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Jerónimo Valera's (1568-1625) Scotistic Account on the Nature and Properties of Logic

Abstract: In this study, we offer a description and an analysis of Jerónimo Valera's (1568-1625) account on the nature of logic and on its properties. This was essentially done by Valera in the beginning of his *Summulae dialecticae* and in Distinction I of the Book I of his Scotistic *Commentaries* on Aristotle's logic. For the purpose of explaining and determining logic as a science, a particular emphasis will be put on Valera's view of the *obiectum* or the «subject-matter» of logic.

Keywords: Jerónimo Valera, logic, *obiectum* of logic, being of reason, syllogism.

Resumo: Neste estudo, oferece-se uma descrição e uma análise do relato de Jerónimo Valera (1568-1625) sobre a natureza da lógica e sobre as suas propriedades. Isso foi essencialmente feito por Valera no começo das suas *Summulae dialecticae* e na Distinção I do Livro I dos seus *Comentários* scotistas à lógica de Aristóteles. Para o propósito de explicar e determinar a lógica como ciência, uma ênfase particular será colocada na concepção de Valera do «objeto» (*obiectum*) da lógica.

Palavras-chave: Jerónimo Valera, lógica, objeto da lógica, ente de razão, silogismo.

Introduction

Jerónimo Valera's (1568-1625) work that survived to our days, namely *Commentarii ac quaestiones in universam Aristotelis ac Subtilissimi Doctoris Ioan-*

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nis Duns Scoti logicam (1610) – the first philosophical work printed in South America – is at once a remarkable testimony of study, learning and writing of philosophy, in this case of philosophical logic at the beginning of the 17th century, and an emblematic evidence of the reception, influence, and development of Duns Scotus's thought in the intellectual spheres of the Viceroyalty of Peru at those times¹. It was written as a logical textbook for Franciscans friars, and not planned for university classes strictly speaking².

Valera's work on logic fits well in the traditional picture of logic teaching within Latin-American colonial philosophy³. After all, the still existing volume testifies the double structure of his logical *cursus* – it is not entitled so by Valera, but we find in it both the *Summulae dialecticae* or the minor logic and the «questions» or rather the *Commentarii ac quaestiones...* on the *Organon* of Aristotle. Such an exposition program, with some specifications, has been verified by W. B. Redmond and M. Beuchot in the important works by authors such as the Augustinian Fray Alonso de la Vera Cruz (1507-1584), in his *Recognitio summularum* and *Dialectica resolutio* (1554), the Dominican Tomás de Mercado (ca. 1523-1575) in his *Commentarii lucidissimi...*, and the Jesuit Antonio Rubio (1548-1615), in his *Commentarii in universam Aristotelis dialecticam* (1603)⁴.

¹ Cfr. for example G. FURLONG, *Nacimiento y desarrollo de la filosofía en el Río de La Plata 1536-1810*, (Publicaciones de La Fundación Vitoria y Suárez) Editorial Guillermo Kraft Limitada, Buenos Aires 1952, pp. 137-138; F. BARREDA LAOS, *Vida Intelectual del Virreinato del Perú*, Universidad Nacional Mayor de San Marcos, Lima ³1964, p. 73; M. L. RIVARA DE TUESTA, «La influencia de los clásicos en la filosofía colonial peruana. Fray Jerónimo de Valera (1568-1625)», in T. HAMPE MARTÍNEZ (comp.), *La tradición clásica en el Perú virreinal*, Sociedad Peruana de Estudios Clásicos – Universidad Nacional Mayor de San Marcos, Lima 1999, pp. 47-68 (especially pp. 47-52).

² Cfr. V. S. CÉSPÉDES AGÜERO, «La filosofía escotista de Jerónimo de Valera (1568-1625)», in J. C. BALLÓN VARGAS (ed. y coord.), *La complicada historia del pensamiento filosófico peruano, siglos XVII y XVIII (Selección de textos, notas y estudios)*, Universidad Científica del Sur – Universidad Nacional Mayor de San Marcos / Ediciones del Vicerrectorado Académico, Lima 2011, pp. 435-514 (here p. 482).

³ Cfr. W. B. REDMOND, «Latin America, Colonial Thought in», in E. CRAIG (ed.), *The Routledge Encyclopedia of Philosophy*, Routledge, London – New York, Vol. 5, 1998, pp. 421-426; R. H. PICH, «Recepção e desenvolvimento da Escolástica Barroca na América Latina, séculos 16-18: notas sobre a contribuição de Walter Bernard Redmond», *Scripta Mediaevalia* 4 (2011):2 1-22; L. F. RESTREPO, «Colonial Thought», in S. NUCCETELLI; O. SCHUTTE; O. BUENO (eds.), *A Companion to Latin American Philosophy*, Wiley-Blackwell, Chichester 2010, pp. 36-37 (36-52).

⁴ Cfr. M. BEUCHOT, *Historia de la filosofía en el México Colonial*, Herder, Barcelona 1996, pp. 143-145; W. B. REDMOND, «La *Logica mexicana* de Antonio Rubio – Una nota histórica», *Diá-*

The fact that even under a common structure Valera's work is a «Scotist logic» – and this is implied in the general title – is particularly remarkable. The front page of the *Commentarii ac quaestiones...* brings objective information about the total content of Valera's *logica in via Scoti*. The subtitle is divided into two headlines, the first one being «Totum hoc opus in duas partes distributum offertur: prima continet breve quoddam Logicae Compendium quod vulgo solet Summa seu Summulae Dialecticae nuncupari, Quaestiones Prolegomenales, Praedicabilia Porphyrii, et Aristotelis Antepredicamenta, Predicamenta et post Predicamenta». As the *Discursus prolegomenus* of the *Summulae* and the Prefaces of Books I and II of the *Commentarii ac quaestiones...* show, what is meant is that, in the three sections of the first part, the following texts were produced: in the (I) *Summulae dialecticae* (pp. 1-36), there is a compendium of logic after a *Discursus prolegomenus* in two chapters, which present «dialectics», the objective and the nature of the «*Summulae*» (pp. 1-5). The *Summulae* are exposed in three short books (pp. 5-36). (II) The following section presents the *Liber Primus*, which consists of a commentary, in Scotist form, to the «Introduction» (*Eisagogé*) written by Porphyrius to Aristotle's logic. We find here «Introductory Questions», namely in Distinctions I-II (pp. 2-105), wherein Valera presents logic as a science and investigates the «nature of the predicables», their «properties», and the «nature of the universal in common». Accordingly, in the following Distinctions (III-VIII, pp. 105-202) the five kinds of «universals» are treated⁵. (III) In the third and last section of the first part of the *Commentarii ac quaestiones...*, the *Liber Secundus*, first the «Pre-Predicaments» are explained (I-II, pp. 204-227), which are the main modes of predication of signifying terms, namely univocity, equivocity, analogy, and denomination; second the «Predicaments» (III-VII, pp.

noia (UNAM) 28 (1982) 309-330; W. B. REDMOND y M. BEUCHOT, *La lógica mexicana en el Siglo de Oro*, Universidad Autónoma de México, Ciudad de México 1985.

⁵ V. S. CÉSPÉDES AGÜERO, «La filosofía escotista de Jerónimo de Valera (1568-1625)...», pp. 454-474, gave particular attention to Valera's conception of universals. The same author translated the Second Distinction, On the Nature of the Universal in common, First Article, On the Universal for the Material, Questions I-IV, 497-514; cfr. HYERONIMUS VALERA, ««Introducción a la lógica de Aristóteles Libro Primero, Distinción Segunda – Sobre la naturaleza de lo universal en lo común, Artículo Primero – De lo universal por lo material, Cuestiones primera, segunda, tercera y quarta», traducción, selección de textos y notas de V. S. CÉSPÉDES AGÜERO, «La filosofía escotista de Jerónimo de Valera (1568-1625)»», in J. C. BALLÓN VARGAS (ed. y coord.), *La complicada historia del pensamiento filosófico peruano, siglos XVII y XVIII (Selección de textos, notas y estudios)*, Universidad Nacional Mayor de San Marcos / Ediciones del Vicerrectorado Académico, Lima 2011, 497-514.

227-378) of Aristotle, his ten categories; and third the «Post-Predicaments» (VIII, pp. 378-384), the several relationships that the categories have to each other, such as anteriority, simultaneity, and opposition⁶. In sections (II) and (III) Jerónimo Valera, in order to explain a considerable amount of logical-philosophical matters, systematically makes use of Duns Scotus's *Quaestiones in Librum Porphyrii Isagoge* and *Quaestiones super Praedicamenta Aristotelis*.

The second subtitle of the front page informs that this is the content of the second part of the entire work: «Secunda pars libros Perihermeniarum seu De interpretatione, libros Priorum, Posteriorum, Topicorum & Elenchorum comprehendit». This means that the second part comprises Books 3-7, where *Liber Tertius* contemplates the *De interpretatione*, *Liber Quartus* the *Analytica priora*, *Liber Quintus* the *Analytica posteriora*, *Liber Sextus* the *Topicorum*, and *Liber Septimus* the *Elenchorum*. So Valera would deliver a complete course on Aristotelian logic, namely the greater or material logic, and at the same time a *Scotist* course-commentary under the assumption that *opera* edited as *Scotist* from the end of the 15th up to the beginning of the 17th century⁷ contained also expositions on *First analytics*, *Second analytics* and *Topics* (less probably) taken today as inauthentic. In *Liber Tertius* and *Liber Septimus* we can suppose that Valera would work on non-critical editions of authentic works by Scotus edited today as *Quaestiones in Libros Perihermenias Aristotelis* (transmitted as *Quaestiones in Primum Librum Perihermenias Aristotelis* and *Quaestiones in duos Libros Perihermenias Aristotelis*) and *Quaestiones super Librum Elenchorum Aristotelis*⁸. At any rate, the first and virtually only existing volume in contemporary libraries does not contain *anything* of this second part. Apparently the second volume was either never writ-

⁶ Also in this case Valera is following a traditional division of the greater logic, which is observable again in Alonso de la Vera Cruz. Cfr. W. B. REDMOND y M. BEUCHOT, *Pensamiento y realidad en fray Alonso de la Vera Cruz*, Universidad Nacional Autónoma de México, Ciudad de México 1987, pp. 109sq. On John Duns Scotus's (rather short) treatment of the post-predicaments, cfr. G. PINI, *Categories and Logic in Duns Scotus – An Interpretation of Aristotle's Categories in the Late Thirteenth Century*, E. J. Brill, Leiden – Boston – Köln 2002, pp. 195-196. About such terminology and division in the commentary tradition on the categories, cfr. also S. EBBESEN, «Les Catégories au Moyen Âge et au début de la modernité», in O. BRUUN et L. CORTI (éds.), *Les Catégories et leur histoire*, Vrin, Paris 2005, pp. 245-274 (especiallly pp. 245-257).

⁷ Cfr. U. SMEETS, *Lineamenta bibliographiae scotisticae*, Commissio Scotistica, Roma 1942, pp. 2-4, 8-9.

⁸ Cfr. Hyeronimus Valera, *Commentarii ac quaestiones in universam Aristotelis ac Subtilissimi Doctoris Ioannis Duns Scoti logicam*, Apud Franciscum a Canto, Lima 1610, I Prooemium, p. 1; II [Prooemium], p. 203.

ten or is today lost. One should note, however, that the existing volume by Valera, in its commentary part, is related only to authentic works by Scotus⁹.

1. Jerónimo Valera on «Dialectics» in the Beginning of his *Summulae*

The purpose of this section is to highlight Valera's general understanding of «dialectics» (*dialectica*), at the beginning of his enterprise, that is, in the opening chapters of his «minor logic». The chapters taken into account (*Discursus prolegomenus, Caput I: De nominibus ac variis Dialecticae descriptionibus*, and *Caput II – A quo inchoandum sit*) illustrate a view on logic and on the teaching of logic that will be assumed again at the beginning of Valera's commentaries on Aristotelian *logicalia*.

Valera recognizes Aristotle as the prince of peripatetics and virtual inventor of «dialectics». Dialectics is neither easy nor elementary; consequently there is a need of developing an «art» for «dilucidating» the difficult doctrines of Aristotle for beginners. The «*Summulae*» are in fact a compendium or a «rude and imperfect image» of all parts of logic – materially viewed as the *Organon*. However, the goal of summular teaching is not only to enable the acquaintance and facilitate the understanding of Aristotelian books, but also to lead to matureness in the «method of disputating». Apprentices must become therefore «*dialectici*» and at some moment able to dispute «*more dialectico*»¹⁰.

In a non original way, Valera divides the *Summulae* in three parts, that follow the three operations of the intellect: (i) the simple apprehension either of things or of the simple terms, which is the very basis for (ii) the composition or division of simple things apprehended in the affirmative proposition or in the negative proposition respectively, and with this there can finally be (iii) «discourse», in which case from one proposition another one is inferred¹¹. Of course, this does

⁹ Cfr. R. H. PICH, «Notas sobre Jerónimo Valera e suas obras sobre lógicas», *Cauriensia* 6 (2011a) pp. 169-202; R. H. PICH, «*Scholastica colonialis*: Notes on Jerónimo Valera's (1568-1625) Life, Work, and Logic», *Bulletin de Philosophie Médiévale* 54 (2012) [forthcoming].

¹⁰ Cfr. Hyeronimus Valera, *Commentarii...*, *Summulae Dialecticae (SD)*, *Discursus prolegomenus*, pp. 1-2.

¹¹ For the Medieval origin of this division, cfr. also T. AHO and M. YRJÖNSUURI, «Late Medieval Logic», in L. HAARAPANTA (ed.), *The Development of Modern Logic*, Oxford University Press, Oxford 2009, pp. 27sq. Cfr. also the remarks in J. MAAT, «Language and Semiotics», in D. M. CLARKE and C. WILSON (eds.), *The Oxford Handbook of Philosophy in Early Modern Europe*, Oxford University Press, Oxford 2011, pp. 275-276.

not reveal a concern about the psychology of these three fundamental operations, but rather about the logical-linguistic form and typology that each intellectual operation presents. The proper interest of dialectics is concluding after a correct argumentation. Valera affirms, with Aristotle, that dialectics is «the method or the art of reasoning»¹².

It is manifest that Valera has «didactical» concerns in his writing. For example, he details the several names and descriptions that were given to «dialectica» as art of reasoning. The «faculty» in question relates essentially to *two names*, and by explaining them Valera identifies with a view of logic as a habit and a discipline, also clearly adopted by Domingo de Soto¹³. The *first* is «dialectica» that comes from the Greek «dialecome». As etymology makes clear, Valera does not see the sense of dialectics, in Aristotle, as focused on the «topic» part. The word as such has a common meaning that encompasses both «topical» and «demonstrative» parts, Valera clearly preferring the third meaning, «to make evident the unknown things from the known things, through argumentation, be it probable or necessary». The *second* name of the «faculty» at issue is «logica», from the Greek word «logos», translated as «discourse» or «reason», in the sense of giving direction to both external and internal discourse¹⁴.

¹² Cfr. Hieronimus Valera, *Commentarii..., Summulae Dialecticae (SD)*, Discursus prolegomenus, pp. 1-2.

¹³ Cfr. E. J. ASHWORTH, «The Scope of Logic: Soto and Fonseca on Dialectic and Informal Argument», in M. CAMERON and J. MARENBO (eds.), *Methods and Methodologies. Aristotelian Logic East and West, 500 – 1500*, Brill, Leiden – Boston 2011, pp. 129-130.

¹⁴ *Ibid.*, Caput I, p. 2. From these notes, it is fair to say that Valera with his «textbook» about logic does not partake of the transformation of dialectics propugated by humanists such as Lorenzo Valla in the middle of the 15th century. Here the core of dialectical argumentation was put on «persuasion» and «probability», where the *Topics* of Aristotle gained special place in the study of the «arts»; cfr. L. JARDINE, «Humanism and the Teaching of Logic», in N. KRETZMANN – A. KENNY – J. PINBORG, *The Cambridge History of Later Medieval Philosophy. From the Rediscovery of Aristotle to the Disintegration of Scholasticism 1100-1600*, CUP, Cambridge 1982 (repr. 1996), pp. 798-804; L. JARDINE, «Humanistic Logic», in Ch. B. SCHMITT – Q. SKINNER, *The Cambridge History of Renaissance Philosophy*, CUP, Cambridge 1988 (repr. 1990), pp. 175-176 (also pp. 178-186). In Valera's context, therefore, humanist and reforming textbooks such as the ones by Rodolphus Agricola, Philip Melanchton and even Petrus Ramus, difused in the European «Center-West» in the 16th century, which aimed to stimulate style, persuasion, and the good understanding of grammar, are far from substituting the model, present in a more or less indirect form, of Peter of Spain's logic for the purpose of education in the art of valid argumentation. Cfr. also W. K. PERCIVAL, «Changes in Approach to Language», in N. KRETZMANN – A. KENNY – J. PINBORG, *The Cambridge History of Later Medieval Philosophy. From the Rediscovery of Aristotle to the Disintegration of Scholasticism 1100-1600*, CUP, Cambridge 1982 (repr.

Valera turns introductorily to a series of possible questions about his art. For example: What are the causes of dialectics? The «cause» here is a natural one. Human reason itself gave rise to disputation, for there is a certain «native» strenght-tendency to inquire and to answer, which has received «growth» through «application» (*studium*), but achieved its «highest perfection» through art. Surely Aristotle was not the first to think about the «precepts» of dialectics, but he is the «*dialecticae inventor*», since in addition to ordering the already discovered precepts and providing them with an excellent method, he actually «invented» many parts of dialectics. Still in *Caput I*, Valera offers beautiful «descriptions» of dialectics, certainly useful to affirm its «utility» to his «[peruanis] tyronibus», such as «the skill of well disputing», «the art of discerning the truth from the false», «the common science that forms all the arts», «the art of arts», «the science of sciences», etc., as well as vivid illustrations to understand the nature of *dialectica* and its place within philosophy¹⁵.

Another important question for Valera was «from where to begin» the *Summulae* or rather the teaching of logic as such. The beginning and order of topics are not viewed with unanimity by the «summulists». Two aspects are common among the schools. First, an answer to the question about the «beginning» is the «way of knowing» (*modus sciendi*), and this is «the oration that manifests some unknown thing». Assuming three causes for there being «unknown things», the «way of knowing» is triple: an unknown thing turns manifest (i) «through division», (ii) «through deffinition», and (iii) «through argumentation», in which case from a known property another still unknown is deduced. Here, the way of knowing is the «oratio», which amounts to a consequence or to a valid argument¹⁶.

1996), pp. 810sq. On the humanistic criticism of traditional Aristotelian-scholastic logic, and particularly on the role played by Lorenzo Valla, cfr. for example L. NAUTA, «Lorenzo Valla and the Rise of Humanistic Dialectic», in J. HANKINS (ed.), *The Cambridge Companion to Renaissance Philosophy*, Cambridge University Press, Cambridge 2007, pp. 193-210 (especially pp. 193-205). In fact, following the conclusion of E. J. ASHWORTH, «The Scope of Logic: Soto and Fonseca on Dialectic and Informal Argument», cit., p. 145, about Domingo de Soto and Pedro da Fonseca, by the way, the only summulists that Valera mentions in his *Summulae dialecticae*, we would say that «neither of them shows the supposed impact of humanistic logic».

¹⁵ Cfr. Hieronimus Valera, *Commentarii...*, *SD*, Caput I, pp. 2-3.

¹⁶ In this manner of proceeding and in this choice of «prolegomenous» topics, Valera is not alone; one can report in the *Summulae* of Domingo de Soto, 1529, in the *Introductiones dialecticae*, the same approach; cfr. E. J. ASHWORTH, «Traditional Logic», Ch. B. SCHMITT – Q. SKINNER (eds.), *The Cambridge History of Renaissance Philosophy*, CUP, Cambridge 1988, pp. 162sq.

If this is the beginning of dialectics, it excludes «authority», «experiment» without determined rules and techniques, and «examples» that manifest something unknown merely accidentally¹⁷. Here, to begin with the «way of knowing» or strict valid argumentation in logic (i.e. the science of the most universal *instrument of reason*) is to begin already «through the most universal instrument of the intellect», to which everything else «in the reason of the intelligible» is then directed¹⁸: this, as especially the First Distinction of *Liber primus* will explain, is the syllogism.

Confirming the first view, Valera proposes that it is a universal law that «the superior and more necessary cause of knowing», which is precisely «the intellect with its instrument or way of knowing», must precede all further knowledge, and therefore logic is previous to philosophy and further sciences. The reason is clear: logic encloses «the way of knowing», and this is the «universal instrument» «for all knowledge»¹⁹. It is the case that in any science, in order for the terms to be known «scientifically» and «ordinately», the *modus sciendi* must have a precedent place. Logic has an instrumental character for any science and is thus previous to any scientific realization. A second confirmation is that the «simple things» that sciences investigate are explained only through «divisions», «definitions», and «argumentations». This is previous to the knowledge of simple things. In order to have an «exact definition» of a scientific term it should previously be known *what a definition is* and according to which laws is a definition good. Accordingly, it is only by mastering the method of disputing that a subject is able to perceive the «further things» – of the further scientific undertakings – with greater facility too²⁰.

There is, however, a second view on the starting point of dialectics according to which it begins not through the way of knowing itself, but through a more simple part of it, namely, the term. Aristotle seems to have assumed that dialectics starts with such simple things. The order of doctrine, as every art, follows an order of nature, and nature progresses from potency to act, from part to whole, from simple things to composed things, etc. Grammar confirms this, for in it *scholastici* start with knowledge of terms in the form of grammar classifications such as «substantive», «verb», etc. The first and simpler things, the parts, are easier to

¹⁷ Cfr. Hyeronimus Valera, *Commentarii...*, *SD*, Caput II, p. 3.

¹⁸ *Ibid.*

¹⁹ *Ibid.*

²⁰ *Ibid.*, Caput II, pp. 3-4.

know, for they are more independent. Finally, the logician has to conduct first of all the intellectual operation that is previous and independent, and this operation is the apprehension of the terms²¹.

What then is Valera's determination about the mode of beginning of dialectics as a discipline? His position is well balanced. «All ways of disserting» (*modos omnes disserendi*), the universal instruments of the intellect that consist in it of universal laws and serve to investigative undertakings are presented in scientific form in the «logica magna» that follows the *Summulae* – the (seven) books with commentaries to Aristotle's books *in via Scoti*. In the compendium, *some* knowledge of how to reason with correction should be obtained before proceeding to more complex steps. The compendium presents a confusing and imperfect knowledge of the way of knowing, and there is no reason why should still another confusing compendium be brought before this one, in a process *ad infinitum*. Surely no distinct knowledge of what is the way of knowing claimed can be obtained unless divisions and definitions are made. But before this, one has to know *more simply or vaguely* what «definition», «division», «consequence», etc. are. It is not the case that at the beginning the exact definition of the «way of knowing» can be known. If at least for the *confusing* knowledge of the «way of knowing» it is not required another «way of knowing», the same is valid for the knowledge of the «way of knowing» prepared in the *Summulae*. Valera insists on the point that also for the subject matter of logic *it is necessary to begin from some point*; for this purpose, the knowledge of «division», «definition», etc., that one possesses «through the guiding nature», «through the sharpness of natural logic» (*logicae naturalis acumine*), is enough. Furthermore, for the disciple it is enough to vaguely receive the way of knowing transmitted by the master. Confidence plays an important role here, so that the disciple will assume that what he receives is exact and true. At any rate, the point of departure of dialectics is not confidence in the master, but the confusing or vague notions that one possesses through a «logical» intelligence given in by nature²².

Jerónimo Valera cannot share, therefore, the first opinion about the beginning of dialectics as a discipline. For him it is not possible to begin with a non confusing «way of knowing». One has to start with the simpler things and terms – as a matter of fact, things of reason and second intentions –, through division and

²¹ Ibid., Caput II, p. 4.

²² Ibid.

definition. There is an answer to the first argument in defense of the first opinion: if it is affirmed that the more necessary science must come before further sciences, and this is the science that investigates the way of knowing, one cannot already possess this science from the beginning. As scientific knowledge, it has to be obtained on the basis of previous efforts and still confusing states of knowledge²³. In answer to the second argument that proved the first opinion, Valera affirms that *in order to begin or to acquire* knowledge of logic, one cannot and need not attain the way of knowing in the «assigned act», but only in the «exerted act». This is what the beginner makes by making use of the definition offered by the master²⁴. There is a «pedagogical principle» here. Before he strictly and clearly understands the very subject matter of logic, the apprentice has to follow what the master does in the procedures of the discipline.

2. On the Nature and Properties of Logic in the *Liber Primus* of the *Commentarii*...

In the *Prooemium* to the *Liber Primus* Valera explains the plan of his commentary on Aristotelian logic and why, structurally at least, it can be viewed as a Scotist logic²⁵. In the First Distinction, “On the nature and properties of logic,” he advances three questions put forth by the Subtle Doctor, namely (I) “Whether logic is a science”; (II) “Whether logic is a common science”; (III) “What is the object of logic.” Quoting Scotus literally, Valera will follow his conclusions. Concerning the first question, it is highlighted first that logic is a science, for in it many things are concluded through demonstration and actually it deals with all things required for demonstration; second, logic is to be considered insofar as it is «docens» (wherein it is a science) and insofar as it is «utens» (wherein it is not a science). About the second question, Valera remembers that logic is a common science through its «subject-matter» (*subiectum*), for it falls within the use of all other sciences. About the third question, we are remembered of three Scotist conditions of the *subiectum* of a science: (a) one has to know what it is and that it is; (b) through the «quod quid est» one can demonstrate the properties

²³ Ibid., Caput II, p. 5.

²⁴ Ibid.

²⁵ Cf. HYERONIMUS VALERA, *Commentarii...*, *Liber primus*, Prooemium, pp. 1-2. Cfr. on this R. H. PICH, «*Scholastica colonialis*: Notes on Jerónimo Valera’s (1568-1625) Life, Work, and Logic», op. cit., [forthcoming].

of the subject; (c) all other things in the science are reduced to its subject and are considered because of it²⁶. According to this, Valera affirms that a being of reason in common is the proper *subiectum* or *obiectum* of logic, i.e. the «syllogism». Syllogism satisfies all conditions for being the adequate *subiectum* of logics. All questions by Valera keep this in view²⁷.

From such an orientation provided by Scotus's questions and conclusions, Valera's detailed exposition on the nature and properties of logic will be offered in ten different questions, which will be now described and up to a certain (modest) point analyzed. The basic purpose is to expose his views – which can be quite sophisticated in some cases, especially concerning the subject matter of logic – as loyal as possible to his own texts and formulations and as clear as possible to a contemporary reader. In a simple attempt to find a structure and a sequence for his ten questions, we divide the exposition into (2) an account on *the real basis* of logic as a habit, (3) an account on *the object* of logic, (4) an account on *the scientific character* of logic as intellectual habit.

2.1 A Faculty Given in Reality, a Habit Artificially Acquired

Again in a kind of «metatheoretical» consideration, beginning his Commentary in Question I of Distinction I, «Whether dialectics is in the nature of things» (*Utrum Dialectica sit in rerum natura*), Valera emphasizes that theoretically the question about what a thing is always precedes any questions about how it is. After saying that a «quid est» question has in this case a double aspect, it is the second aspect that concerns Valera, namely a question whether things have «true existence», either «actual» or «possible». Valera wants to know whether dialectics has «true existence», actual or possible, in the nature of things²⁸. Exploring negative views on the existence of logic «in the nature of things», he will affirm that logic does not properly investigate the nature of truth and falsity (as metaphysics does) and does not simply judge on the truth – and the credible – about its object (as all sciences do), but it considers the form and way how one has to judge the truth of things. In addition, he sees no inconsistency in affirming that there is an art in nature that discerns truth from falsity, presupposing therefore that there is falsity in the nature

²⁶ Cfr. R. H. PICH, *Der Begriff der wissenschaftlichen Erkenntnis bei Johannes Duns Scotus*, Rheinische Friedrich-Wilhelms-Universität Bonn, Bonn 2001, especially Chapter I.

²⁷ Cfr. Hyeronimus Valera, *Commentarii...*, *Liber primus*, Littera Doctoris Scoti, pp. 2-3.

²⁸ Cfr. Hyeronimus Valera, *Commentarii...*, *Liber primus*, d. 1, q. 1, p. 3.

of things. Agreeing that falsity is «privation of truth», Valera denies the premise according to which privation is nothing. Although privation is not something positive, there is, however, a *reale privativum*, and it is given in nature²⁹.

Before the conclusion, Valera makes two points: (i) the first and most received division of logic is the division of logic in «natural», «inchoative», and «artificial». (I) Natural dialectics is the intellect itself, which, guided by the natural light, «defines», «divides», and «argues», and there is no human being that does not do this through the mere and simple conduction of nature alone – all human beings are capable of such «benefit». (II) Inchoative dialectics is the knowledge of some evident consequences devised by the intellect, at least in the perfect modes of the first figure – i.e. *Barbara*, *Celarent*, *Dario* et *Ferio*. (III) Artificial logic is a habit acquired through frequent use of argumentation. It is the nature of this sort of logic or dialectics that Jerónimo Valera will then make efforts to investigate and understand. (ii) In addition, concerning things that can be realized well or badly, some art that perfects them is given by nature; every art has been invented to perfect things that nature left «imperfect» and «inchoative» or to perfect the potencies that have inclination to an act that sometimes is made well, sometimes not³⁰.

The conclusion is that logic is not only «possible», but it is given *de facto*. It is «possible» because operations of the intellect can be realized well or badly. This allows the conclusion that such operations can be ordered *by some art* to a good performance. It could also be said that here there is an offer of nature, that is, that a corresponding art «is giveable» (*dabilis est*) for the purpose of providing way and method for the excellent realization of those operations. That it is given *de facto*, this is knowledge from experience, for there are several that learn this

²⁹ Ibid., p. 3.

³⁰ Ibid., pp. 3-4: «Notandum est primo primam eamque receptissimam logicae divisionem esse qua in naturalem, inchoatam et artificialem dividitur. Dialectica naturalis dicitur ipse intellectus, qui lumine naturali ductus diffinit, dividit et argumentatur, de quo Aristoteles Libro *De reprobationibus sophistarum* [...]. Et I *Elenchorum* c. 11: [...]. Dialectica inchoata est, notitia aliqua seu cognitio aliquarum consequentiarum evidentiarum ab intellectu comparata, saltem in modis perfectis primae figurae. Logica vero artificialis est habitus per usum argumentandi frequentem acquisitus, cuius natura modo aggredimur inquirendam. Notandum secundo, quod ad quamcumque rem quae bene vel male fieri potest, datur aliqua ars quae talem rem perficiat, cum omnis ars fuerit adinventata ad perficienda ea, quae veluti imperfecta et inchoata reliquit natura, vel ad perficiendas potencias, quae inclinationem habent ad aliquem actum, quem aliquando bene aliquando male operantur; [...].

art; and also we experience *before learning dialectics* that to define, to divide, and to argue are difficult things; however, once we have acquired that art we define, divide, and argue quite easily and softly³¹.

2.2. An Artificial Habit of Knowledge

But if Valera, on the one hand, gives logic a natural basis as power or faculty of the mind (of the intellect), he is conscious that, if it is a science, it must be treated as a habit, and in this respect logic is «artificial», as already mentioned. It is understandable that Question II deals with this subject, under the heading «teaching» habit (*docens*) or «habit» in-use (*utens*) (*Quaestio II – Utrum recte dialectica in docentem et utentem dividatur*). Valera believes that there are two opinions generally accepted. According to the first, logic proceeds by scientifically *teaching* its object and everything else that concerns it, and this holds for both the demonstrative and the topical parts of logic. According to the second, there is «maximal disagreement» about the idea of logic as «utens». Apparently, there is a strong appeal in the idea that logic is (also) a true and real habit which *exerts* in other sciences the same precepts than *learning* logic does, in other words, a habit that realizes in exerted act those ways of knowing in the matters of the other sciences³².

Valera disagrees with the view that logic should be taken as *utens* in the sense of effectively concurring with the acts of other sciences in respect to their formal objects, in the «active sense»³³. The *first* reason for this conclusion is that a habit exists in order for a potency to overcome difficulties which it has in operating. Where there are no such difficulties, a habit is not necessary. Very soon human intellect has knowledge through an art or a «teaching logic» (in a natural sense) of what is «definition», «division», «syllogism», «parts» of syllogism and its valid

³¹ Ibid., p. 4: «Conclusio: logica non tantum est possibilis, sed etiam de facto datur. Prima pars probatur, quia operationes nostri intellectus possunt bene vel male fieri, aliquando enim bene aliquando non ita diffinimus, dividimus et argumentamur: ergo possunt ab aliqua arte ordinari ut bene fiant: dabilis ergo est ars, quae viam et methodum tradat, ista recte conficiendi. Secunda etiam pars constat ex ipsa experientia, innumeri enim sunt, qui talem artem addiscunt, et experimur semper quod antequam dialecticam addiscamus, magna cum difficultate diffinimus, dividimus et argumentamur, ea autem acquisita facile et suaviter; datur ergo de facto».

³² Ibid., I d. 1, q. 2, pp. 4-5.

³³ Ibid., p. 5: «Prima conclusio: logica non dicitur utens active quia effective concurrat ad actus aliarum scientiarum quoad formale ipsorum, ut asserit prima sententia, est enim superfluum habitus ad hoc munus».

modes for the realization of other sciences. Such a «logica docens» suffices for the purpose of serving other scientific habits³⁴. Moreover, the demonstrative act, both with respect to a material and to a formal (object) of the act in a habit, say in philosophy, is produced only by the intellect *and the corresponding philosophical habit*. The concurrence of another habit for such an act is superfluous. As a result, logic is not *actively* realized in the acts of other sciences. *Actively* logic has or performs only the act of teaching. The proper act of every science is knowledge, through proper causes, of the corresponding thing it is a science of. Surely this should happen through the syllogistic order of causes and hence in correct figure and modes. But causes, in their nature, are intrinsically inclined towards their proper acts and effects. Moreover, *the forms of demonstration in figure and modes* are «beings of reason». They are a result of intellectual acts themselves, and they have being only when they are known through reflexive intellectual acts. Figures and modes of demonstration do not exist as such through the habit of one that *makes use* of them³⁵.

As a *second conclusion*, Valera accepts a sense of logic «in-use» «passively» (*passive*). The division of logic in «teaching» and «in-use» is adequate when «in-use» has that qualification. After all, in other sciences it is not only precepts transmitted in the topical part that are used to construct probable arguments; precepts of «demonstration», «definition», and «division» are used as well. In fact, logic is divided into «docens» and «utens» both in its demonstrative and its topical part, although in the second meaning it is improperly called «utens». After all, it is rather «used» (*usa*) and «exerted» (*exercita*). In any case, in the meaning just explained Valera concedes that any other science might be called «logica utens». But one should realize too that any other science, with its own precepts, would eventually be divided into «docens» (where precepts are assigned) and «utens» (where precepts are used or exerted). So the division would not belong to logic alone³⁶.

³⁴ Ibid., pp. 5-6.

³⁵ Ibid., p. 6.

³⁶ Ibid.: «Secunda conclusio: si utens in praesenti sumatur passive, divisio logicae in docentem et utentem est adaequata conveniens omnibus suis partibus; divisio tamen haec in hoc sensu est valde impropria et non ad mentem antiquorum doctorum. Prima pars probatur: logica utens passive sumpta est, qua utimur in aliis scientiis, sicut est explicatum supra in secundo modo explicandi primam opinionem; sed non solum utimur praeceptis traditis in parte topica ad conficiendas argumentationes probabiles in aliis scientiis, sed etiam praeceptis demonstrationis,

Finally, there is a special reason why *logic itself only in the topical*, but not in the demonstrative part, may be divided into «teaching» and «in-use». One has to remember that the principles through which conclusions are proven in sciences differ in two ways: (i) Some principles, such as «Contraries have to be made about the same», are common to all sciences. Principles like this are used in natural philosophy and also in ethics, where one does not obtain «science» through them, but only «opinion». (ii) Every science has «means» (*media*) and proper principles to generate its proper conclusions. It is only the topical part of logic that brings the common principles of which formally and immediately we make use in other sciences. Thus, to the topical part belong both the doctrine *and* the practice of arguing from probable principles, i.e. from principles extensive to other sciences through which probable syllogisms are elicited. *The demonstrative part* of logic has only «doctrine», and by this Valera means that common principles of demonstrative logic are not extensive to the active use in other sciences. He believes that this is the teaching of Scotus, as well as of Thomas Aquinas, Peter of Fonseca (1528-1599), and Aristotle in *Rhetorics* I, 1³⁷. In that topical sense, logic «docens» and «utens» would be the same habit «realiter» and would have only a «formal distinction»; but the «teaching» aspect suffices to call it «science»³⁸.

diffinitionis, divisionis, etc., cum conficimus demonstrationes et diffinitiones, ergo non tantum pars topica, sed etiam demonstrativa dividitur in docentem et utentem».

³⁷ In fact, Valera mentions several authorities, without offering a full description of the references; cfr. Ioannes Duns Scotus, *Quaestiones in librum Porphyrii Isagoge*, in Ioannis Duns Scoti *Opera philosophica I*, Franciscan Institute Publications, St. Bonaventure N. Y. – Washington D. C. 1999, q. 1 (*Utrum logica sit scientia*), n. 7, pp. 4-5; Ioannes Duns Scotus, *Quaestiones super librum Elenchorum Aristotelis*, in Ioannis Duns Scoti *Opera philosophica II*, Franciscan Institute Publications, St. Bonaventure N. Y. – Washington D. C. 2004, q. 1 (*Utrum logica procedat ex communibus*), nn. 6-8, pp. 272-273; cfr. Cardinalis Constantius Sarnanus (Contanzo Boccadifuoco) O.F.M. (1531 – 1595), *Expositiones Quaestionum Doctoris Subtilis Ioannis Duns Scoti, in Universalia Porphyrii*, Apud Franciscum Franciscum, Venetiis 1576, q. 1 (*Utrum logica sit scientia*), pp. 9sq., 18-19, 22-23, 24-26, 31-32, 42-43; Mauritius a Portu Hibernicus [Maurice O’Fihely] O.F.M. (ca. 1460 – 1513), *Lectura accuratissima in quaestiones Doctoris subtilis super Isagogis Porphyrii*, 1519, q. 1 (*Utrum logica sit scientia*), Sexta Difficultas, p. 4a; Thomas Aquinatis, *In XII libros metaphysicorum*, in Sancti Thomae Aquinatis Doctoris Angelici *Opera omnia*, secundum impressionem Petri Fiaccadori, Parmae 1852 – 1873, Musurgia Publishers, New York, Tomus XX, 1949, Liber IV, Lectio IV, p. 349; Petrus Fonseca [Pedro da Fonseca], S.J. (ca. 1528 – 1599), *Commentaria in libros metaphysicorum Aristotelis*, Romae 1589 [Sumptibus Lazari Zetzneri Bibliopolae, Coloniae 1615; Georg Olms Verlagsbuchhandlung, Hildesheim, Tomus I – II, 1964], II cap. III, q. I, Sectio VI, 498-502 (columns).

³⁸ Cfr. Hyeronimus Valera, *Commentarii...*, I d. 1, q. 2, pp. 6-7.

3. The Object of Logic is a Being of Reason

Surely the nature of a habit can only be determined when we know what its «proper object» is. But before determining the adequate object of logic, Valera has to formally discuss both what is an «object» of a scientific habit and what is a «being of reason». These are the two themes faced in Question III of the First Distinction of *Liber primus*.

Given that an «object» is what a science deals with and towards the knowledge of which the entire concern of the habit is directed, Valera first conducts us in four explanations: (i) one thing is the «obiectum» or that towards which what is to be considered is «objected»³⁹; (ii) another thing is the «subiectum», which respects to demonstrated properties of it and to which it is «subjected»; (iii) because of a comparison with «prime matter», there is a «matter about which» (*materia circa quam*) a science is concerned; (iv) there is finally the «finis extrinsecus» of a science, wherein the «end» is that because of which the thing is. As in point (i), Valera recognizes the comparison between potency and habit: a potency – for example, «sight» – has both an «intrinsic end», or the operation produced by it and because of which it is this or that potency (in this case «to see»)⁴⁰, and an «extrinsic end» or the end towards which the intrinsic end «terminates», in our example, «color». Accordingly, the «intrinsic end» of science is the operation that it produces (i.e. «knowledge»), and its «extrinsic end», towards which knowledge «terminates», is the «object». «Extrinsic end» and «object» are equal to the «adequate object» of a science⁴¹.

³⁹ Cfr. Aristoteles, «Lehre vom Beweis oder Zweite Analytik», in Aristoteles, *Philosophischen Schriften*, übersetzt von E. ROLFES, Felix Meiner Verlag, Hamburg, Band 1, 1995, I 1, 71a11-13, p. 1; I 2, 71b15-16, p. 3.

⁴⁰ Cfr. Aristoteles, *Über die Seele – De anima*, mit Einleitung, Übersetzung (nach W. THEILER) und Kommentar herausgegeben von H. SEIDL, griechischer Text in der Edition von W. BIEHL und O. APELT, Felix Meiner Verlag, Hamburg 1995, II 1, 412b10 – 413a10, pp. 63-65; II 7, pp. 97-102.

⁴¹ Cfr. Hyeronimus Valera, *Commentarii...*, I d. 1, q. 3, p. 8: «Obiectum dicitur id de quo ars aut scientia agit, aut disputat, et ad cuius cognitionem tota scientiae cura dirigitur, quod quatuor nominibus solet appellari: dicitur obiectum (similitudine sumpta ex potentiis) quia ei considerandum obiicitur, ex Aristotele I *Posteriorum* c. 1. Dicitur subiectum respectu passionum, quae de ipso demonstrantur, et quibus veluti subiicitur. Dicitur materia circa quam talis scientia versatur, sumpta similitudine a materia prima, quae est fundamentum quod in omnibus rebus praesupponitur. Sic obiectum est quod prius supponitur in scientia, et etiam quia sub certo modo cognoscitur, respectu cuius modi dicitur materia, quae a tali modo informatur. Dicitur

The object of science is threefold: (1) «material» (*materiale*), which is the thing itself dealt with in science, in *the content* of some formality found in the thing; (2) «formal *ut quo*» (*formale ut quo*), or *the content under which* the object is considered in some science; (3) «formal *ut quod*» (*formale ut quod*), which is the composite whole of material and formal aspects, which is «per se» and immediately «objected» to be known by the habit. In medicine these objects would be respectively (1') «body», (2') «health», and (3') «the whole healable body» (*totum hoc corpus sanabile*). In a given science properties are demonstrated of the formal object «ut quod» and flow from its essence⁴².

Further, the formal object *ut quod* is twofold in every science. (a) One is «adequate» (*adaequatum*), and this comprehends everything the science is concerned with either as «causes and principles» or as «parts of which it is composed». For this reason it is called the «object of attribution» (*obiectum attributionis*), insofar as everything the science considers is somehow referred to it: everything is dealt with insofar as it conduces to the knowledge of it. (b) The other is called «inadequate» or «partial» (*obiectum inadaequatum*) and it amounts to each particular thing about which the science disputes in a given order to the adequate object. In fact, here we find several objects. Loyal to Scotus⁴³, Valera affirms again that there are three conditions for the *adequate object* of science: (I) one must know what it is and that it is (it is supposed to be «in rerum natura», or at least «secundum esse possibile»), and the definition of the object is presupposed

finis extrinsecus scientiae, cum enim finis rei sit illud propter quod res est. Duplex potest esse finis alicuius potentiae, aut habitus: unus intrinsecus, et talis est operatio elicit a potentia vel habitu, qua propter dixit Aristoteles II *De anima* potentiam esse propter suam operationem, ut potentia visiva propter visionem; unde finis intrinsecus potentiae visivae est videre. Alter finis dicitur extrinsecus, illud scilicet ad quod terminatur finis intrinsecus seu operatio: ut respectu visus color, quia ad illum terminatur visio. Sic ergo finis intrinsecus scientiae est operatio ab ipsa elicit, ut cognitio; finis vero extrinsecus ad quem terminatur hic finis intrinsecus seu cognitio est obiectum, unde finis extrinsecus et obiectum adaequatum in scientia sunt idem; quia omnia quae in scientia considerantur ad illud ordinantur».

⁴² Ibid.

⁴³ Cfr. Ioannes Duns Scotus, *Quaestiones in librum Porphyrii Isagoge*, cit., q. 3 (*Utrum syllogismus sit subiectum logicae*), n. 13, p. 14 (also nn. 13-19, pp. 14-16). Cfr. also Ioannes Duns Scotus, *Ordinatio* prologus, in Ioannis Duns Scoti *Opera omnia I*, Typis Polyglottis Vaticanis, Civitas Vaticana 1950, p. 3, qq. 1-3, nn. 142-149, pp. 96-101; Ioannes Duns Scotus, *Lectura* prologus, in Ioannis Duns Scoti *Opera omnia XVI*, Typis Polyglottis Vaticanis, Civitas Vaticana 1960, p. 2, qq. 1-3, nn. 66-70, pp. 26-27; Ioannes Duns Scotus, *Reportata parisiensia* prologus, in Ioannis Duns Scoti *Opera omnia XI.1*, (Reprografischer Nachdruck der Ausgabe Lyon 1639), Georg Olms Verlagsbuchhandlung, Hildesheim 1969, q. 1, a. 2, nn. 5-15, pp. 3-6.

as something «per se notum». (II) Through the «quod quid est» or «diffinitio» of the object, properties are demonstrated of it, and therefore the adequate object of science must have properties. (III) All things considered in science are considered because of the object; accordingly, the object is the «principium et radix veritatum» in the habit, it is «adequate» because object and science must adapt in such a way that nothing is considered in science that is not somehow related to the object, and there is also nothing about the object that the science does not consider⁴⁴.

Before coming to first conclusions about the object of logic, Valera still differentiates «real being» from «being of reason». «Real being» is the one that «can exist in the nature of things», while «being of reason» is the «diminished being» that a thing acquires only when it is under cognition. By knowing «man» (*homo*), the intellect does not put anything real on it, for «man» is not really changed by being conceived of. Through this act, the intellect puts as it were a «being of reason» on it, which «homo» has only insofar as it is known. Therefore, that «homo» is «subject», «predicate» or «species» is not an attribution «a parte rei», but only because the intellect invents it over «homo». As a result, Valera affirms that a «real being» has an «esse factum», and a «being of reason» has an «esse fictum» by the intellect based on a similarity of the real being⁴⁵. It seems to be fair to Valera's account to affirm that «real» equals *extramental* and independently

⁴⁴ Cfr. Hyeronimus Valera, *Commentarii...*, I d. 1 q. 3 pp. 8-9: «Obiectum adaequatum tres praecipuas debet habere condiciones (ut ait noster doctor in q. 3). Prima quod sit notum quid est et quia est, id est quod supponatur esse in rerum natura, saltem secundum esse possibile; de impossibili enim, non potest haberi scientia, et supponatur etiam in scientia illius diffinitio seu ratio formalis, tamquam aliquid per se notum; tum quia natura subiecti non demonstratur, tum quia per eam passiones de subiecto demonstrantur, unde debet esse unum saltem eo pacto, ut aliquo modo una diffinitione possit explicari. Secunda conditio, quod per eius quod quid est, id est diffinitionem, seu rationem formalem demonstrantur passiones in scientia de tali obiecto, atque adeo non solum res de quibus agit scientia debent habere passiones, sed etiam ipsum obiectum quod adaequatum dicitur ut sic debet habere suas proprias passiones, quas scientia demonstret de ipso. Tertia conditio, quod omnia quae in scientia considerantur propter ipsum considerentur, et sic dicitur principium et radix veritatum, quae in scientia reperiuntur, et adaequatum quia ita obiectum et scientia debent inter se adaequari ut nihil consideretur in illa quod ad ipsum obiectum aliquomodo non pertineat, et nihil ad obiectum spectet quod a scientia non consideretur. Ad quas tres condiciones reducuntur aliae, quas ponit Doctor I *Reportationes* q. 1, ideo illas praecipua vocat». Cfr. again note 43 above.

⁴⁵ Cfr. Hyeronimus Valera, *Commentarii...*, I d. 1, q. 4, p. 9: «Secunda vox est 'ens rationis', quae sic pro nunc breviter explicatur, quod ens reale dicitur illud quod potest existere in rerum natura. Ens vero rationis illud esse diminutum quod res acquirit, quando est sub cognitione. Ex eo enim quod noster intellectus cognoscat, verbi gratia hominem nihil reale in illo ponit, cum homo non

of any mental act, whereas «of reason» equals *intramental* and both dependent on mental act and (originally at least) also on the existence of the real being.

Especially on the basis of the threefold division of the adequate object established above and on the distinction «real»/«of reason» just explained, Valera concludes *firstly* that the *material object* of logic can be – without any determination – any knowable thing, both real and of reason, after all what is knowable can be matter of «definition», «division», and «demonstration». But he concludes *secondly* that «simpliciter et absolute» the «formal object of logic» is a being of reason. The object whereof properties are demonstrated in logic is a being of reason, even if it is called «pro materiali» a «real being». Taken «in concreto» and named after its «form», logic deals with a «being of reason»⁴⁶. Valera argues for this second conclusion by affirming that, looking at the procedures of logic, all things in it are considered under «formalities» such as «genus», «species», «differentia», «propositio», etc. It is under these headings that logic disputes on the nature of things and deals with definitions as composed by genus and difference, as well as with syllogism, as a given device composed by major premise, minor premise, and consequence, so that this whole device is a being of reason, for the intellect does not put anything real in things named by these forms. Logic deals with things such as «man», «animal», «concepts», «words», etc. not as they take part in «real being», for this would be a metaphysical concern. For the reasons

mutetur realiter ex eo quod intelligatur, tribuit tamen illi quoddam esse rationis quod tantum habet quandiu cognoscitur, ut quod homo sit subiectum, vel praedictum, vel species, nihil est reale a parte rei, sed solum quia intellectus id in homine fingit. Et sic solet dici ens reale habere esse factum; ens vero rationis habere esse fictum ab intellectu ad similitudinem entis realis». Valera offers a detailed account of the «being of reason» also in Hyeronimus Valera, *Commentarii...*, I d. 2, a. 2, q. 1 (*Quid ens rationis sit?*), pp. 52-56.

⁴⁶ Cfr. Hyeronimus Valera, *Commentarii...*, I d. 1, q. 4, pp. 9-10: «Prima conclusio: obiectum materiale logicae potest esse ens reale, immo omnes res scibiles, sive reales, sive rationis possunt dici obiectum materiale logicae. Haec patet quia quidquid est scibile potest esse materia diffinitionis, divisionis et demonstrationis, in quo sensu dixit Aristoteles dialecticam non esse unius generis, et disputare de omni ente. Et si hoc tantum intendunt qui asserunt logicam non habere obiectum determinatum, bene procedunt, si vero aliquid amplius intendunt, non sunt audiendi, alias enim si logica omnium rerum cognitionem includere, nulla esset alia scientia praeter logicam. Tum etiam quia determinata scientia et ars determinatum obiectum debet habere, a quo possit sumere suam unitatem et distinctionem ab aliis, sicut et quaevis potentia. Secunda conclusio: obiectum formale logicae est ens rationis, unde simpliciter et absolute dicendum est obiectum logicae de quo passionibus demonstrantur esse ens rationis, etiam si pro materiali dicat ens reale, quia concretum denominatur a forma, cum ergo haec in obiecto logicae sit ens rationis, etiam sumptum in concreto, absolute denominabitur ens rationis. Quae conclusio sic probatur».

just given, logic treats them as they take part in «being of reason», for it is not the case that there is a «medium» or a middle and common term between «real being» and «being of reason». Moreover, anything that counts as a being of reason has true properties that can be demonstrated from its own proper principles, just like it happens when we affirm of «genus» that it is «praedicabile». But logic is the only existing science that deals with such «formal beings», and therefore the object of logic is a being of reason⁴⁷.

If it is correct to say that logic deals with «being of reason», Valera affirms that it is still necessary to know which «being of reason» has «the conditions of the object in logic». This is the subject of Question IV⁴⁸. In a *first presupposition*, he affirms that terms of logic such as «subiectum», «praedicatum», «genus», «differentia», «diffinitio», «propositio», «syllogismus», and so on, can be considered in three ways: (a) «mentally», (b) «objectively», and (c) «vocally». Taking the logical term «definition» as an example, a (a') «mental definition» is the act of the intellect through which the essence of a thing is explained «intelligibly»; (b') «objectively» a definition is a conjunction of genus and difference (which are predicates connected as such in the thing) through which the defined thing is known essentially – as in «man is a rational animal». Finally, (c') «vocal definition» are the several spoken words – as well as, reductively, the written words – taken in an order to each other, through which either the objective or the mental definition is signified⁴⁹.

As a *second presupposition*, Valera affirms that definition – the same would hold for other logical terms –, either mental, objective or vocal, can be considered in two ways: (1) «entitatively» or «materially» and (2) «formally». Combining the previous divisions with these other two, we say that the (a1) mental definition «materially» are the acts of the intellect themselves as «extrinsic forms of things»; the (a2) mental definition «formally» are the intellectual acts disposed and taken in an order according to subject and predicate. Such disposition and ordination – which at the end amounts to the mental structure of the proposition – are a «being of reason», for it does not put anything real in the acts themselves. (b1) The objective definition «materially» are the realities identified with the thing itself that is defined; (b2) the objective definition «formally» concerns those «forms of

⁴⁷ Ibid., p. 10.

⁴⁸ Ibid., pp. 10sqq.

⁴⁹ Ibid., pp. 10-11.

reason» that compose definition, namely «genus» and «difference». (3) Finally, (c1) the vocal definition «materially» are the words that signify things; and (c2) the vocal definition «formally» is the ordination and disposition of such words, once more «according to the form of the subject and of the predicate»⁵⁰

3.1. Some Arguments for the «Way of Knowing» as the Object of Logic

Before presenting his Scotist view that the «way of knowing» or «syllogism» is the being of reason that can be the object of logic, and accepting a more restricted view that the *modus sciendi* as «the oration capable of manifesting some unknown thing» is the common thing that has all conditions for being the object in logic, Valera presents four views by others on the way how the *modus sciendi* constitutes the object of that science. His appraisal of these views will be important for the understanding of his conclusions.

Some affirm that the «vocal» *modus sciendi* is the object of logic. Words are the object of logic, but not as long as they are taken materially, neither in respect to their signification, nor in respect to their «ornatus». They belong to logic insofar as they are ordered according to the form of the way of knowing, that is, of vocal definition, division and argumentation. The point would be that logic disputes on words under this structure in all its parts, for words as such are directable «first and *per se*». As «sound» is «first and *per se*» directable (in the science of music), words, that are species of sound, are «first and *per se*» directable and are directed by the art of logic, named after «logos» or «discourse»⁵¹.

Second, some say that only the «mental way of knowing» – or the acts of the intellect insofar as they are ordered according to the «form of reason of the way of knowing» – is the object of logic. The acts of the intellect, insofar as they can be directed and artificially disposed, are an «object knowable *per se*». They can therefore be known through a science, and this science is logic. The science of the soul deals with those acts insofar as they are considered according to their nature (materially); but insofar as they can be (mentally) directed in devices they belong to the science of logic. Something similar happens with the acts of the

⁵⁰ Ibid., p. 11.

⁵¹ Ibid.: «Quidam dicunt solum modum sciendi vocalem esse obiectum logicae. Hoc enim est quod intendunt, qui voces esse obiectum logicae affirmant, non quidem materialiter sumptas, sic enim agit de illis philosophia nec quoad illorum significationem, quia sic spectant ad grammaticam, et quoad illarum ornatum ad rhetoricam. Ad logicam ergo pertinent quatenus tales voces ordinatur secundum formam modi sciendi diffinitionis, scilicet divisionis et argumentationis vocalis».

will: according to its nature they are treated by natural science; but insofar as they can be directed according to right reason they belong to moral science. Other examples concerning acts of «motive potency» could be given⁵².

The argument would concede that, in order to direct the operations of the intellect, it is necessary to deal with the «objective way of knowing», i.e. not the operations but the things directed such as definitions, divisions, and consequences. But if we remember that the adequate object is that towards which all things treated in a given science serve and if we assume that logic deals with the objective way of knowing and the forms of reason insofar as they help the intellectual acts to be directed, these «directable» (*dirigibiles*) acts will still be «the adequate object of logic»⁵³. One could say also that the purpose of logic is to finely constitute someone as «intelligent» – as a good dialectician –, this (habit) is what is «first and *per se*» intended or desired by the intellect. Again in an analogy with «moral philosophy» – concluding that the object of this science is to direct acts of the will so that they «perfect intrinsically the agent» – one would conclude that the object of logic are well ordered intellections, not things understood extrinsically; the object of logic are not intellectual acts as they are «extrinsic forms of [mental] things», but rather insofar as they are «intrinsic forms» of an agent's intellect⁵⁴. Finally, in defence of the «mental way of knowing» as the object of logic one would affirm that in logic the properties demonstrated relate only to intellectual operations. So, for example, of «proposition» – a logical part and term – it is shown that it is «affirmative» or «negative», «true» or «false»; but these last are not properties said of a thing as understood, after all through the proposition a

⁵² Ibid., pp. 11-12: «Alii dicunt solum modum sciendi mentalem, actus scilicet intellectus, quatenus ordinantur secundum formam rationis modi sciendi, esse obiectum logicae. Quod probant multis rationibus, sed potissimae sunt haec. Prima: operationes nostri intellectus prout possunt dirigi et artificiose disponi sunt obiectum per se scibile, ergo per aliquam scientiam, quae nulla alia est nisi logica. Impossibile enim est quod aliquid sit simpliciter scibile, quin possit assignari aliqua scientia, quae simpliciter habeat illud pro obiecto. Tum etiam quia scientia de anima agit de illis secundum suam naturam consideratis; ergo quatenus possunt in artificium dirigi pertinent ad aliam scientiam, quia quando in aliquo obiecto materiali est specialis difficultas propter distinctam rationem formalem, de illa ut sic debet agere scientia distincta, quod potest multis exemplis comprobari; de actibus enim voluntatis secundum suam naturam agit philosophia naturalis, quatenus vero possunt dirigi secundum rectam rationem pertinent ad scientiam distinctam, scilicet moralem, actus potentiae motivae quatenus possunt varie et artificiose dirigi pertinent ad varias artes, de vocibus, sonis, operationibusque exterioribus hoc etiam constat».

⁵³ Ibid., p. 12.

⁵⁴ Ibid.

thing is just «affirmed» or «denied»; moreover, «formal truth» does not respect things intellected, but only the proposition⁵⁵.

Third, some say that the «objective way of knowing» is the object of logic. One argument for this thesis is that logic does not deal with logical notions such as «definition» and «consequence» «from the part of the intellect», but «from the part of the object». In logic one shows that definition is composed of genus and difference, but from the part of the intellect definition is rather and just an «accidental operation that touches the nature of the thing that is composed by genus and difference». Moreover, beings of reason in logic «first and *per se*» denominate only things themselves – *in this argument* the claim seems to be that such logical beings of reason denominate or classify real things or at the end have their meaning dependent on how things are. Acts of the intellect denominate things only accidentally, insofar as they signify them. So, for example, the denomination «subject» is not attributed first of all *to the concept* of «man», but to the thing «man» itself. It is correct to say that «words» and «concepts» are «subjected» and «predicated» only insofar as they are so «significatively» and «instrumentally». The same holds for «syllogism», for «a parte rei» the thing that is signified through the conclusion is inferred from things signified through the premises. Still, as a second argument, it is affirmed that the objective «way of knowing» – or «syllogism» as mental object that at any rate signifies an entailment that has its basis and origin in the way things are – is knowable and has properties that can be proved⁵⁶.

⁵⁵ Ibid.

⁵⁶ Ibid., pp. 12-13: “Alii dicunt tantum modum sciendi obiectivum esse logicae obiectum, quo probant. Primo: logica non agit de diffinitione (et sic de aliis) ut se tenet ex parte intellectus, sed ex parte obiecti, quia in logica ostenditur de diffinitione, quod constat genere et differentia diffiniti. Diffinitio autem ut se tenet ex parte intellectus non constat genere et differentia diffiniti, sed ut sic est quaedam operatio accidentalis attingens naturam rei constantem genere et differentia. Tum etiam quia omnia entia rationis logicalia primo et per se tantum denominant ipsas res; actus vero intellectus solum per accidens quatenus significant ipsas res. Denominatio enim subiecti, scilicet praedicati non tribuitur principaliter huic conceptui hominis vel animalis, cum conceptus formalis hominis non praedicetur de conceptu formali animalis, sed de ipsis rebus; unde solet dici voces et conceptus subiici, et praedicari tantum ut quo significative et instrumentaliter, et idem de forma sillogismi. A parte rei enim res significata per conclusionem infertur ex rebus significatis per praemissas; ergo illud primo et per se erit obiectum logicae, in quo primo et per se reperitur ratio formalis obiecti logicae. Secundo: modus sciendi ut se tenet ex parte obiecti est scibilis et habet passiones demonstrabiles, cum de diffinitione, ut se tenet ex parte obiecti ostendatur, quod convertitur cum diffinito sic: omne quod adaequate est idem cum diffinito convertitur cum illo, sed diffinitio essentialis est adaequate idem cum diffinito; ergo convertitur cum illo”.

Moreover, in respect to the objective way of knowing as best candidate for being the object of logic, and confirming the special status of logical contents or objects, some say that, if intellectual acts as directable were the object of logic, they would be so above all because we lack a guide in those acts. But we do not. After all, to direct the acts of the intellect is to conform them to the exemplars, and accordingly we need knowledge of exemplars. If someone ignores the nature of exemplars, he or she will ignore whether intellectual acts conform to them or not. In order to direct intellectual acts logic must first of all treat the exemplars themselves, that is, the nature of «definition», «division», «consequence», etc. And such exemplars do belong to the «objective» *modus sciendi*⁵⁷. It is important to realize that this third argument and the second described above affirm the objective meaning of the object of logic, syllogism as *modus sciendi*, in different ways: according to the third argument, the object of logic is an exemplar existing as content (at least) in human being's mind; in the second view it is rather a mental content or being that derives its meaning from the things themselves.

Fourth, some propose that the object of logic is the «way of knowing» insofar as it comprehends the «mental», the «objective», and the «vocal way of knowing». After all, in order to know that the objective *modus sciendi* is rightly ordered it is necessary to know that the intellectual *operations* are rightly ordered. And in fact it is through words that we can know whether concepts are correctly disposed in relation to each other. It is affirmed then that in all three kinds of a way of knowing the «formal reason of the object of logic» can be found, and a habit tends to all things in which the formal reason of the object is found. Thus, it is not «in an accidental way», but rather in an – essential – order to its formal object that logic first and *per se* treats of «the acts of the intellect» as the *obiectum* in which formal rectitude is found, second of «things» as the objective cause of that rectitude, and third of «words» as the signs that manifest such rectitude⁵⁸.

⁵⁷ Ibid., p. 13: «Tertio: si propter aliquid actus nostri intellectus ut dirigibiles essent obiectum logicae, maxime propter rationem contrariorum, quia indigemus dirigente in actibus intellectus, sed ratio haec potius probat oppositum, quia dirigere actus intellectus est illos conformare propriis exemplaribus; ad hoc autem praerequiritur cognitio exemplarium. Si enim quis ignoret naturam exemplarium, ignorabit etiam talibus exemplaribus conformare actus intellectus. Ergo ad hanc directionem debet logica potius agere de ipsis exemplaribus, ut ad dirigendum actum diffiniendi debet agere de natura diffinitionis in communi, et sic de aliis; ista autem exemplaria sunt modi sciendi obiectivi».

⁵⁸ Ibid. : «Alii tandem dicunt obiectum logicae esse modum sciendi prout comprehendit mentalem, obiectivum et vocalem. Fundamentum est quia implica intelligere operationes intellectus esse recte ordinatas, quin etiam intelligatur talem rem cognitam ab intellectu esse recte ordinatam,

3.2. Two Further Presuppositions for a Scotist View on the Object of Logic

Beyond those more specific presuppositions already presented by Valera for the determination of which «being of reason» has «the conditions of the object in logic» (see above under 3), Valera also proposes, before determining the object of logic, two considerations about how things must be dealt with in a scientific habit. He affirms *firstly* that things considered in a science differ in three respects: (i) there is a thing treated first and *per se*, as in metaphysics «being» (*ens*) is treated first and *per se*. (ii) There are things that a science treats of not first and *per se*, but necessarily in an order to the first object, such as the properties of the object of attribution. (iii) There are also things considered in an order to the first object, but such that they can be considered without that order. Particularly about points (i) and (ii), one can affirm that the object contains all things considered in science, but it does so neither potentially nor universally – in the way a «superior» (common or more common) object contains a (particular or more particular) «inferior» one of which it is predicated. The first object – as «God» in theology – is common to things considered in science because it is the first with which the entire science is concerned as towards its «scopus». As all parts of a tree are in a sense contained «virtually» in its roots, so all things considered in a science are «virtually» contained – in a *continentia virtualis* – in its first adequate object⁵⁹.

vocibus autem cognoscimus conceptus esse inter se recte dispositos. Confirmatur, quia in omnibus istis reperitur ratio formalis obiecti logicae: habitus autem, et potentia tendit in omne id in quo est propria ratio formalis sui obiecti, unde licet medicus agat primo et per se de corpore, in quo reperitur sanitas formaliter, de medicina tamquam de causa sanitatis, de urina tamquam de signo sanitatis; non propterea dicitur medicinam per accidens agere de urina, sed propter sanitatem corporis: ita similiter logica licet primo et per se agat de actibus intellectus, ut de subiecto in quo ipsa rectitudo formalis reperitur, de rebus ut de causa obiectiva talis rectitudinis, de vocibus ut de signis manifestantibus talem rectitudinem, non tamen agit de illis per accidens». Valera will agree with this argument; he will only insist that everything that logic considers has a dependence on syllogism as its sole «adequate object»; cfr. *ibid.*, p. 17.

⁵⁹ *Ibid.*, p. 13: «Primo est praenotandum quod ea, quae in aliqua scientia considerantur, sunt in triplici differenti. Unum est de quo primo et per se agitur, sive illud sit commune, sive particulare, ut in metaphysica primo et per se agitur de ente, in theologia de Deo et hoc dicitur obiectum attributionis. Alia sunt de quibus agitur non per se primo sed ordinate ad illud primum, ita ut non possint intelligi absque illo ordine, quo pacto agitur in scientia de passionibus quae non possunt considerari nisi in ordine ad subiectum. Alia sunt quae licet considerentur in ordine ad primum, ita tamen ut absque tali ordine possunt considerari. Cum ergo dicimus subiectum continere omnia quae scientia considerat, non est intelligendum de continentia potentiali et universali, sicut superius dicitur continere sua inferiora de quibus praedicatur: hoc enim esset

As a *second* assumption, one should have in mind that there is a general agreement that dialectics directs the operations of the intellect⁶⁰. But there is disagreement about how we should understand such guidance. (i) Some would say that «directing» is the intellectual act through which acts of the intellect are produced in conformity with their object. In this respect *all sciences* direct acts of the intellect in conformity with a specific object of concern, as for example mathematics direct intellectual acts that have in view dimensions and proportions of quantity. Considering that the many sciences are directive of acts of the intellect, according to the nature of their objects each time, and considering that these acts tend to their objects insofar as they are taken in an order and disposed according to definition and syllogism – the «disposition of reason» –, it is such a form or disposition of reason, which does not put anything real in things or acts, but only a being of reason, that is the object of logic. (ii) Some would say, however, that *logic* directs the acts of the intellect insofar as it produces those forms of reason. This can be understood in two different ways: (ii') either because logic inclines the intellect to produce its acts in conformity with its object, as sciences generally do; (ii'') or because logic considers the form of reason called «disposition» or «direction of reason», through which such acts are called acts of the intellect «directed» and «artificially disposed and ordered». In fact, *the act itself, through which* logic knows such form and teaches how, for example, «definition» must be realized – which uses to be called an «active direction» –, cannot be the object of logic, for the simple reason that the act of science is not the object of it. If, however, the object of logic is the «direction» of intellectual acts, and through the name «direction» authors understand the form of reason which is «passive direction», then the dissention between opinions (i) and (ii) would be only nominal. Moreover, Valera remembers that it is frequently said that logic directs intellectual acts extrinsically, insofar as the intellect, as long as dialectics is finely acquired, forms, without the danger of error, the proper concepts in every habit⁶¹.

obiecta scientiarum destruere, unde Deus non esset obiectum theologiae adaequatum, cum non sit hoc pacto commune ad ea de quibus ipsa disserit, sed dicitur commune ut bene advertit noster Doctor q. 3 logicae in responsione «ad secundum», quia est primum in quod tamquam in scopum tota scientiae cura dirigitur; diciturque continere virtualiter sumpta similitudine ab arbore, in qua omnes illius partes in sua radice quodammodo continentur, quae continentia virtualis alibi pressius explicabitur».

⁶⁰ Ibid.

⁶¹ Cfr. Hyeronimus Valera, *Commentarii...*, I d. 1, c. 4, pp. 13-14: «Secundo praenotandum: omnes in hoc uno convenire dialecticam directivam esse operum intellectus; ex varia tamen istius di-

The detailed expositions of the conditions for being the object of logic and on the conditions for generally being the object of a scientific habit, moreover the insightful views on the way how the *modus sciendi* is the object of dialectics, offered in 3, 3.1, and 3.2, should suffice to conclude now on the adequate object of the dialectician's *habitus*.

3.3. On the Object of Logic

The first Scotist conclusion in Question IV is that syllogism is the adequate object of logic⁶². As a first proof⁶³, Valera affirms that syllogism has all the

rectionis intelligentia, tanta opinionum varietas exorta est, vel ergo dirigere actus intellectus sumitur, pro eo quod est elicere actus intellectus conformes suis obiectis, et sic certum est omnes scientias ordinari ad dirigendos actus intellectus, quamlibet secundum sui obiecti exigentiam, ut philosophia dirigat actus intellectus tendentes in res naturales, scientiae mathematicae dirigunt actus intellectus tendentes ad diversas dimensiones et proportiones quantitatis. Ratio autem est quia tunc actus intellectus dicuntur in hoc sensu directi quando eliciantur conformes suis obiectis, sed quaelibet scientia inclinatur intellectum ad eliciendos suos actus conformes suis obiectis. Ergo quaelibet scientia inclinatur intellectum ad dirigendos suos actus seu eliciendos suos actus directos. In hoc ergo sensu non una sed multiplex scientia est instituenda directiva actuum intellectus, unaquaque iuxta sui obiecti naturam, sed quia isti actus scientiarum tendunt in sua obiecta, prout sunt ordinati et dispositi secundum formam seu dispositionem rationis, syllogismi nempe diffinitionis, etc.; circa hanc ergo formam seu dispositionem rationis, quae nihil reale ponit in ipsis rebus seu actibus, sed tantum quoddam esse artificiumve rationis tamquam circa proprium obiectum negociatur logica. Vel ergo logica dicitur dirigere actus intellectus, quatenus efficit tales formas rationis, et hoc non, ut supra probatum est: vel quia inclinatur intellectum ad eliciendos suos actus conformes tali obiecto suo, et hoc habet commune cum omnibus scientiis, ut dictum est; vel quia considerat istam formam rationis, quae dispositio seu directio rationis dicitur, qua formaliter dicuntur actus intellectus directi et artificiose dispositi et ordinati (quod est proprium logicae), et tunc actus, quo cognoscit talem formam, et docet quomodo sit conficienda verbi gratia diffinitio, etc. Qui directio activa solet dici non est obiectum logicae: cum actus scientiae non sit obiectum illius. Si vero cum a supradictis doctoribus dicitur, obiectum logicae esse directionem actuum intellectus, nomine directionis intelligant illam formam rationis, quae directio passiva solet dici, quae a logica consideratur: solum dissentio erit de nomine, id enim et nos dicimus. Praeterea etiam dici solet logicam dirigere actus intellectus extrinsece, quatenus intellectus dialectica acquisita, absque erroris periculo format omnes conceptus, in quacumque re, ad modum explicatum quaestione secunda».

⁶² Cfr. Ioannes Duns Scotus, *Quaestiones in librum Porphyrii Isagoge*, cit., q. 3, n. 20, pp. 16-17. Cfr. also G. PINI, *Categories and Logic in Duns Scotus. An Interpretation of Aristotle's Categories in the Late Thirteenth Century*, Brill, Leiden – Boston – Köln 2002, pp. 35-36.

⁶³ Cfr. Hyeronimus Valera, *Commentarii...* I d. 1, q. 4, pp. 14sq. On the left margin, we have references to Maurice O'Fihely, José Anglès, and Cardinal Sarmanus. Cfr. Mauritius a Portu Hibernicus [Maurice O'Fihely] O.F.M. (ca. 1460 – 1513), *Lectura accuratissima in quaestiones Doctoris subtilis super Isagogis Porphyrii*, q. 1 (*Quaestio de subiecto logicae: an sit syllogismus?*), pp. 5-9 (especially p. 7a, left column); Ioannes Anglicus [John Foxall] O.F.M. (? – 1476), *Commentum*

conditions of an adequate scientific object, after all it is an «unum quid», with one definition. Its nature will be explained after the determination of its parts in *Categories* and *On Interpretation* (they form the «logica vetus», for Scotus⁶⁴, not because of their antiquity, but because they deal with the parts of syllogism, and a part is prior to the whole. The books that deal with the whole – called «logica nova» – are the *Analytica priora* and *Analytica posteriora*, and in them *syllogism* in its several forms and figures is treated)⁶⁵. In *First analytics* I we have the definition⁶⁶ of syllogism and several properties of it are revealed. Everything that logic considers is either syllogism or something related to it, that is, (i) «properties» or «subjective parts» as we learn from *Priorum*, *Posteriorum*, and *Topicorum*⁶⁷,

super questionibus de universalibus Doctoris Subtilis, videlicet Ioannis Scoti, Venetiis 1483, q. 3 (Quaeritur de subiecto logicae, an sit syllogismus...), pp. 1-3; Cardinalis Constantius Sarnanus (Contanzo Boccadifuoco) O.F.M. (1531 – 1595), Expositiones Quaestionum Doctoris Subtilis Ioannis Duns Scoti, in Universalia Porphyrii, q. 3 (De subiecto logicae), pp. 54-91.

⁶⁴ In fact, these explanations do not appear in Ioannes Duns Scotus, *Quaestiones in librum Porphyrii Isagoge*, q. 3, nn. 1-25, pp. 11-20 (especially n. 20, pp. 16-17).

⁶⁵ As it seems, Valera's explanation for the meaning of the expressions «logica vetus» and «logica nova» is very unusual; for possible explanations of the expressions in the Middle Ages and in historiography, cfr. for example A. KENNY and J. PINBORG, «Medieval Philosophical Literature», in N. KRETZMANN – A. KENNY – J. PINBORG (eds.). *The Cambridge History of Later Medieval Philosophy. From the Rediscovery of Aristotle to the Disintegration of Scholasticism 1100-1600*, Cambridge University Press, Cambridge 1982, pp. 18-19; B. G. DOD, «Aristoteles latinus», in N. KRETZMANN – A. KENNY – J. PINBORG (eds.). *The Cambridge History of Later Medieval Philosophy. From the Rediscovery of Aristotle to the Disintegration of Scholasticism 1100-1600*, Cambridge University Press, Cambridge 1982, pp. 46, 48, 55. Cfr. also S. EBBESEN, «Ancient Scholastic Logic as the Source of Medieval Scholastic Logic», in N. KRETZMANN – A. KENNY – J. PINBORG (eds.). *The Cambridge History of Later Medieval Philosophy. From the Rediscovery of Aristotle to the Disintegration of Scholasticism 1100-1600*, Cambridge University Press, Cambridge 1982, pp. 101-127; D. P. HENRY, «Predicables and Categories», in N. KRETZMANN – A. KENNY – J. PINBORG (eds.). *The Cambridge History of Later Medieval Philosophy. From the Rediscovery of Aristotle to the Disintegration of Scholasticism 1100-1600*, Cambridge University Press, Cambridge 1982, pp. 128-142.

⁶⁶ Cfr. Aristoteles, «Lehre vom Schluss oder Erste Analytik», in Aristoteles, *Philosophische Schriften*, übersetzt von E. ROLFES, Felix Meiner Verlag, Hamburg, Band 1, 1995, Book I Chapter 1, pp. 1-3.

⁶⁷ *Ibid.*, Book I Chapters 1-46, pp. 1-91. Cfr. also Aristoteles, «Lehre vom Beweis oder Zweite Analytik», cit., Book I Chapters 1-34, pp. 1-68; Aristoteles, «Topik», in Aristoteles, *Philosophische Schriften*, Felix Meiner Verlag, Hamburg, Band 2, 1995, Book I Chapter 1-2, pp. 1-4; Chapters 10-12, pp. 12-16. Cfr. also O. HÖFFE, *Aristoteles*, Beck Verlag, München 1996, pp. 48-58; R. SMITH, «Logic», in J. BARNES, *The Cambridge Companion to Aristotle*, Cambridge University Press, Cambridge 1995, pp. 27-65; D. KEYT, «Deductive Logic», in G. ANAGNOSTOPOULOS (ed.), *A Companion to Aristotle*, Wiley-Blackwell, Chichester 2009, pp. 31-50 (especially pp. 38-46);

(ii) «remote integral parts» as the preparation for the theory of simple terms in the *Liber Porphyrii* or the simple terms themselves in *Praedicamenta*, or (iii) «proximate [integral] parts» such as «propositions», which are the subject matter of *Perihermenias*. Thus, the division of logic follows the division of syllogism into either *subjective* or *integral parts*. And logic also deals with «sophistical syllogism» as the «privation of syllogism». Thus, the entire enterprise in logic is determined by and directed towards syllogism as its «scope and end». In logic as a science syllogism is the *subiectum* of «adequation», of «attribution», and finally the «specifying subject» too⁶⁸.

As a confirmation, Valera thought important to justify the extensive treatment of the «parts» of syllogism. Syllogism is a device that we can build, and it is (es-

R. SMITH, «Aristotle's Theory of Demonstration», in G. ANAGNOSTOPOULOS (ed.), *A Companion to Aristotle*, Wiley-Blackwell, Chichester 2009, pp. 51-65 (especially pp. 52-59).

⁶⁸ In fact, this first conclusion and its first proof are essentially based on Scotus; cfr. notes 62 and 64, above. Cfr. Hieronimus Valera, *Commentarii...*, I d. 1, c. 4, p. 14: «Primo: syllogismo conveniunt omnes conditiones supra positae obiecti adaequati, imprimis enim syllogismus est unum quid, cum una diffinitione, eius natura explicetur, et statim post determinationem de eius partibus in libris *Praedicamentorum* et *Perihermeniarum* (quos libros logicam veteram appellat noster Doctor, non quia sunt antiquiores duratione aliis libris logicae, ut bene advertunt Anglicus et Mauritius, sed quia agunt de partibus syllogismi, pars autem est prior toto, unde libri qui agunt de toto, quod posterius est partibus, priorum scilicet et posteriorum in quibus agitur de syllogismo logica nova appellantur). In primo [libro] *Priorum* praemittitur eius diffinitio, et in eodem multae passiones de ipso ut sic ostenduntur per talem diffinitionem, ut ibi videbimus, et omnia quae in logica considerantur propter ipsum determinantur, cum quidquid considerat logica vel sit syllogismus aut aliquid ipsius, scilicet vel ut passiones, vel ut partes subiectivae (scilicet species) ut in libris *Priorum*, *Posteriorum*, *Topicorum*, vel tamquam partes integrales remotae, ut termini simplices de quibus in *Praedicamentis*, cui adminiculatur *liber Porphyrii*; vel proximae ut propositiones, de quibus in libris *Periermeniarum*. Unde divisio totius logicae est secundum divisionem syllogismi, in partes scilicet subiectivas vel integrales, et cum eiusdem sit cognoscere habitum et privationem, ideo agit logica de syllogismo sophistico, ut de privatione illius; ergo omnia in logica determinantur propter syllogismum, et tota logicae cura illum, ut in scopum et finem dirigitur, erit ergo subiectum adaequationis et attributionis illius et specificativum, cum per syllogismum logica ab aliis scientiis distinguatur sufficienter». At any rate, the way Valera – following Scotus – determines the subject-matter of logic and as a consequence how the several (traditional) logical works and subjects covered by Aristotle's *Organon* can be integrated into a unified scientific view is interesting, if we remember how unclear this matter was in 13th century medieval logic; cfr. for example S. EBBESEN, «What Counted as Logic in the Thirteenth Century?», in M. CAMERON and J. MARENBOON (eds.), *Methods and Methodologies. Aristotelian Logic East and West, 500 – 1500*, Brill, Leiden – Boston 2011, pp. 94sq. At least in what respects Scotus's *logicalia*, the summary offered in A. VOS, *The Philosophy of John Duns Scotus*, Edinburgh University Press, Edinburgh 2006, pp. 154-156, does not seem to me to apprehend clearly the *obiectum* of logic as a science as it was initially conceived by Duns Scotus.

entially) composed of parts. Any science that treats a «totum» as «factibile» has to treat of its parts as such (see above). The important thing to remember is that each part stays in an order to the whole, and so the «term» stays in an essential order to «proposition», i.e. to be extreme of the proposition formally under one of five logical types of attribution. Furthermore, «proposition» stays in an essential order to syllogism, after all, syllogism is a construction of premises and conclusion⁶⁹, and these are categoric propositions, with a modal value, through which we produce «hypothetic», «demonstrative», and «topical» syllogism. Interestingly, Valera remembers that logic considers also «definition» and «division» insofar as they are useful to construct syllogism. But there is no need of some particular book on them in logic, for they are comprehended in the *logica vetus*⁷⁰.

In fact, Valera's concern for the need of including in logic as a science the treatment of the «parts» just mentioned is expressed again in a second proof. Science is acquired through «discourse», and discourse is only possible through two previous operations of the mind. We need a logically prior operation to «rightly apprehend simple things» and their correct ordination to «compositions»; we need also a logically prior operation to form «compositions» or propositions and check their order and disposition to syllogism; these «conceptions of mind» are treated in an order to the realization of science⁷¹. We can therefore notice that the object of logic is neither the «logical being of reason» (*ens rationis logicum*) – therefore, logic is not a general science of beings of reason – nor «the way of knowing» (*modus sciendi*) taken in common (remembering that there are in fact several forms of getting to know things that are unknown, including here «division» and «definition»⁷²). These items are not what logic defines, its principles are not principles of those subject-matters, and logic does not demonstrate their properties. Again, it does not belong to the definition of an «adequate object of science» that it is «common» to all things considered in it. In addition, the «modus sciendi» is not even «common» to all things that are effectively treated in logic, such as «terms» and «propositions». The «common» *modus sciendi* which is called

⁶⁹ That this is the program to present the logical (passive) structure of the three fundamental intellectual operations had been announced from the beginning in the introductory chapters of the *Summulae dialecticae*. That program in dialectics is now explained in much more details indeed. Cfr. above, under division 1.

⁷⁰ Cfr. Hyeronimus Valera, *Commentarii...*, I d. 1, c. 4, pp. 14-15.

⁷¹ *Ibid.*, p. 15.

⁷² Cfr. above, under division 1.

«argumentation» (*argumentatio*) is not the object of logic either, for logic does not deal with all kinds of argumentation, as, for example, «dilemma», «sorites» and «exemplum», which are argumentations, but of rhetoric. Logic considers solely the *sylogistic* argumentation⁷³.

The other two Scotist conclusions about the object of logic can be issued very briefly. Second, in logic «demonstration» is the object of «major concern» (*principalitas*). And the «principal» object in a given science is the one that is «nobler in it». Third, the «formal object *quo*», i.e. the «formal reason of the object of logic» is the «form of reason» ordered through syllogism. The «material object» are «things», «concepts», and «words», ordered through the same form of reason. It is only under the form of reason of syllogism – which they all include – that these last items can be considered in logic⁷⁴.

3.4. Refinements

Expectably, Valera has a stance about the complex expositions on the way how the *modus sciendi* is supposed to be the object of dialectics – «vocally», «mentally», «objectively», or in a combination of those three aspects. He refers back with particular interest to arguments for the second view⁷⁵, according to which only the «mental way of knowing» – or the acts of the intellect insofar as they are ordered according to the «form of reason of the way of knowing» – is the object of logic. He affirms that the intellectual operations, as they can be conducted

⁷³ Cfr. Hieronimus Valera, *Commentarii...*, I d. 1, c. 4, p. 15: «Tertio probatur: a sufficienti partium enumeratione, obiectum logicae non est ens rationis logicum in communi sumptum, ut prima fert opinio, nec modus sciendi in communi, quia nullius istorum secundum rationem generalem habetur diffinitio in logica, nec praemittitur ut principium scientiae, nec passio aliqua de eis demonstratur in generali. Unaqueque enim scientia haec tractat de suo obiecto, nec enim de ratione obiecti adaequati scientiae est quod sit aliquid commune omnibus, quae in scientia tractantur, ut patet de Deo in theologia; immo ens mobile non esset obiectum philosophiae cum non sit commune loco, vacuo, motui et aliis huiusmodi, de quibus ipsa agit. Immo nec modus sciendi esset obiectum logicae cum non sit hoc modo commune, omnibus quae in logica tractantur, terminus enim vel propositiones, etc., non sunt modus sciendi. Praeterea argumentatio non est obiectum logicae, quia logica non agit de omni specie argumentationis, cum dilemma, sorites et exemplum, quae species sunt argumentationis, ad rhetoricam pertineant: ergo eius obiectum non est argumentatio in communi; obiectum enim non debet latius patere quam scientia, ut diximus». Cfr. also Hieronimus Valera, *Commentarii...*, *SD*, III, c. 1, p. 31.

⁷⁴ *Ibid.*, pp. 15-16.

⁷⁵ Valera affirms simply, cfr. *ibid.*, p. 16, that he admits the first view – described under the division 3.1 – as long as it proves the third conclusion summarized above in the main text.

in an order to a specific and corresponding object, belong to all sciences. Such operations belong to logic insofar as they can be conducted or disposed according to that «form of reason» through which they are called «formally directed». The directable operations of the intellect are only the «material object» of logic; its «formal object» is, however, the «form of reason». By means of an analogy, we can say that the object of the art of house-building is not wood and stones, but rather «the form» of house, or the house «in concreto»⁷⁶.

Moreover, the object of a guiding art such as «logic» can be viewed as «that» *through which* we direct acts or operations, surely *not* as the «instrument» through which, *but certainly* as the «form» through which the thing – i.e. the «act» – is said to be «formally directed». Accordingly, «health» is the «formal object» of medicine, and «body» is directed through this form or «formally». Thus, the object of logic, syllogism, is the «form of reason» through which the operations of the intellect are «formally» directed⁷⁷.

To constitute the intellect as a potency that well conceives of its object is undoubtedly not a task of logic alone, but of every science, and every science does it by attaining the nature and properties of its adequate object. It is true that the acts of the intellect can only attain this if they are rightly disposed and ordered through the «form of reason», which is the formal object of logic. Logic considers intellectual acts not substantially, but only insofar as they are under or are ordered according to the «form of reason»⁷⁸.

Valera wants to bring the reader to the conclusion that, although taking into consideration those three different forms of the «way of knowing», there is in logic a special sense in which the «objective» *modus sciendi* should be the holder of an outstanding place or significance. He affirms that properties taken «passively» and «objectively» belong to the proposition «taken objectively». This seems to mean that they correspond to things insofar as things are under «beings of reason». It is a «formal truth taken passively» that a thing is said by the intel-

⁷⁶ Ibid., p. 16.

⁷⁷ Ibid: «Ad secundum. Responsio: distingo antecedens obiectum artis directivae non est «id» quo dirigimus tamquam instrumento; concedo tamquam forma, qua res formaliter dicitur directa nego, unde obiectum formale medicinae est sanitas, qua corpus est formaliter directum. Et obiectum formalem artis, quae docet aptare calamum, est ipsa formalis aptatio calami, sic in proposito illa forma rationis, qua operationes intellectus formaliter dicuntur directe, est obiectum formale logicae, et idem de forma rationis reperta in rebus et vocibus, sub quibus comprehenduntur scripturae».

⁷⁸ Ibid.

lect in conformity or as it is «ex parte rei». Valera can see a natural basis for what happens in logic and in intellectual acts rightly disposed by the form of reason. In the things themselves the «inference» and the «fundamental consequence» are given, for *the thing* signified in the conclusion depends on *the things* signified in the premises; accordingly, the form of reason of syllogism that the intellect forms follows objectively what things are⁷⁹. The natural basis which intellectual instruments of knowledge – ordered intellectual acts – acquire and the forms of reason follow passively is given of course not only in things insofar as they are under cognitions, but also in cognitions themselves. Within this natural basis, logic treats «things» and «acts of the intellect» *insofar as they relate to the form of reason*⁸⁰.

Still concerning arguments for the opinion according to which the «objective way of knowing» is the object of logic, Valera agrees that definition explains «intelligibly» a thing's essence, and that it is «intelligibly» composed by genus and difference *of the thing* defined. Accordingly, we find in intellectual acts these «denominations» and «forms of reason», which logic treats of. Valera seems to agree that logic considers «words» and corresponding «concepts» that are «actively» or «significatively» subjected and predicated – which means: subjected and predicated explicitly through the intellect in its several acts. Logic, however, also deals with things that are «passively» or «objectively» «subjected» or «predicated» – which seems to mean those beings of reason signified through given concepts and words regardless of the explicit acts or of the explicit determinations of the intellect⁸¹. Interestingly, Valera agrees that dialectics directs acts of the intellect related to syllogism insofar as it considers a certain «rectitude of reason» *found in* intellectual acts and – possibly visualized first through reflexive intellectual acts, originally then – in «things». This means that logic passively

⁷⁹ Ibid.

⁸⁰ Ibid.: «Ad tertium. Responso: quod illae passiones passive et obiective sumptae conveniunt propositioni obiective sumptae, ipsis scilicet rebus quatenus subsunt entibus rationis, est autem veritas formalis passive sumpta rem esse dictam ab intellectu conformite et ut se habet ex parte rei; de diffinitione autem videatur quod diximus in primo notabili, et idem proportionaliter de divisione et demonstratione, quia in ipsis rebus datur illatio et consequentia fundamentalis, quia ex rebus significatis per praemissas infertur res significata per conclusionem, in quibus intellectus format illam rationis formam syllogismi et dicuntur causare scientiam obiective. Ad confirmationem. Responso: quod talia instrumenta sciendi seu tales formae rationis non tantum dantur in ipsis rebus, quatenus subsunt nostris cognitionibus, sed etiam in ipsis cognitionibus, ut dictum est. Hinc est quod logica agit de ipsis rebus et actibus intellectus quatenus conveniunt in tali forma rationis».

⁸¹ Ibid.

knows «exemplaria» to which all other sciences have to conform their acts⁸². This is a somehow curious position, for if logic deals with beings of reason, and beings of reason are diminished beings created by the intellect by reflecting on its first intentional cognitions, «exemplaria» sound like a too strongly real objective basis for logical beings of reason. It may be the case, however, that Valera has in mind that even logical beings follow what first intentions and hence things themselves are. On the other hand, we should not forget that logical exemplars exist eternally, and they are from eternity diminished beings, in the mind of God, as he suggests in another passage⁸³.

Valera's investigation on the object of logic is extensive and detailed, especially if compared to Scotus's account. Valera's Questions III and IV of the Distinction I of his *Liber primus* cover structurally the question that was dealt with by Scotus – following today's edition – in *Quaestiones in librum Porphyrii Isagoge* q. 3, nn. 1-25, pp. 11-20. His Question II (described above) expands the discussion on logic as «docens» and «utens» to be found only in *Quaestiones in librum Porphyrii Isagoge* q. 1, n. 7, pp. 4-5. The remaining Questions V-X will treat subjects that appear sparingly and in brief explanation in *Quaestiones in librum Porphyrii Isagoge* q. 1, nn. 1-16, pp. 3-7 and q. 2 (*Utrum logica sit scientia communis*) nn. 1-4, pp. 9-10. Particularly to discussions on the nature of logic as a *theoretical* and *scientific* habit, Valera explicitly recurs to the Prologue of *Ordinatio* (Part 3 and Part 5 in today's Vatican Edition) and to the *Quaestiones super libros metaphysicorum Aristotelis* I q. 7.

4. Logic is a Science

In fact, although they contain some detailed discussions on logic – especially when clear-cut differences among philosophical school in 16th-17th centuries are highlighted⁸⁴ – Questions V-X of Distinction I in the *Liber primus* can be treated

⁸² Ibid: «Ad tertium: idem respondendum; iam enim explicuimus quo pacto dialectica dirigat actus intellectus quatenus scilicet considerat rectitudinem illam rationis, repertam in actibus intellectus et in rebus; et hoc est cognoscere exemplaria quibus aliae scientiae conformant suos actus, logica in hoc passive se habente, ut dictum est».

⁸³ Ibid. Cfr. for example Hyeronimus Valera, *Commentarii...*, I d. 2, a. 2 (*De forma universalitatis, seu de universali pro formali*), q. 1 (*Quid ens rationis sit?*), pp. 53-56 (especially pp. 54-56, conclusions 2-6).

⁸⁴ Cfr. especially Hyeronimus Valera, *Commentarii...*, I d. 1, q. 7 (*Utrum logica sit unus simplex habitus, et una scientia specie?*), pp. 20-22; I d. 1, q. 8 (*Utrum logica sit scientia speculativa, vel*

more shortly, for the simple reason that their conclusions in most of the cases can be easily understood. Surely the long treatment of the adequate object of logic presupposes that logic is a science, but several aspects of this ascription are still open. If the Fifth Question is «Whether logic proceeds scientifically in the knowledge of its object», it is clearly perceptible in Valera's conclusions what the discussion is about. Following Aquinas and Scotus⁸⁵, he affirms *firstly* that logic is a science according to all its parts. The reason for this conclusion is evidenced by understanding what a «scientia de prompta» is. Science is a habit or «promptitude» inclined to the knowledge of a necessary thing through a proper cause. This applies to logic. After all, although things treated singularly by logic may be contingent, when taken «in general» and put in an order to their essential principles, they are necessary and perennial truths. But actually it seems that Valera wants to emphasize the fact that by so doing logic as a science fulfils the sufficient condition of producing conclusions through a «proper cause», and this can mean «logical consistency»⁸⁶. After all if logical consistency can be observed in the «analytic» part of logic, wherein from necessary truths-causes a necessary truth-conclusion is obtained, and in this case syllogism produces science in the strict or demonstrative sense, logic is only a «science» in the «topical» part, in which it generates opinion, and finally in the «sophistical» part, where an argument generates appearance⁸⁷, if «logical consistency» is a sufficient condition for being a science: from probable premises a probable conclusion is obtained; from apparent premises an apparent conclusion is obtained, etc.

Accordingly, Valera affirms *secondly* that logic should not be distinguished in «scientific» and «preceptive», for this amounts to the same in logic. The only

practica), pp. 23-25; I d. 1, q. 10 (*Utrum logica sit necessario prius addiscenda ad alias scientias comparandas*), pp. 29-30.

⁸⁵ Cfr. Thomas Aquinas, *In XII libros metaphysicorum*, Liber IV, Lectio VIII, pp. 360-361 (the correct reference seems to be, as in the previous reference to Thomas Aquinas, Lectio IV, p. 349; cfr. note 37 above); Ioannes Duns Scotus, *Quaestiones in librum Porphyrii Isagoge*, q. 1, n. 6, p. 4.

⁸⁶ Cfr. Hyeronimus Valera, *Commentarii...*, I d. 1, q. 5, p. 17: «[...] Sumpta ergo scientia in hac acceptione, sic diffinitur, quod est cognitio rei per suam causam, propriam, et necessariam; et haec duplex est, vel actualis, vel habitualis. Scientia actualis est ipsa actualis cognitio rei per propriam causam; habitualis vero promptitudo illa, aut facilitas causata in intellectu, ex ipsa actuali cognitione, inclinans illum ex sua natura ad eliciendam actualem cognitionem scientificam; semper enim ex ipsis actibus generatur in ipsa potentia, a qua tales actus eliciuntur, facilitas quaedam quam habitum appellamus, inclinans illam ad eliciendos actus similes illis, a quibus fuit genitus».

⁸⁷ Cf. Hyeronimus Valera, *Commentarii...*, I d. 1, q. 5, p. 18.

precepts logic has are scientific or «proper causes», as when logic teaches that definition is composed of «genus and difference», and so it explains the nature of a given thing. *Thirdly*, logic as «teaching» is an «art» *only* «in a broad sense». After all, it obviously does not direct external deeds. On the other hand, logic directs intellectual operations. For this directive similarity with true art, we can accept that it is called «ars liberalis»⁸⁸.

Fourthly, he says again that logic «in use» and «passively»⁸⁹ is not a science – here he mentions the agreement by Sánchez⁹⁰, Rubio⁹¹, and «other recent authors». Basically, logic so taken does not produce *itself* any act, but only behaves as an «extrinsic rule» in order for the other sciences to produce their acts. «Passively» taken, logic is not an art either, for an art is «either factive or active». However, if logic – still being considered «in use», but now «actively» – is taken for the topical part, that is, insofar as it proceeds through certain common principles to prove truths of scientific habits other than logic, and only with «probability» of course, not «as such» (*ut sic*), it is a science⁹².

Asking further in Question VI (a) whether logic has «perfectly and absolutely» the definition of a science, and (b) whether it should be called a «common science»⁹³, two «presuppositions» (*notanda*) are put forward by Valera. *Firstly*, three things

⁸⁸ Ibid.

⁸⁹ Cfr. the treatment of this topic above, under 2.2.

⁹⁰ Cfr. Ioannes Sancius Sedegnus [Juan Sánchez Sedeño] O.P. (1552 – 1615), *Quaestiones ad universam Aristotelis logicam acutissimae et utilissimae*, Sumptibus Ioannis Crithii, Bibliopolae Coloniensis, Mogunciae 1616, q. 5 (*Utrum logica recte dividatur in docentem et utentem*), pp. 20-23; q. 6 (*Utrum logica utens, et docens distinguantur realiter inter se*), pp. 23-31; q. 7 (*Utrum logica docens sit scientia*), pp. 31-42; q. 8 (*Utrum logica utens, ut sic, sit scientia*), pp. 43-45 (especially pp. 43-44, «Decisio quaestionis»).

⁹¹ Cfr. Antonius Rubius Rodensis [Antonio Rubio] S.J. (1548 – 1616), *Commentarii in universam Aristotelis dialecticam*, Ex Officina Iusti Sánchez Crespo, Compluti 1603, Pars Prior, Quaestiones prooemiales pro dialecticae introductione, q. 3 (*Utrum logica utens sit scientia, aut saltem habitus a docente distinctus*), numbered columns 18-33 (especially 27-28).

⁹² Cfr. Hieronimus Valera, *Commentarii...*, I d. 1, q. 5, p. 18: «Logica ut utens passive nullum actum elicit, sed tantum se habet ut regula extrinseca ad quam aliae scientiae, se convertentes, suos actus eliciunt, ut explicatum est, atque adeo nec ut sic erit ars, ars enim vel est factiva vel activa. Si vero sumatur pro parte topica, quatenus per principia communia, ab ipsa tradita, descendit ad probandas veritates aliarum scientiarum, non demonstrative, sed tantum probabiliter procedit, non ergo ut sic est scientia».

⁹³ In respect to the first question, Valera refers to Mathias Aquarius [Mattia Aquario] O.P. (? – 1591), *Dilucidationes in XII libros primae philosophiae Aristotelis*, Ex Typographia Bartholomaei Bonfadini, et Titi Diani, Romae 1584, Liber 2, Dilucidatio 11 (*Utrum logica sit scientia*), pp. 126-130.

are found in a given science, namely *subiectum*, «[demonstrated] property» and «middle [term]» or «principle» through which a property is demonstrated and which is the «formal reason» of the *obiectum*. Of course scientific knowledge – as a kind of acquired knowledge – is not of the object «incomplexe sumptum», but of it together with a property in the conclusive proposition. For there being science *simpliciter*, it is not necessary that the object be a being «simpliciter» or a being «secundum quid», if it is taken «incomplexe». It is only necessary that, if it is taken «complexe» (in the conclusion or as a proposition), the object is «simpliciter necessarium». *Secondly*, although a «being of reason» (such as «syllogism») is a «diminished being» (*diminute ens*), it is «considerable» (*considerabile*) however under «proper», «true», and «certain» principles, and it has «properties» distinguished from their *subiectum* and connected to it with necessity. In fact, the «virtual cause» or «intrinsic reason» why a property comes to be proved of the subject is the «definition» or formal reason working as *medium*. The connection gained in the conclusion is thus «necessary» and «eternal», and it is independent from the intellect, such as the logical proposition ‘Genus is a predicable’⁹⁴.

Based on this observation, and considering once again that logic has in «syllogism» an adequate object, it is not difficult to see why Valera concludes *first* that logic is «properly and absolutely», and «strictly speaking» a science. He concludes *second* that logic can be called a «common science», for its object and the further *subiecta* about which it disserts are applicable to all things. As we have seen, all sciences make use of syllogism. Because it is a general «science of reason», which seems to amount here to a general science of the conclusive-deductive forms of reason, both in the «teaching» (primarily) and in the «in-use» meaning (secondarily), logic is called a science «secundum quid», through extrinsic denomination and «in obliquo»⁹⁵.

Although Valera considers in Question VII («Whether logic is one sole simple habit and one sole science specifically?») a traditional and difficult issue, and offers

⁹⁴ Cf. Hieronimus Valera, *Commentarii...*, I d. 1, q. 5, pp. 20-21.

⁹⁵ Ibid., p. 20: «Prima conclusio: logica est proprie et simpliciter et stricto modo scientia; probatio istius conclusionis ex praeiactis notabilibus liquet. Est enim logica cognitio certa et evidens rei necessariae, per propriam et intrinsecam rationem cognoscendi, diffinitionem scilicet ipsius obiecti; ergo est proprie et simpliciter scientia. Secunda conclusio: logica potest dici scientia communis a suo obiecto, quia eius obiectum et ea de quibus logica disserit sunt aplicabilia omnibus rebus, ut explicatum est, et omnes scientiae utuntur syllogismo, qua etiam ratione appellatur scientia rationis et modus sciendi ab obiecto, et in hoc sensu potest appellari scientia secundum quid, denominatione extrinseca et in obliquo».

expositions of the several opinions by the schools, I will briefly summarize only his own views on it. Valera affirms *firstly* – taking this as the position of Scotus and his disciples – that, since in logic there are several «partial» and «essentially distinguished» objects, there are also several essentially distinguished habits. Each one has its «peculiar» object in view – such as the habit to the knowledge of «definition», the habit to the knowledge of «division», the habit to the knowledge of «oration» or «proposition» (*oratio*), the habit to the knowledge of «consequence», etc. (which are all logical beings of reason)⁹⁶. After all, «logical cognitions» are essentially different in the «being known», both «materially» (or in the «being of the thing») and «formally» (or in «the being of the knowable»). Clearly for the scientific knowledges just mentioned we would proceed from essentially different «causes and principles», «of things essentially different»⁹⁷.

Valera affirms *secondly* that the habits found in logic are «partial» and distinguished by a «partial and incomplete species». But they have a connection among themselves and constitute a «total unique habit». As partial and inadequate objects have an order among themselves – the order towards a sole «object of attribution» –, so partial habits that generate scientific knowledge of such objects are connected or ordered to bring knowledge of the unique adequate object⁹⁸. As a *third conclusion*, Valera affirms that logic is one sole science through a «specific unity», which integrates partial habits as «heterogeneous parts» distinguished by an «incomplete species» and ordered to the knowledge of a sole adequate object. In respect to all other objects, the only adequate object is viewed not as «potential», but rather as an «integral whole»⁹⁹.

Concerning another traditional Question (VIII – « Whether logic is a theoretical or a practical science»), richly discussed by Medieval authors

⁹⁶ They are briefly defined by Valera in Hyeronimus Valera, *Commentarii...*, SD, II cc. 1-4, pp. 17-22; III c. 1, pp. 30-32.

⁹⁷ Cfr. Hyeronimus Valera, *Commentarii...*, I d. 1, q. 7, p. 22.

⁹⁸ Ibid.

⁹⁹ Ibid.: «Tertia conclusio: logica est una scientia unitate specifica, integrata ex pluribus habitibus partialibus, tamquam ex partibus heterogeneis, sicut ergo homo licet integraliter componatur ex pluribus partibus essentialiter, atque adeo specie incompleta distinctis, ut ex capite, manibus, ossibus, nervis, sanguine: non tamen ideo homo dicitur unus genere, quasi sit genus ad suas partes, sed unus unitate specifica et numerica, quia omnes illae partes integrant totum hominem et dicunt ordinem ad illum. Sic in proposito: logica est una scientia, unitate specifica integrata tamen ex pluribus partibus, habitibus nempe partialibus, specie incompleta distinctis atque adeo respectu illorum, non se habet ut totum potenziale, sed ut totum integrale».

and «schools», as well as by thinkers contemporary to Valera, we see a clear Scotist account in our author's determination. His first presupposition is taken from Scotus's Prologue Part IV (V)¹⁰⁰ and *Quaestiones super libros metaphysicorum Aristotelis* I q. 7¹⁰¹. Concerning the understanding of a «practical science», two things must be known about «praxis»: (i) it is an operation by the will, not by the intellect; (ii) no operation of the intellect is «properly and essentially» a praxis. A cognition can only be practical insofar as it «regulates praxis», that is, when an action is performed according to the right reason¹⁰². Accordingly, an operation fully determined through «nature», such as an intellectual act or cognition, is not a praxis. Only acts produced or commanded by the will can be called «praxes»¹⁰³.

Valera takes a second presupposition again from Scotus's *Quaestiones super libros metaphysicorum Aristotelis* I q. 7¹⁰⁴: no science is practical unless it considers the «operation» or the «realizable» (*operatio, operabile*) as «realizable» (*operabile*) indeed, that is, in the sense of something to be done or of some practice¹⁰⁵. In fact, we are remembered that about every «realizable» it

¹⁰⁰ Cfr. Ioannes Duns Scotus, *Ordinatio* prologus p. 5, qq. 1-2, nn. 217-366, pp. 151-237 (here especially nn. 228-235, pp. 155-160).

¹⁰¹ Cfr. Ioannes Duns Scotus, *Quaestiones super libros metaphysicorum Aristotelis Libri I-V*, in R. ANDREWS ET ALII (eds.), *B. Ioannis Duns Scoti Opera Philosophica III*, Franciscan Institute Publications, St. Bonaventure (N.Y.) 1997, I q. 7 (*Utrum metaphysica sit practica*), nn. 1-34, pp. 153-160.

¹⁰² *Ibid.*, nn. 8, 17-18, pp. 154, 156. Cfr. on these subjects H. MÖHLE, *Ethik als scientia practica nach Johannes Duns Scotus. Eine philosophische Grundlegung*, Aschendorff Verlag, Münster 1995, pp. 13-83.

¹⁰³ Cfr. Hyeronimus Valera, *Commentarii...*, I d. 1, q. 8, p. 25: «Primo ex nostro Doctore quaestione 4 Prologi *Sententiarum* et primo *Metaphysicorum* quaestione 7: *Quod praxis proprie dicta a qua scientia dicitur practica, est operatio alterius potentiae quam intellectus, prout subiacet imperio voluntatis, et est nata conformiter fieri rationi recta. Unde pro nunc duo sunt praecipue de ratione praxis, primum quod sit operatio alterius potentiae ab intellectu, atque adeo nulla operatio intellectus potest esse proprie et essentialiter praxis, dicitur tamen cognitio practica illa quae est regulativa praxis, secundo ait Noster Doctor: Quod contingat in ea errare et recte agere id est quod possit bene vel male fieri, atque adeo sit regulabilis ut recte fiat a recta ratione, illique conformabilis. Unde operatio quae a natura est omnino determinata non est praxis, quia non est per rationem dirigibilis, non enim est opus directione rationis, ubi nulla est difformitas, ut est videre in operationibus vegetativae, quae sunt a natura determinatae, nec subsunt imperio voluntatis. Solum ergo operationes elicidae vel imperatae a voluntate sunt praxes».*

¹⁰⁴ Cfr. Ioannes Duns Scotus, *Quaestiones super libros metaphysicorum Aristotelis Libri I-V*, I q. 7, nn. 7-28, pp. 154-158.

¹⁰⁵ *Ibid.*, n. 18, p. 156.

is possible to have a theoretical science, at least in case the «realizable» is taken only «materially». «Formally» also – taking into consideration the formal way how the thing is considered, which is expressed by the «*inquantum operabile*» –, the object of practical science is the «*res operabilis*» as it stands in an order to a praxis, and here we have the «formal reason of the object» or the «*obiectum formale quo*» of a practical science. Again Jerónimo Valera appeals to John Duns Scotus to affirm that a science is «practical» through the object and therefore through «praxis», not through its end¹⁰⁶. A science is practical not insofar as its object exerts the causality of an end that moves the will to the love of it – although even the object of a practical science can have a «*ratio finis*» in relation to the habit, in the sense that the *finis* of such a science is to know what is «directive» in a given operation¹⁰⁷.

As a third presupposition, Valera insists that practical science is science too, and so it has something in common with theoretical science, namely that

¹⁰⁶ Cfr. Ioannes Duns Scotus, *Ordinatio* prologus p. 5, qq. 1-2, nn. 260-264, pp. 176-178.

¹⁰⁷ Cfr. Ioannes Duns Scotus, *Quaestiones super libros metaphysicorum Aristotelis Libri I-V*, I q. 7, n. 34, p. 160. Cfr also Ioannes Duns Scotus, *Quaestiones super libros metaphysicorum Aristotelis Libri VI-IX*, in R. ANDREWS ET ALII (eds.), *B. Ioannis Duns Scoti Opera Philosophica IV*, Franciscan Institute Publications, St. Bonaventure (N.Y.) 1997, VI q. 1, n. 44, p. 18. Aristoteles, «Metaphysik», in Aristoteles, *Philosophische Schriften*, nach der Übersetzung von H. BONITZ bearbeitet von H. SEIDL, Felix Meiner Verlag, Hamburg 1995, Band 5, II 1, p. 36. Cfr. Hyeronimus Valera, *Commentarii...*, I d. 1, q. 8, pp. 25-26: «Secundo nota: quod noster Doctor in illa quaest. 7 I Libro *Metaphysicorum* sic ait: *nulla scientia est practica, nisi consideret operationem, vel operabile, inquantum operabile*, et in fine quaestionis, *quia de quantumcumque operabili potest esse scientia speculativa*, ubi breviter perstringit, quid sit de ratione obiecti scientiae practicae, quod scilicet sit operabile, non tantum materialiter, sic enim potest esse obiectum scientiae speculativae, si tantum sistat in illius cognitione, sed formaliter, inquantum operabile, quod nihil aliud est quam *res operabilis*, pro ut subest ordinationi ad praxim, quae refunditur in ipsum obiectum, et se habet ut ratio formalis obiecti scientiae practicae, seu obiectum formale quo, hinc intelligitur quod dixit noster Doctor quaestione illa 4 Prologi *Sententiarum*: *scientiam dici practicam non a fine, sed ab obiecto, atque adeo a praxi, non ut habet rationem finis sed obiecti*, scilicet non quatenus exercet causalitatem finis movendo voluntatem ad illius affectum, vel morem (ut nonnulli dixerunt) hoc enim impertinenter se habet ad specificationem scientiae. Verum est quod obiectum habet aliquam rationem finis, quatenus omnia quae in scientia tractantur ad illud ordinantur, in quo sensu dixit noster Doctor VI Libro *Metaphysicorum* q. 1 § 2, videndum: *quod scientia speculativa ex natura sui et sui obiecti* [hoc est non ex sola extrinseca intentione addiscentis, sed ex propria ratione sua] *ordinatur tamquam ad finem ad scire tantum, practica vero, ad scire directivum in aliqua operatione, quae non est essentialiter speculatio*, et Aristoteles II *Metaphysicorum* cap. 1 textu 3 sic ait: *contemplatricis enim finis veritatis est, practicae vero opus*, operatio scilicet aliqua alterius potentiae ab intellectu: debent ergo intelligi de fine obiectivo, qui idem fere est ac obiectum formale».

these two kinds of habits of knowledge conclusively obtain a truth through the proper cause(s). But «moral philosophy» – and here Valera follows Aristotle¹⁰⁸ – is «absolutely practical», for, although it considers in some of its parts «natures and properties of virtues through their causes», it produces from these, as from principles and causes, precepts and rules of the «recte vivendi»¹⁰⁹. And a science is «practical» not only because its way of proceeding is «directive», «preceptive» or «compositive», but it has to be guided by an object formally «realizable» by a potency other than the «intellect» and by the praxis as it was explained¹¹⁰. So far Valera has summarized, in order to answer a question inserted by himself into a systematic presentation of the nature of logic, the basic tenets on practical (in distinction to theoretical) science that Scotus advanced both in the final Part of the Prologue to *Ordinatio* and *Quaestiones super libros metaphysicorum Aristotelis* I q. 7.

Valera concludes *firstly* that logic is *either* only practical or only theoretical. Whether a science is practical or theoretical depends on the «subject [object] of attribution» and on the «end» of the whole discipline and art, and this is *only one*. If a habit is concerned only with the knowledge of something – because of the nature of the object –, the science will be theoretical; if a habit is concerned with the right realization or construction of an action – because of the object itself –,

¹⁰⁸ Cfr. Aristoteles, «Nikomachische Ethik», in Aristoteles, *Philosophische Schriften*, Felix Meiner Verlag, Hamburg, Band 3, 1995, II 2, 1103b26-32, p. 28.

¹⁰⁹ Ibid.

¹¹⁰ Cfr. Hyeronimus Valera, *Commentarii...*, I d. 1, q. 8, p. 26: «Tertio notandum: scientiam practicam, et esse scientiam, et practicam, quatenus scientia est, habet hoc commune cum speculativa, quod utraque est cognoscitiva veritatis per causam: in hoc enim ratio scientiae consistit. Unde practica ut scientia est, naturas et proprietates rerum, de quibus agit considerat rationemque et causam, sive propter quid res ita sit conficienda reddit; alias nulla daretur scientia practica, cum nulla sit quae quatenus scientia hoc non habeat. Philosophia enim moralis, ex Aristotele II *Ethicorum* cap. 2 simpliciter practica est, quia licet aliquae eius partes, naturas et proprietates virtutum per suas causas consideret, ex his tamen omnibus, ut ex principiis et causis, elicit praecepta et regulas recte vivendi. Medicina scientia practica est, licet aliqua eius pars proxime et immediate regulas medendi non curet, sed tantum humani corporis structuram, temperamentum et alia huiusmodi considerat. In quantum practica vero totum hoc ad praxim refert, in quo ab speculativa distinguitur quae in ipsa cognitione sistit: quia non docet conficere suum obiectum, sicut practica, et sic subdit Aristoteles loco citato: *et si practici considerent, quo pacto res habeant, non tamen contemplantur causam ipsam per se, sed ad aliquid*. Ex quo fit quod ex solo modo procedendi quantumvis directive, praeceptivo et compositivo, non dicitur scientia practica, nisi ab obiecto formaliter operabili ab potentia quam ab intellectu et a praxi supra explicata, quibus sic positus sit».

the science will be practical¹¹¹. Valera concludes *secondly* that logic «absolutely speaking» is only a theoretical science. Improperly and «secundum quid» we say it is «practical» – Valera recurs again to some passages by Scotus¹¹²: logic is practical only because it is «directive» to knowledge, i.e. since discursive act can be mistaken, it needs a directive habit, although *the act in which it directs* is as such theoretical. This is the opinion of John Duns Scotus and his disciples, also by Thomas Aquinas and, with few exceptions, by his disciples as well¹¹³.

If the fundamental task of logic is to teach and direct intellectual acts towards the full knowledge of its adequate object, which is «syllogism», and in this respect it teaches the form of reason which is common to every other scientific habit, we can expect the treatment of Question IX: «Whether logic must be first learnt before all other sciences, and whether it is a part of philosophy». Valera affirms that logic was posterior to the invention of all other sciences. Reissuing a discussion on the «origin» of logic that was advanced in Question I of this First Distinction, Valera says that originally logic was surely «infused» by God to our «first ancestor» – what seems to mean here that it was infused as a habit. It was never totally extinguished, somehow a «spark» of it survived, although it was almost entirely forgotten. When it was «moribunda», it was excited again, not through divine infusion and revelation, but reconquered through the power of the intellect's natural light¹¹⁴. In fact, sciences have in common that they have

¹¹¹ Cfr. Hyeronimus Valera, *Commentarii...*, I d. 1, q. 8, p. 26.

¹¹² Cfr. for example Ioannes Duns Scotus, *Quaestiones super libros metaphysicorum Aristotelis Libri VI-IX*, VI q. 1, n. 66, p. 26.

¹¹³ Cfr. Hyeronimus Valera, *Commentarii...*, I d. 1, q. 8, p. 26. Cfr. também Mauritius a Portu Hibernicus [Maurice O'Fihely] O.F.M. (ca. 1460 – 1513), *Lectura accuratissima in quaestiones Doctoris subtilis super Isagogis Porphyrii*, 1519, q. 1 (*Utrum logica sit scientia*), Quarta Difficultas, p. 3b; Nicolaus de Orbellis [Nicolas d'Orbelles] O.F.M. (ca. 1400 – 1472/1475), *Expositio logicae secundum doctrinam Doctoris Subtilis Scoti*, Parma 1482 [Parma 1482.04.30, 4 Inc. c.a. 247, urn:nbn:de:bvb:12-bsb00067883-8, BSB-Ink N-127GW M28128], [pp. 8-9]; Petrus Tartaretus [Pierre Tartaret] (? – 1522), *Expositio et quaestiones super Logicam Aristotelis*, Jean Bouyer et Guillaume Bouchet, Poitiers 1493/1494, q. 2 (*Quaeritur secundo utrum logica sit scientia practica vel speculativa*), pp. IIb – Va, (especially dubium 3: *Dubitatur tertio utrum idem habitus scientificus possit dici practicus et speculativus*, pp. IVb – Va). There are some brief and scattered notes on the place of «Scotist» authors like Maurice O'Fihely, Nicolas d'Orbelles and Pierre Tartaret in the history of logic in C. PRANTL, *Geschichte der Logik im Abendlande*, Akademische Druck- und Verlagsanstalt, Graz, Bände III-IV, 1955, Chapter XXII, pp. 173-298.

¹¹⁴ Cfr. Hyeronimus Valera, *Commentarii...*, I d. 1, q. 9, pp. 27-28. Similar remarks on the origins of logic, not so much as a potency, but rather as a habit, were made in the introductory chapters of the *Liber primus*; cfr. above under division 2.1.

deffinitions, divisions, and demonstrations; the invention of logic, which is «ex propria ratione sua» only posterior to such habits, has to do with what these common notions agree or should agree with. For its emergence, logic depends upon other sciences: there would be no logic as a habit or discipline in case there were no other sciences¹¹⁵.

Valera explains, *secondly* what gave birth to the exciting of «artificial logic»: both the intellect's natural light or «natural dialectics» and the «experience» that, when human beings realize sciences, they perceive, by defining and reasoning, that they manifest the nature of something unknown, for otherwise they would not obtain a right view of the truth. Dialectics was only re-excited and taught in schools because human being came to perceive the way through which there is a correct procedure in the pursuit of truth; by inquiring the cause for there being that one right way, they arrived at precepts through which habits would correctly proceed in defining and reasoning. Thus, Aristotle can affirm in *Rhetorics* that dialectics was born and propagated «ex observatione»¹¹⁶. But if the point is not about the origin of artificial logic, but about its place in the learning of philosophical disciplines, Valera will say *thirdly* that logic should be learned before we learn other sciences. After all, it teaches the mode of realizing other sciences and is therefore an «instrument» for them. Assuming moreover that the «confuse multitude of things» (of substance with all its accidents) is the cause of errors, and this occurs in respect to the objects of which we would like to have scientific knowledge, it becomes necessary to have logic as the rule to distinguish one from the other. In order to easily realize demonstrations, it is necessary to learn first – and therefore through logic – both the modes and the orders in which demonstrations should be disposed¹¹⁷.

¹¹⁵ Cfr. Hyeronimus Valera, *Commentarii...*, I d. 1, q. 9, p. 28: «Probatur autem conclusio sic: omnes scientiae in hoc conveniunt, quod quaelibet habet suas diffinitiones, divisiones et demonstrationes, ut supra de demonstratione probatum est, logica autem adinventata est ut tractaret de hoc in quo omnes demonstrationes diffinitiones, etc., conveniunt: ut per logicam quid sit demonstratio, diffinitio, etc., innotesceret: ergo ex natura rei et per se loquendo, primum est quod sint scientiae, et demonstrationes, et diffinitiones, etc., in illis, quam sit logica tractans de illis. Quod enim dependet ab alio est posterius illo a quo dependet; sed logica dependet ab aliis scientiis, quia non esset logica, si non essent aliae scientiae, ergo logica est posterior ex propria ratione sua aliis scientiis».

¹¹⁶ Cfr. perhaps Aristote, *Rhétorique – Tome Premier (Livre I)*, texte établi et traduit par M. DUFOUR, Société d'Édition «Les Belles Lettres», Paris 1932, I 1, 1354a1-6, p. 71; also I 1, 1355a1-18, pp. 73-74.

¹¹⁷ Cfr. Hyeronimus Valera, *Commentarii...*, I d. 1, c. 9, p. 28.

Finally, logic is not only called the «instrument of philosophy», but also a «subjective part» of it, if «philosophy» is taken, not strictly but in a broad meaning, as «knowledge of the thing through proper cause and proper principles». In this definition, philosophy covers both metaphysics, physics, and logic – in fact, in the inverted sequence, the fundamental areas and disciplines of a scholastic «cursus philosophicus» in 16th-17th centuries¹¹⁸ –, i.e. philosophy so understood comprises both «real» and «rational» sciences (or rather sciences of «real» being and of «rational» being). There is a linguistic explanation for this stance. Logic does investigate the causes and principles of its object; «philosophers», on their turn, are the ones who «investigate rightly the causes of things». According to Aristotle, they even began to philosophize after admiring the «effects of things whose causes they ignored». Surely logic is also an «instrument of the sciences», but not insofar as, as an «effective instrument», it concurs to realize the acts of other sciences¹¹⁹. Its instrumental character must be placed on the fact that it gives precepts to correctly make syllogisms and demonstrations, of which other sciences make use¹²⁰.

Given its place in the study of philosophy and its function in the study of the form of reason that every science has to follow, Valera finally asks– as the issue was partially touched upon in the third conclusion of his Question IX – «Whether logic has necessarily to be learnt previously in order to realize the other sciences» (Question X). We should realize that this question stresses *not so much* whether logic *should be* learnt previously, but rather whether it *has necessarily to be* learnt previously. As a *first* presupposition, Valera affirms that the being of a thing is double: (i) either «esse simpliciter», or «esse absolute», where for example the «esse absolute» of Peter is his «life»; (ii) or «esse secundum quid», when a thing is said «to be» not «absolutely», but with an «addition», as the «right health condition of the body» is Peter’s «being in a qualified sense». Science also has a double sense:

¹¹⁸ On the diffusion of this model of philosophical study and writing cfr. also J. P. DOYLE, «Hispanic Scholastic Philosophy», in J. HANKINS (ed.), *The Cambridge Companion to Renaissance Philosophy*, Cambridge University Press, Cambridge 2007, pp. 261-266.

¹¹⁹ Cfr. above, under division 2.2, the discussion of the sense in which logic is a science «in-use».

¹²⁰ Cfr. Hyeronimus Valera, *Commentarii...*, I d. 1, c. 9, p. 28: «Quarta conclusio: logica non tantum dicitur instrumentum philosophiae, sed etiam pars illius subiectiva, si nomine philosophiae inteligamus, non stricte (eam scientiam quae de ente naturali disputat), sed in ampla significatione, pro ut cognitionem rei per propriam causam et per propria principia significat, in qua acceptione, tam de metaphysica quam de physica, et logica dicitur, complectiturque tam scientias reales quam rationales».

(i') through the «esse simpliciter» a science is said to be «absolutely», for there being «certain and evident knowledge of the thing through proper causes»; (ii') in the «esse secundum quid» a science exists in a more perfect way in one way rather than in another, for in one way the habit knows more things¹²¹. *Second*, since knowledge has in view the truth of the thing, we know it when we know that the thing is such as it is meant through the proposition. In order for any proposition to be true, the thing signified by the predicate must unite «a parte rei» with the thing signified by the propositional subject. That union can be immediate, in case we assent to such propositions only because of the apprehension of the terms, or mediate, when the predicate belongs to the subject through a middle term, which is either a thing's essence or a previous property that belongs to the subject both «a parte rei» and «a priori»¹²².

As a *first conclusion*, «artificial logic» is not necessary to realize other sciences¹²³. What is required, in order to have a scientific knowledge of something, is the «discovery» of things and a «certain and evident judgment»; the knower must also be aware that he uses «certain and most true premises» to achieve conclusive knowledge. But artificial logic is not necessary to any of these steps. About the «minor premise» Valera says that «discovery» (*inventio*) is the apprehension of things of which one must judge; «the application of the object to the apprehensive potency» *suffices* for it. Moreover, in order to judge the truth of our concept *we only have to pay attention* to the thing whereof we have a concept. Obviously, what is «posterior» as such cannot be absolutely necessary to realize what is «prior». Thus, logic as a discipline is «ex natura rei» posterior to all sciences – just like as a

¹²¹ Cfr. Hieronimus Valera, *Commentarii...*, I d. 1, q. 10, p. 30.

¹²² *Ibid.*

¹²³ Cfr. Ioannes de Ianduno (Jean de Jandun) (ca. 1285 – 1323), *In duodecim libros Metaphysicae iuxta Aristotelis, et magni Commentatoris intentionem ab eodem exactissime disputatae* [Marci Antonii Zimaræ *Annotationes et correctiones...*], Apud Hieronymum Scotum, Venetiis 1553 [unveränderter Nachdruck Minerva GmbH, Frankfurt/Main 1966], II q. 12 (*Absurdum est simul quaerere scientiam, etc.*), pp. 36a-36b; Chrysostomus Iavellus [Crisostomo Iavelli] O.P. (1470 – 1538), *Compendium opere ac doctrina iuxta librorum logicae Aristotelis*, Apud Ioannem Mariam Bonellum, Venetiis 1555, Tractatus I (*De praecognoscendis*), c. 4 (*Quae sit logicae utilitas, et necessitas*), pp. 9-10; Petrus Fonseca [Pedro da Fonseca], S.J. (ca. 1528 – 1599), *Commentaria in libros metaphysicorum Aristotelis*, cit., II cap. III, q. IV (*Sitne dialectica necessaria ad caeteras scientias capessendas*), Sectiones I-III, 528-535 (columns); Didacus Masius [Diego Mas] O.P. (1553 – 1609), *Commentarii in Porphyrium et in universam Aristotelis logicam*, Sumptibus Conradi Butgenii, Coloniae, Tomus Primus, 1617, Quaestiones prooemiales, q. 3 (*An sit dialectica necessaria ad alias scientias consequendas*), pp. 65-69 (especially pp. 67sqq.).

habit it is probably posterior to several other habits of knowledge. Therefore, «real sciences» – or sciences about objects classified as «real beings» – do not depend on logic to produce their perfect and direct acts¹²⁴. Still as a *third proof* of the first conclusion, Valera affirms that the «natural light» suffices to know syllogisms that have clear and self-evident necessity of connection, and these are the four modes of first figure or the «perfect syllogisms»¹²⁵ – Valera will even say that nearly all scientific habits construct their demonstrations in the first figure. Logic does not function as a potency in relation to other scientific habits – if it were so, it would be given as an absolute condition to all corresponding operations –, but it functions as a habit, i.e. it is given in order for them to be realized more easily. In order to have (or just to acquire passively) the form of the way of knowing in other sciences, artificial logic is not necessary: the «power of natural logic» is enough. Such power suffices to discover the form of right argument in logic, and so it does too in the matters of other sciences¹²⁶.

Valera finally affirms, as a *second conclusion*, that artificial logic is necessary «in a qualified sense» to realize other sciences, wherein we find the repeated thesis that it is necessary for them to be better realized. This is supposed to be a teaching by John Duns Scotus in *Super libros metaphysicorum Aristotelis*¹²⁷. Once logic is well acquired, other sciences can be acquired in a better way, namely «prompte», «faciliter», «breviter», and «perfecte». In an expanded sense – which is also accepted by Aristotle¹²⁸ – logic prevents sciences from falling prey to the danger of error, i.e. that sciences rely on «imperfect syllogisms» or that they just fall

¹²⁴ Ibid., pp. 30-31.

¹²⁵ About this point, cfr. also above under division 2.1.

¹²⁶ Cfr. Hyeronimus Valera, *Commentarii...*, I d. 1, c. 10, p. 31: «Tertio probatur: quia lumen naturale sufficit ad sciendum syllogismos, qui necessitatem habent colligendi claram et per se notam, ut sunt quattuor modi priores primae figurae, qui ideo perfecti syllogismi vocantur. Praeterea si logica esset simpliciter necessaria ad alias scientias comparandas, sequeretur quod logica respectu acquisitionis aliarum scientiarum se haberet ut potentia, et non ut habitus; consequens est falsum, in hoc enim potentia ab habitu distinguitur, quod potentia datur ad simpliciter opaerandum, habitus vero ad faciliter; sed logica per te requiritur non ad alias scientias faciliter consequendas, sed tamquam simpliciter necessaria ad illas; ergo. Tandem probatur forma modi sciendi, quae est in logica, est eiusdem rationis cum forma modi sciendi, quae est in aliis scientiis, sed ad se ipsam non est simpliciter necessaria logica artificialis, sat enim est logicae naturalis iuvamen, ne processus in infinitum detur; ergo et illud idem sufficet ad alias scientias. Si enim logica naturalis valet per se formam aptae argumentationis materiae logicae tribuere, cur non et materiae aliarum scientiarum?».

¹²⁷ The passages are unclear; cfr. note 129 below.

¹²⁸ Cfr. Aristoteles, «Topik», cit., I 2, pp. 3-4.

into «fallacies» or «paralogisms». For such pragmatic and secondary purposes the habit of logic is «necessary», and this necessity relates only to the «being in a qualified sense» of other sciences, not to their «being absolutely»¹²⁹

Concluding Remarks

Valera's exposition on the nature and properties of logic consists of a very detailed account of the matters under discussion, one that, far from being merely a commentary on similar questions to be found in Scotus's logical works, both brings current issues into debate and develops aspects of the Scotist tradition in a quite original way. He can surely be viewed as an important commentator and interpreter of Scotus on those subjects and deserves a relevant place among other commentators and interpreters mentioned by him – such as John Foxall, Nicolas d'Orbelles, Maurice O'Fihely, and Pierre Tartaret. The literature on logic produced by Valera reflects the changes that philosophical disciplines and philosophical writings were incorporating in 16th-17th centuries. In this respect, we can realize the several didactical concerns of his writing and even pure pedagogical reflections that permeate the discussions, namely in the sense of finding some explanation about how logical knowledge is possible, how it can be acquired, what is the method for introducing people to it, and how does it relate to other scientific habits. Although in the ten questions of Distinction I of his *Commentarii...* Valera considers nearly all possible central questions that could be debated in a logical textbook at the beginning of the 17th century, it is quite remarkable the depth of his treatment of particular issues on the object of logic – a matter of debate among philosophical schools indeed¹³⁰ –, which is a specific being of reason,

¹²⁹ Cfr. Hyeronimus Valera, *Commentarii...*, I d. 1, c. 10, pp. 31-32: «Secunda conclusio: artificialis logica est secundum quid necessaria ad alias scientias capescendas. Seu ad melius esse et valde utilis. Hanc docet noster Doctor subtilis in II *Metaphysicorum* q. 12 et I *Metaphysicorum* q. 1, et hoc pacto sunt intelligendi graves doctores, qui logicam adeo extollentes in contrariam sententiam videntur propendere. Haec patet, quia adepta logica, aliae scientiae meliori modo acquiruntur, prompte scilicet, faciliter, breviter et perfecte, et sic Aristoteles I *Topicorum* c. 2 eam utilem vocat, sunt enim multi alii syllogismorum modi imperfecti, qui non ita clare concludunt et multae obrepunt fallaciae, et aliqui adeo apparentes paralogismi ut primo aspectu longe veriores appareant quam veri et boni syllogismi, ergo ut sine erroris periculo scientiam comparemus necessaria est logica, et cum ista necessitas sit ad esse secundum quid scientiarum, id est non ad esse simpliciter illarum, sed ad maiorem perfectionem, logica erit necessaria secundum quid».

¹³⁰ A summary of this can be found in Petrus Fonseca [Pedro da Fonseca], S.J. (ca. 1528 – 1599), *Commentaria in libros metaphysicorum Aristotelis*, cit., II cap. III, q. I (*Num dialectica sit scientia nec ne*), Sectiones I-VI, 484-508 (columns).

namely «syllogism». Valera's way of considering the object of logic as the form of reason taken fundamentally in the objective sense reveals several steps that stretch beyond the Scotist views on the same issue, especially considering that «syllogism» as a being of reason created by the intellect through reflection on its own acts denounces both a rectitude to be found in the expression and explanation of knowledge claims of things as they are – revealing therefore a realistic basis for the very content of the adequate logical object – and a rectitude that is not simply an intellectual invention, but is rather warranted by the existence of «exemplary contents», to which such understanding of logical objects in human intellect have to match. As the study of Jerónimo Valera's work will reveal, he has not only a special concern for logical concepts, but in a very clear sense a special concern for logical objects that seem to have some kind of metaphysical independence from the mind, which seems, however, to be able to apprehend them only by reflecting on its natural achievements in cases of conclusive knowledge preceded by argument claims and on the sense of the correctness of its own conclusive operations¹³¹.

¹³¹ I would like to thank Márcio Paulo Cenci, Professor of Philosophy at the Centro Universitário Franciscano (UNIFRA), in Santa Maria / RS (Brazil), for his invaluable support in finding digitized works and biographical information about several authors mentioned by Jerónimo Valera in the texts studied in this article.