after Pedro Viana (Petrus Viana), who delivered philosophy in Je-

suit College 1575–1578, and Miguel Ortiz (Michael Ortizius), who worked in Vilnius University 1591–1594.

Diego Ortiz was born in Andalusian city Cabra in 1564. Having acquired secondary education in Montilla, he had 3 years philosophy course as well as 1 year theology course in Cordoba (Darowski 1983: 6). After joining Society of Jesus (1583), he participated in this Order’s counter-reformation mission in Transilvania (1587–1588). It is worth mentioning that this mission at that time lost its 26 members. Fortunately, Ortiz managed to survive. After the expulsion of the Jesuits from Transylvania, he settled in Lublin.

And Lublin is the place where his educational career started. Namely, in Lublin Jesuit College he delivered syntax and grammar 1588–1590. His educational career continued in Poznan Jesuit College, where he taught philosophy 1591–1594. His lectures were quite popular, as they were attended both by candidates to Jesuit Order and laymen (Darowski 1983: 7). The curve of Ortiz’s career went up when he was invited to Vilnius Jesuit Academy, or University. Here he delivered philosophy 1594–1598. It was also in Vilnius University in 1594 that he received bachelor’s degree in liberal arts and philosophy. In 1598 Ortiz returned to Poznan Jesuit College where he delivered dogmatic theology until 1601. His lectures once more gained considerable popularity, as they were attended not of Jesuits alone but also by Benedictines, Cistercians, Franciscans, Augustinians as well as ordinands on interdiocesan seminary (Darowski: 8).

After Lublin period, Ortiz came back to Vilnius University where he delivered theology 1601–1610 and 1613–1619. In 1602 Vilnius University awarded him a doctor degree in theology. The academic career of Ortiz has reached its peak when he was elected the chancellor of Vilnius University in 1609. It was the position that he managed to hold until his death. In 1610 fire damaged the premises of Vilnius University and Ortiz was forced to move to Pultusk Jesuit College. Here he delivered dogmatic theology for 3 years until the above-mentioned premises were restored. In 1625 plague epidemic took over Vilnius. Ortiz as the other professors and students at Vilnius University moved to Nesvizh (Nieswiez), where he finally died the same year.

According to testimonies of contemporaries, Ortiz was a man of wide erudition and high spiritual values and virtues. He also possessed a sober practical mind that allowed him to make appropriate solutions in various situations of life¹. He spoke Spanish, Latin, Hebrew, Ancient Greek, and Polish languages (Darowski 1983: 10). As the unknown author of Ortiz's obituary maintained, "he was a man worth eternal memory, a man, whose prominent and subtle mind

matched the amazing simplicity and cordiality of understanding, the features that are rarely met in this world"². The high recognition and estimation he got for his scientific, academic, and social activities are witnessed by high positions he held. More concretely, Ortiz was not only Chancellor of Vilnius University for 26 years but also longtime adviser to the Rector of the same university as well as member of the Council of Polish province of Jesuits Order (Darowski: 9–10).

Ortiz has not left *Summas*, treatises, or manuals of philosophy. His philosophical views reached our days only thanks to his students. All his philosophical legacy may be divided into 2 parts: a) manuscripts of lectures on logic, psychology and metaphysics delivered in Poznan Jesuit College and Vilnius University and written by the students of the above-mentioned schools (Ortizius 1591–1592, 1596, 1596–1597); b) philosophical theses of students of those schools prepared under supervision of Ortiz (Ortizius 1591, 1597). This article will analyze the main and the most extensive source of Ortiz's philosophical legacy, namely, his lectures on logic, by concentrating on the metalogical level included in those lectures.

LOGIC AS SCIENCE AS WELL AS COMMON INSTRUMENT

And let us to start from the so called metalogical level that we can find in those lectures. This level includes questions about status, object, and origin of Logic. It is worth mentioning that not all the courses of logic delivered in schools of Polish-Lithuanian Commonwealth in-

cluded extensively presented metalogical level. For example, the course of Logic by Marcin Smiglecki (*Martinus Smiglecius*) delivered in Vilnius University 1586-1587 (Smiglecius 1987) involves only some short fragments of that level allowing to restore only the most gen-

eral traits of it. As for Ortiz, he started his lectures exactly from this level that served him as a certain introduction into the following parts of the course.

First, let us analyze, how Ortiz interpreted the logic's status. In the classical scholasticism, we can find several interpretations of this status. According to thomists and scotists, logic belongs to theoretical sciences, investigating various sides of reality, both external and internal. As for logic, this science, by analyzing operations, features, and species of human thinking, deals with reality that is immanent to a human being. On the contrary, followers of William Ockham asserted that logic belongs to practical sciences that formulate principles, rules, and laws of various forms of human activity, namely, thinking, behavior, house holding, state governing, warfare and so on. Logic is a discipline that diverts human thinking in the right direction thanks to its rules and laws. Hence logic is a purely practical and not theoretical science. More exactly, theoretical sciences achieve clear, distinct, certified, and necessary knowledge about reality meanwhile logic proposes the necessary laws and conditions of reaching this knowledge. The consecutive Aristotelians proposed alternative to the abovementioned position. According to them, logic cannot be regarded as science *in sensu stricto*, as any real science is obliged to research a certain aspect of reality. But logic is not attached to any realm of reality. Logic only formulates general conditions, rules and laws that are necessary for cognition of any kind of reality. Therefore, logic is just a common instrument of all sciences.

And what about Ortiz? Which camp of this scholastic dispute did he support? First, he claimed that logic is a real science as it satisfies all the requirements of scientific cognition. According to him, "any cognition achieved by demonstration, is a scientific one. As for logic, its laws, rules, and principles are formulated based on demonstration. Hence, logic is a science in *sensu stricto*" (Ortizius 1596: fol. 16). On the other hand, science is a certain and evident cognition (*cognitio certa et evidens*) of a necessary being through the veracious and necessary causes, because of which such a being exists. As for logic, it is exact and evident cognition of properly performed 3 operations of human intellect. Such cognition attributes to those operations their authentic and necessary properties, based on the necessary causes of the latter (Ortizius 1596: fol. 16). More exactly, logic provides evident, exact, and necessary truths about apprehension, proposition and ratiocination, or reasoning. Hence, it is once more science *sensu stricto*.

On the other hand, this interpretation did not hinder to consider logic also the common instrument of sciences. According to Ortiz, "anything can be correctly called an instrument, if someone uses it to achieve a certain goal. But human intellect applies logic to cognition of all the things. Therefore, logic is a tool for cognizing all the things" (Ortizius 1596: fol. 16). In other words, logic, by providing general rules of human thinking and reasoning, serves as a common tool for all the sciences cognizing different regions of reality.

So, logic, being common instrument of sciences, does belong at the same time

to the realm of real sciences. But what science is it – theoretical or practical one? Ortiz provides an Occamistic answer to this question. According to him, “each science that directs and governs human actions is a practical one. As for logic, it diverts actions of human intellect in the right direction; hence, it is a practical science at its core” (Ortizius 1596: fol. 21). On the other hand, “the object of theoretical science is a thing by its very nature, and the object of practical science is a thing inasmuch as it performed or created by human beings” (Ortizius 1596: fol. 19). The object of logic is not a being independent of human activity. On the contrary, the object of logic involves 3 operations of human intellect which

could be performed both properly and improperly and which therefore need principles, rules and laws allowing them to take a right direction. Logic is a science proposing those rules; hence it is a perfect practical science.

It is worth mentioning that we find the same interpretation of logic’s status in theses on logic prepared by the Ortiz’s student Kwyrin Knogler in Vilnius University in 1597. According to Knogler, “logic is both an instrument for all the sciences and a real science as well as a part of philosophy. It belongs to practical sciences, as its object is 3 operations of intellect insofar as they can be directed and completed in order to attain the infallible cognition of beings” (Ortizius 1597: th. 1).

WHAT IS LOGIC ALL ABOUT?

Let us move now to the other topic of metalogical level, namely, the status of logic’s object. Scholastic logic involved several interpretations of this status. Sco-tists as well as occamists maintained that objects of logic are entities made up by human reason (*entia rationis*), that is, tools of cognition. Those *entia rationis* included Porphyre’s predicables, laws of logical square, figures, and modes of syllogism as well as the other constructs of human reason that give a right direction to operations of intellect belonging to the sphere of real beings. Meanwhile thomists regarded logic’s objects as real entities (*entia realia*). The latter were interpreted as operations of human intellect insofar as they are diverted to the proper cognition based on certain rules. The rules themselves bearing status of

cognition’s tools were considered not object of logic but necessary conditions of human thinking.

As for Ortiz, he held this thomistic point of view. According to him, “immediate and adequate object of logic is nothing but real actions of our intellect inasmuch as they are guided in the right direction while cognizing things in order to be performed infallibly” (Ortizius 1596: fol. 12). More concretely, operations of intellect as such are reckoned as only partial and intermediate objects of logic. Meanwhile the direct and immediate object of logic is identified with the same operations guided and governed by rules and conditions of right and correct cognition. Logic is a science that concentrates on those correctly performed operations by analyzing their essential fea-

tures and types. As for the rules and conditions of correct reasoning, they were conceived in two ways. Some of them were regarded as *entia rationis*. The most representative example of them could be Porphyre's predicables as the most general conceptual intellectual constructs that should enframe cognition of any real being. Nevertheless, most rules as well as conditions of human reasoning were awarded status of *entia realia*. More

concretely, Ortiz interpreted them as real conditions and features of properly performed intellectual operations. For example, even laws of syllogistics were attributed to real entities of that kind. According to Ortiz (1596: fol. 10), "each figure of syllogism as well as its modes could look as entities of reason excogitated by intellect (*entia rationis ab intellectu excogitata*). Still, they are nothing but real conditions of correct reasoning".

THE INTERPRETATION LOGIC'S ORIGIN

Let us turn now maybe to the most intriguing topic of metalogical level, namely, origin and history of logic. Analyzing this topic, Ortiz remained faithful to scholastic tradition which distinguished two types of logic, namely, natural logic (*logica naturalis*) and artificial, or theoretical, logic (*logica artificialis sive theoretica*). Ortiz defined natural logic as natural potency of human reasoning, that is, natural process of thinking. As for artificial logic, it was interpreted as scientific system composed of rules of proper reasoning which divert process of natural thinking in the right direction (Ortiz 1596: fol. 2). According to Ortiz, natural logic stems from the human nature itself, as three operations of intellect are the most essential human abilities. In this place it's worth remembering Aristotelian definition of human being as rational animal. So it is in the very nature of human being that he or she is able to formulate concepts, propositions and reasonings. Meanwhile, properly performed and therefore, truth-guaranteeing, intellectual operations are not innate

to human nature, as rules of correct thinking are not any *a priori*, or innate, ideas. On the contrary, those rules can be discovered only as results of a certain experience. Therefore, artificial logic formulating these rules and principles originates not from the human nature itself but from a certain human knowledge and experience.

Ortiz traditionally distinguished two types of experience: direct and reflexive ones (*experientia directa et experientia reflexa*). Ortiz identified direct experience with cognition of any realm of reality that does not belong to the realm of human experience itself. Such direct experience includes both sensual and intellectual cognition. As for reflexive experience, it is acquired when intellect investigates its own operations as well as sense perception subordinated to them. Hence, reflexive experience is nothing but intellectual cognition of human cognitive potencies. It is from this reflexive experience that Ortiz derives logic, whereas all the other sciences were regarded by him as results of direct experience (Ortiz 1596: fol. 2).

The very emergence of logic and other sciences was explained in the following way. After Ortiz, thinking is one the most essential potencies of human nature, therefore human beings applied it from the beginning of their existence. As “reflexive actions of intellect are posterior to direct ones” (Ortizius 1596: fol. 2), human reason from the very beginning of its existence investigated areas of reality not identical to itself creating at the same time sciences that represented the above mentioned areas. As for reflexive experience, human reason acquired it a little bit later. Hence, science of logic directing reason’s operations originated later than the other sciences that stem from direct experience.

It’s worth mentioning that those sciences created before discovery and application of reflection’s potency were quite primitive. Ortiz entitles them as sciences in state of imperfection (*scientiae in statu imperfecto*). In this state human reason simply was not familiar with conditions that are necessary for achieving truth. Therefore, scientific discourse used to encounter various errors and inaccuracies. Moreover, some of the scientific data and conclusions, based on them, contradicted one another. In length of time human intellect itself started to conceive these numerous deficiencies of scientific discourse. To get rid of those shortcomings as well as to avoid future fallacies this intellect began to analyze itself thus trying to discover principles of proper reasoning as well as to acquire perfect and completed scientific knowledge. As Ortiz maintains (1596: fol. 2), “reflection on operations of intellect,

namely, apprehension, composition and discourse, performed by intellect itself originated experience thanks to which logic was created”. Hence, it was exactly because of this self-reflection that intellect discovered laws and principles of proper reasoning which constitutes logic as theory of appropriate reasoning.

According to Ortiz, emergence of logic determined a huge progress of all scientific knowledge. Logic has immediately become the common tool of sciences. Based on necessary truth attainment conditions, sciences gradually got rid of their childhood’s mistakes thus achieving evident, exact, necessary, perfect, and completed knowledge of their own objects. According to Ortiz (1596: fol. 2), “it was after invention of logic that creators of sciences began to make perfect and completed discourses about their objects, as, before logic’s invention, those discourses used to be done with errors”. In other words, sciences reached status of perfection only after emergence of logic. Thus, as Ortiz asserts (1596: fol. 2), “logic was invented after other sciences inasmuch as they are considered in their imperfect state, still, it was invented before those sciences taken in the state of perfection”.

While analyzing logic’s origin, Ortiz paid special attention to the question of its authorship. He traditionally proclaimed Aristotle the author and incontestable authority of artificial logic. True, Ortiz admitted that even before the logical treatises of Stagirite, several precepts of logic were discovered as well as rudiments of certain theories created. For example, Socrates was considered founder of definition theory; division theory’s

initiator's status was attributed to Plato; Architas was honored as the father of categories conception etc. Nevertheless, it was Aristotle alone that complemented already existing parts of logical discourse with syllogistics and the other theories of his own and eventually combined this variegated material into unified scientific system. According to Ortiz (1596: fol. 3), "although we cannot deny a certain usage of artificial logic and its precepts even before Aristotle, nevertheless, merely Aristotle should be entitled as the first inventor and scribe of perfect and methodically presented logic". On the other hand, Ortiz admitted that logic was being developed even after Stagira. Yet, he did not attribute any significant merits to post-Aristotelian authors of logic (Porphyre, Boethius, Gilbert de la Poree etc.). In his opinion, everything that was invented and written in logic after Aristotle could be easily derived from what *magister dixit*. Thus, he regarded Aristotle as the first as well as only inventor of theoretical logic in its perfect state.

Such a position maintaining that everything that was invented and written in the long run of logic's history, could, in principle, be reduced in one way or another to Aristotle's position seems quite naïve from the contemporary point of view. For, at least in frames of logical semantics and theory of logical sequence scholastic logic surpassed Aristotle. On the other hand, this position could be easily explained by research method peculiar to scholasticism. This method could be defined as demonstration of previously known propositions based on the arguments of the scholastic authorities. It is no secret that Aristotle was the greatest authority within frames of *scientia scholastica*. So, it is natural that, within those frames, nothing else but Aristotelian logic, "amended" and supplemented with ideas of Christian thinkers, was conceived as incontestable, perfect, and absolutely completed science. Therefore, it is likewise natural that Ortiz remaining faithful to scholastic tradition took this position as self-evident.

CONCLUSIONS

The Spaniard Diego Ortiz was the ninth professor at Vilnius Jesuit College and Vilnius University delivering there the course of philosophy. His intellectual and pedagogical geography included colleges and universities in Spain, Transylvania, Poland, Lithuania, and Belarus. His personality combined wide erudition, high spiritual values, and virtues as well as good managerial abilities.

One of the most significant aspects of Ortiz's logical legacy is the so called

metalogical level that we can find in his lectures on logic delivered in Poznan Jesuit College and Vilnius University. This level includes questions about status, object, and origin of Logic. While interpreting logic's status and object, Ortiz entered some scholastic disputes. Namely, he based the explanation of logic's status on an eclectic conception which was very popular in the scholasticism of 16–18th centuries. This conception integrated the Occamist position which reck-

oned logic as a certain kind of practical science, and the Aristotelian standpoint which regarded logic as the common instrument of the scholastic sciences. As for the logic's object, Ortiz took the attitude of Thomistic realism which delivered status of that object to real entities, i.e., operations of human intellect being accomplished in the proper way. Finally, as regards logic's origin, Ortiz followed the

scholastic tradition and derived logic from the reflexive human experience. According to him, such an experience is nothing but the intellective cognition of human cognitive potencies. Ortiz also proclaimed Aristotle as the first and final creator of logic, by asserting that everything that was invented and written in logic after Aristotle could be easily derived from what *magister dixit*.

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Endnotes

- ¹ *Catalogus Secundus Collegii Vilmensis S. I.* 1597, fol. 25, rkps. 96, Wrocław: Ossolineum.
- ² *Summariola eorum qui post ultimam congregatio-*

nem provincialem in Lithuana Provincia vita functi [sunt]. Lith. 61. Roma: Archivum Romanum Societatis Iesu.