

Commentary Styles of Peripatetic Islamic Logicians on Aristotle's Definition of Syllogism

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Abstract: Aristotle (d. 322 BC) was the first philosopher in the history of thought to examine all modes and types of belief acquisition such as knowledge, supposition, error and indirectly imagination. In his *Prior Analytics*, which he wrote primarily to clarify his theory of demonstration, Aristotle examined in detail the syllogism, which he saw as the most important form of reasoning, and his analysis was subject to interpretation by different traditions of thought for centuries. Aristotle's *Prior Analytics* was translated into Arabic in the classical period and later interpreted by many Islamic logicians. This article aims to show how Aristotle's definition of the syllogism in the *Prior Analytics* was taken up and interpreted in the Peripatetic Islamic logical tradition. These interpretations of the definition of the syllogism will provide us with an idea about the unique features of the commentaries on the *Prior Analytics* in the Islamic world. Here, introductory information about the translation of the *Prior Analytics* into Arabic and its commentators in Arabic will be given, Aristotle's definition of the syllogism and its versions in Peripatetic Islamic logicians will be indicated, and the interpretation of the basic terms in the definition by Peripatetic Islamic logicians will be revealed.

Keywords: Aristotle, Islamic Peripatetic Logicians, *Prior Analytics*, definition of syllogism, interpretation.

Introduction

In philosophy and logic, a correct and in-depth understanding of basic terms is crucial. What definition is and how it should be done is a subject of the science of logic, while the definitions put forward in the parts of philosophy are the actualization of the theory in logic. In addition to this, the definition of the basic terms of logic also appears as the realization of the theory in logic itself. This time, the logician tries to define his own terms with the theory of definition he puts forward in logic. The history of logic is full of examples of such efforts. This is evident when we investigate any logical term, the predicates in which this term is defined, and interpretations of other terms within these predicates.

The definitions and interpretations of definitions put forward by different logicians and philosophers should be considered not as subjective and vague expressions of the whatnesses of these terms but as clear examples of the comprehension of their objective reality. This study aims to argue that Aristotle's definition of syllogism is interpreted by Peripatetic Islamic logicians should be seen as the product of such an endeavor. For this purpose, we can first briefly introduce *Prior Analytics* and give some preliminary information about its transition to the Peripatetic Islamic logic tradition, where it will be interpreted.

1. Aristotle's *Prior Analytics* in the Arabic Logic Tradition

Prior Analytics is actually the name of the first part of Aristotle's Book of *Analytics*, which consists of two main parts. As he himself makes clear in the first sentence of the *Prior Analytics*, the main purpose of the theory of syllogism that he sets out in the first main chapter of the Book of *Analytics* (Ἀναλυτικά) that it (this chapter) is titled later as *Prior Analytics* (Ἀναλυτικά Πρώτερα), is to establish the form of the theory that he sets out in the second main part of the Book of *Analytics* that it (this chapter) is titled later as *Posterior Analytics* (Ἀναλυτικά Ὑστερα).¹ As can be seen,

¹ Aristotle, *Prior Analytics*, trans. Hugh Tredennick, *The Categories On Interpretation, Prior Analytics*, ed. Harold P. Cook and Hugh Tredennick (London: Harvard

at first there is only one book and it is called *Analytcs*. Later on, the two main parts of the book were named separately and the first part was called *Prior Analytcs* and the second part was called *Posterior Analytcs*. The Arabic for *Analytcs* is *Kitāb at-Taḥlīlāt / Anūlūtīkā* (كتاب أنولوطيقى/التحليلات), while the Arabic for *Prior Analytcs* is *Kitāb at-Taḥlīlāt al-Ūlā* (كتاب التحليلات الأولى) or, more famously, *Kitāb al-Qiyās* (كتاب القياس).²

The work was first translated into Arabic by Yuḥannā ibn al-Bīṭrīq (d. 815 (?)), but this translation has not survived. The extant Arabic translation is said to be by Theodore, i.e. Tadhārī ibn Basīl Akhī Iṣṭifān (d. 826). This translation is known to have been checked by Ḥunayn ibn Iṣḥāq (d. 873). Greek philosophers known in the Islamic world who wrote commentaries on some or all of Aristotle's *Prior Analytcs* are Alexander of Aphrodisias (d. 3rd c.), Themistius (d. 390 (?)) and John Philoponus (d. 570). In the Islamic world, interpreters of *Prior Analytcs* include Ibn al-Muqaffa' (d. 759), al-Quwairī (d. 940 (?)), Abū Bishr Mattā (d. 940), al-Kindī (d. 866 (?)), Abū Bakr ar-Rāzī (d. 925), al-Fārābī (d. 950), Ibn Zur'a (d. 1008), Ibn Sīnā (d. 1037), Abū al-Faraj Ibn aṭ-Ṭayyīb (d. 1044), Ibn Bājja (d. 1139) Ibn Rushd (d. 1198).³ Most of the relevant works of these philosophers have survived.⁴

University Press, 2002), I, 1, 24a10-12.

² Al-Fārābī, *al-Alfāz al-Musta'mala fī al-Manṭiq*, ed. Muḥsin Maḥdī (Tehran: al-Maktaba az-Zahrā', 1404), 105; W. David Ross, "Introduction," Aristotle, *Aristotle's Prior and Posterior Analytcs*, ed. and com. W. David Ross (London: Oxford University Press, 1957), 1; Ali Tekin, *Varlık ve Akıl: Aristoteles ve Fārābī'de Burhan Teorisi* (Istanbul: Klasik Yayınları, 2017), 35-38.

³ Ferruh Özpilavcı, "Aristoteles'in Mantık Külliyâtı: Organon'un İslam Dünyasına İntikali ve Buradaki Serüveni", *2400'üncü Yılında Aristoteles ve Aristoteles'in Dünya Tefekküründeki Yeri*, eds. M. Mahfuz Söylemez and Recep Duran (Nicosia: Yakınođu Üniversitesi Matbaası, 2017), 44-48.

⁴ We will not give all the examples of the philosophers' definitions of syllogism one by one here. For example, al-Fārābī's definitions in his *Kitāb al-Qiyās*, *Kitāb al-Qiyās aṣ-Ṣağhīr*, *Kitāb al-Khaṭāba* and other works can be shown one by one. The same is also valid for other Islamic logicians. We did not need to do so in this study.

2. Theodore's Arabic Translation of Aristotle's Definition of Syllogism

Now let us see Aristotle's definition of syllogism in the *Prior Analytics*. His definition of syllogism is as follows:

συλλογισμὸς δέ ἐστι λόγος ἐν ᾧ τεθέντων τινῶν ἕτερόν τι τῶν
κειμένων ἐξ ἀνάγκης συμβαίνει τῷ ταῦτα εἶναι.⁵

(*syllogismos de esti logos en hōi tethentōn tinōn heteron ti tōn
keimenōn ex anankēs sumbainei tōi tauta einai*).

It is known that there are different preferences in the English translation of this definition. The relevant preferences are not our subject. Here we would like to give A. J. Jenkinson's translation:

A deduction [syllogism] is a discourse in which, certain things being stated, something other than what is stated follows of necessity from their being so.⁶

Aristotle's definition of syllogism is given in Theodore's Arabic translation as follows:

فأما القياس فهو قول إذا وضعت فيه أشياء أكثر من واحد لزم شيء ما آخر من الاضطرار لوجود
تلك الأشياء الموضوعه بذاتها.⁷

(*fa-ammā al-qiyās fa-huwa qawl idhā wuḍi'at fih ashya' akthar min
wāhid, lazima shay' ākhar min al-iḍṭirār li-wujūd tilka al-ashya' al-
mawḍū'a bi-dhātihā*).

⁵ Aristotle, *Prior Analytics* (Tredennick), I, 1, 24b19-23. We see that Aristotle also defines syllogism in his works such as *Topics* and *On Sophistical Refutation*. Here, we are contented only with the definition in the *Prior Analytics*. For a new study on Aristotle's definition of syllogism with Greek commentaries see; Lucas Angioni, "Aristotle's Definition of Syllogism in *Prior Analytics* 24b18-20 (Draft)," <https://philpapers.org/archive/ANGADO-4.pdf>.

⁶ Aristotle, *Prior Analytics*, trans. A. J. Jenkinson, *The Complete Works of Aristotle*, ed. Jonathan Barnes (Princeton: Princeton University Press, 1991), I, 1, 24b18-20. For some examples of translation of this definition: "A syllogism is a form of words in which, when certain assumptions are made, something other than what has been assumed necessarily follows from the fact that the assumptions are such." Aristotle, *Prior Analytics* (Tredennick), I, 1, 24b19-23.

⁷ Aristūṭālis, *Kitāb Anūlitiqā al-Ūlā aw Kitāb al-Qiyās*, trans. Tadhārī ibn Basīl Akhī Iṣṭifān, *an-Naṣṣ al-Kāmil li-Manṭiq Aristū*, ed. Farīd Jabr (Beirut: Dār al-Fikr al-Lubnānī, 1999), 184.

The literal Arabic translation of *definition* could be as follows:

As for the syllogism, it is a discourse, when more than one thing is put into it, something else follows (*lazima*: is required, implies) from necessity because of the things that are put per se.

When we take the Greek definition as a basis and try to see its equivalents in the Arabic translation, we get the following chart:

συλλογισμός	δέ	ἐστι	λόγος	ἐν ᾧ τεθέντων τινῶν	ἕτερόν	τι
قياس	فأما	فهو	قول	إذا وضعت فيه أشياء أكثر من واحد	آخر	شيء ما

τῶν κειμένων	ἐξ ἀνάγκης	συμβαίνει	τῷ	ταῦτα	εἶναι
الأشياء الموضوعة	من الاضطرار	لزم	ل	بذاتها	وجود

3. The Versions of Aristotle's Definition of Syllogism in Peripatetic Islamic Logicians

Aristotle's definition was accepted by the Islamic philosophers, but it was sometimes modified and rephrased in Arabic.⁸ To illustrate the changes in the definition, here are some examples from the definitions of Ibn al-Muqaffa', al-Kindī, al-Fārābī, Ibn Zur'a, Ibn Sīnā, Ibn Rushd, and Ibn Bājjā. We can look specifically at Ibn al-Muqaffa' and al-Kindī's usages as examples of different naming and definitions in the early period. We can now give them and their English translations here.

(i) Definition of syllogism in Ibn al-Muqaffa':

إن الصنعة المكتفية أن يقدم المتكلم أشياء بينها فيظهر من بينها غيرها.⁹

Adequate construction is when the speaker brings to front what he/she has explained and from the explanation of them what is except for them reveals.

⁸ Ali Tekin, "Mantık: Kıyas ve Burhan" *İslam Felsefesi: Tarih ve Problemler*, ed. M. Cüneyt Kaya (Istanbul: İsam Yayınları, 2024 [Forthcoming]), 174.

⁹ Ibn al-Muqaffa', *al-Mantiq li-Ibn al-Muqaffa'*, ed. M. T. Dānīshpajūh (Tehran: Anjuman-i Falsafa-i İran, 1357), 64.

(ii) Definition of syllogism in al-Kindī:

والجامعة المرسله هي قول نضع منها أشياء يظهر بها شيء آخر لم يكن ظاهرا في ذلك القول وليس هو شيئا خارجا عن ذلك القول.¹⁰

Mouth extracted collector [i.e syllogism] is a discourse which we put from it [i.e mouth extracted collector] things that by which another thing is not clear in that discourse nor is it something out of that discourse.

(iii) Definition of syllogism in al-Fārābī:

والقياس قول توضع فيه أشياء أكثر من واحد إذا ألفت لزم عنها بذاتها لا بالعرض شيء آخر غيرها اضطرارا.¹¹

Syllogism is a discourse that more than one thing is put into it, when they are combined, another thing except for them follows from them per se not in accidental way necessarily.¹²

(iv) Definition of syllogism in Ibn Zur'a:

فأما القياس فهو قول متى وضعت فيه أشياء أكثر من واحد لزم شيء آخر من الاضطرار لوجود تلك الأشياء الموضوعه بذاتها.¹³

As for the syllogism, it is a discourse, whenever more than one thing is put into it, another thing follows from necessity because of the things that are put per se.

¹⁰ Al-Kindī, *Risāla fī Kammiyya Kutub Aristūṭālīs*, ed. M. A. Abū Rīda, *Rasā'il al-Kindī al-Falsafīyya* (Cairo: Dār al-Fikr al-'Arabī, 1950), 380.

¹¹ Al-Fārābī, *Kitāb al-Qiyās*, ed. Rafīq al-'Ajam, *al-Manṭiq 'inda al-Fārābī*, vol. II (Beirut: Dār al-Mashriq, 1986), 19.

¹² El-Rouayheb's translation is as follows: a statement in which things more than one are posited; if these are composed together then something else is implied by them necessarily, by themselves and not by accident. Khaled el-Rouayheb, *Relational Syllogisms and the History of Arabic Logic 900-1900* (Leiden and Boston: Brill, 2010), 14.

¹³ Ibn Zur'a, *Kitāb al-Qiyās li-Aristūṭālīs al-Hakīm*, eds. Jirār Jihāmī and Rafīq al-'Ajam, *Manṭiq Ibn Zur'a* (Beirut, Dār al-Fikr al-Lubnānī, 1994), 108. For a study on the introduction of Ibn Zur'a's *Kitāb al-Qiyās*, see Ali Tekin, "İbn Zūr'a'nın *Kitābu'l-Kiyās li-Aristūtālīs el-Hakīm* Adlı Eserinde *Birinci Analitikler'e* İlişkin Başlangıç İlkeleri Hakkındaki Görüşleri," *Sosyal Bilimlerde 2020 Gündemi: Türkiye ve Doğu Karadeniz*, ed. M. Yavuz Alptekin (Trabzon: Serander Yayınları, 2020), 109-131.

(v) Definition of syllogism in Ibn Sīnā:

فأما القياس فهو قول ما إذا وضعت فيه أشياء أكثر من واحد لزم من تلك الأشياء الموضوعية بذاتها لا بالعرض شيء آخر غيرها من الاضطرار.¹⁴

As for the syllogism, it is any discourse, when more than one thing is put into it, from those things that were put, per se not in accidental way, another thing except for them follows from necessity.

(vi) Definition of syllogism in Ibn Bājjā:

القياس قول توضع فيه أشياء أكثر من واحد إذا ألفت لزم عنها بذاتها لا بالعرض شيء آخر اضطرارا.¹⁵

Syllogism is a discourse that things more than one are put into it, when they are combined, per se not in accidental way another thing follows necessarily.

(vii) Definition of syllogism in Ibn Rushd:

فأما القياس فهو قول إذا وضعت فيه أشياء أكثر من واحد لزم من الاضطرار عن تلك الأشياء الموضوعية بذاتها لا بالعرض شيء ما آخر غيرها.¹⁶

As for the syllogism, it is a discourse, when more than one thing is put into it, from necessity, from those things that are put, per se not in accidental way, something else except for them follows.

As can be seen, definitions used by Islamic logicians overlap in meaning with Aristotle's definition. The definitions used by al-Fārābī, Ibn Zur'a, Ibn Sīnā, Ibn Rushd, and Ibn Bājjā are closer to Aristotle's definition, while the definitions used by Ibn al-Muqaffa' and al-Kindī in the early period are much different.¹⁷ We do not

¹⁴ Ibn Sīnā, *ash-Shifā': al-Qiyās*, ed. Sa'īd Zāyid (Cairo: al-Hay'a al-Āmma li-Shu'ūn al-Maṭābī' al-Amīriyya, 1964), 54.

¹⁵ Ibn Bājjā, *Ta'ālīq 'alā Kitābay al-Qiyās wa at-Taḥlīl li-al-Fārābī 1: Kitāb al-Qiyās*, ed. Mājid Fakhrī, *Ta'ālīq Ibn Bājjā 'alā Manṭiq al-Fārābī* (Beirut: Dār al-Mashriq, 1986), 180. For Ibn Bājjā's interpretation of the definition of syllogism, see Ali Tekin, "İslam Mantık ve Felsefe Geleneğinde Bir Fārābicilik Örneği: Fārābī'nin *Kitābu'l-Kiyās*'ına Yazdığı *Ta'likler* Bağlamında İbn Bācce'nin Fārābī Yorumu," *Medīne'den Medeniyete Fārābī*, eds. Yaşar Aydın and M. Fatih Birgül (Bursa: Bursa Akademi, 2020), 99-103; Muhammet Nasih Ece, *İbn Bācce Mantığı ve Fārābī Bağlantıları* (Konya: Çizgi Kitabevi, 2021), 214-220.

¹⁶ Ibn Rushd, *Talkhīṣ Kitāb Anālītīqā al-Uwal aw Kitāb al-Qiyās*, ed. Jirār Jihāmī (Beirut: Dār al-Fikr al-Lubnāni, 1996), 139.

¹⁷ Tekin, "Mantık: Kıyas ve Burhan," 174.

need to show the changes in each definition individually in detail.

4. Interpretations of the Definition by the Peripatetics in Arabic

Here we will examine how Peripatetic Islamic logicians interpreted the basic statements in Aristotle's definition of syllogism. We will examine the paraphrased and interpreted statements in the definition according to the English syntax in the following order:

- (i) "discourse" (قول),
- (ii) "things more than one" (أشياء أكثر من واحد),
- (iii) "are put" (وضعت),
- (iv) "something else follows" (لزم شيء ما آخر),
- (v) "from necessity" (من الاضطرار),
- (vi) "because of the things that are put per se" (لوجود تلك الأشياء لوضع بذاتها).

According to philosophers, (i) "discourse" (*qawl*) in the definition is the genus of syllogism. In *ash-Shifā': al-Qiyās*, Ibn Sīnā states that the issue of whether the genus of syllogism is the genus of the intelligible syllogism conceived in the soul (*ma'qūl mutaṣawwar fī an-nafs*) or the syllogism uttered by speech (*ma'qūl*) needs to be investigated, and in fact, syllogism refers to two meanings by analogy (*tashābuh*). The first one refers to the thoughts that are compiled in the soul and lead to the affirmation of something else, and the second one refers to the discourse that is compiled from premises that are followed by something other than itself. The genus of the heard syllogism is the heard word (*qawl masmū*), and the genus of the intelligible syllogism is the intelligible discourse (*al-qawl bi-ma'nā al-ma'qūl*). Although Ibn Sīnā states that "discourse" includes both its form in the soul and the verbal expression of what is in the soul, he emphasizes the syllogism, which is the species of discourse that corresponds to the meaning in the soul, more when it comes to the art of demonstration, and argues that the intelligible syllogism, which is the form of syllogism in the intellect

when the purpose is demonstrative, will be sufficient for us on its own in getting the purpose in syllogism, and highlights that in the other four of the five arts, sensible syllogism, which is the expression of syllogism in speech, cannot be dispensed with. Indeed, the arts of dialectic, sophistry, rhetoric, and poetry can be practiced with sensible syllogism (*qiyās masmū*).¹⁸

This interpretation of Ibn Sīnā is very important. For while the demonstrator is a philosopher who can speak for himself and yet does not need to persuade others; the dialectician, sophist, orator, or poet practicing other arts cannot be content with themselves and needs to address others and prevail over them, deceive them, persuade them, or create imaginations in their minds.¹⁹ Ibn Bājja also commented on this issue in his *Tā'ālīq* to al-Fārābī's *Kitāb al-Qiyās*, although not as explicitly. According to Ibn Bājja, in his definition, al-Fārābī meant by "discourse" the "meaning that has settled in the soul" (*al-ma'nā al-markūz fī an-nafs*). In other arts, such as demonstration and dialectic, internal speech (*nuṭq dākhil*) comes first, and external speech (*nuṭq khārij*) is subordinate to internal speech. Ibn Bājja explains that "discourse" here refers primarily to what is in the soul, and then secondarily to the verbal expression of what is in the soul, does not point to Ibn Sīnā's specific exposition for demonstration.²⁰ Ibn Rushd also pointed to the sufficiency of self-thinking/self-talking in the art of demonstration in a different context in his *Talkhīṣ Kitāb al-Khaṭāba*.²¹ Ibn Rushd's commentary on "discourse" in *Talkhīṣ Kitāb al-Qiyās*, where he directly commented on the definition of syllogism, is very short. Ibn Rushd is content with stating that what is meant by "discourse" is "the discourse containing judgment" (*qawl jāzim*).²² In our opinion, this short statement of Ibn

¹⁸ Ibn Sīnā, *ash-Shifā': al-Qiyās*, 54-55.

¹⁹ Tekin, "Mantık: Kıyas ve Burhan," 220.

²⁰ Ibn Bājja, *Tā'ālīq alā Kitābay al-Qiyās wa at-Taḥlīl li-al-Fārābī 1*, 180.

²¹ Ibn Rushd, *Talkhīṣ Kitāb al-Khaṭāba*, ed. 'Abd ar-Raḥmān Badawī (Cairo: Wakāla al-Maṭbū'āt, 1960), 3.

²² Ibn Rushd, *Talkhīṣ Kitāb Anālītīqā al-Uwal aw Kitāb al-Qiyās*, 139.

Rushd needs interpretation. Indeed, Ibn Sīnā interpreted the “discourse” in the definition as we have stated and thought that propositions were meant by the “things” (*ashyā*) in the definition. Considering that the Greek word is *logos*, it is clear that “discourse”, which is taken as the genus of syllogism in the definition, can also be expressed by *nutq* in Arabic. As al-Fārābī and Ibn Bājja point out, the word *nutq* refers not only to the “faculty of reason” but also to inner speech and outer speech. Therefore, it can be said that “discourse” refers primarily to “thinking/reasoning” and secondarily to the “expression in language” of thinking/reasoning.

The discourse, which is the genus of syllogism that is intelligible (*qiyās ma'qūl*) and expressed in words (*qiyās malfūz*),²³ should be interpreted in this way as reasoning itself and its utterance in language. We have focused on the discourse, i.e the genus of syllogism in the definition. Now we can try to interpret the differentiae of syllogism. Ibn Rushd states that all of the remaining parts of the definition, apart from the “discourse”, are the differentiae (*fuṣūl*) that truly distinguish the syllogistic discourse from the non-syllogistic one. Although he did not explicitly use the word “differentiae”, Ibn Zur‘a also used the rest of the parts of the definition to distinguish syllogism from other things in different ways and made his interpretations according to that.²⁴ For us, all of these can be interpreted as a single differentia when the genus “discourse” is taken into account. This is because each of the parts of the expression does not separately distinguish the syllogism from its genus, the discourse, but from other things. This can be taken into account when interpreting the distinction of syllogism.

We can start with (ii) “things more than one” (*ashyā' akthar min wāḥid*) in the definition. Ibn al-Muqaffa' says that the reason for saying “things” instead of “thing” is to distinguish the true and valid construction (*ṣun'a*) from the false and broken one. According to Ibn al-Muqaffa', some people bring only one premise and

²³ Al-Maghniṣī, *Mughni aṭ-Ṭullāb*, ed. I. M. as-Sabūī (Damascus: Dār al-Bairūtī, 2009), 182-183.

²⁴ Ibn Zur‘a, *Kitāb al-Qiyās li-Aristūṭālīs al-Ḥakīm*, 108-111.

one conclusion so that the falsehood and fallacy in their proofs will not be seen. If they were to express two premises clearly in words, the falsehood in their reasoning would be revealed. For example, when someone says, "Someone is adorned, the one who is adorned is a sinner" he is hiding the big premise "Every adorned person is a sinner" which is actually false. For there are some who are adorned but not sinners.²⁵

However, in our opinion, Ibn al-Muqaffa's interpretation is open to debate. The only purpose of hiding the premise is not to hide the fallacy. For, as is well known, the purpose of enthymeme, which is widely used in rhetoric, is not to hide the fallacy but to persuade people.²⁶ In his commentary on this section, Ibn Zur'a states that the expression "more than one thing" is used to distinguish the following (*luzūm*: implication, requirement) in syllogism from other followings, namely, the following of the consequent from the antecedent, the following in the conversion of premises and the following in enthymeme.²⁷ Ibn Sīnā emphasizes that Aristotle did not say "a single thing" (*shay' wāḥid*) but "things" (*ashyā*), and that a syllogism cannot be established from a single term or premise. Indeed, the following of something from a single thing does not occur in syllogism, but only in conversion (*'aks*: reflection). A syllogism consists of propositions (*qaḍāyā*), that is, of two propositions. Here again, there is another reason for using the expression of "things" instead of "premises" (*muqaddimāt*). If the expression of "premises" had been used, the definition would have been wrong, and the syllogism would have been defined by its parts.²⁸ Ibn Bājja will also point out the reason for not using the expression of "premises" or "thing" in the definition. Ibn Bājja also points out that the expression "things" is not used for "intelligible things" (*ma'lūmāt*), and if it had been used, the syllogism would have been specific to the demonstration. According to Ibn Bājja, it

²⁵ Ibn al-Muqaffa', *al-Mantiq li-Ibn al-Muqaffa'*, 65.

²⁶ For example, see al-Fārābī, *Kitāb fī al-Mantiq: al-Khatāba*, ed. M. Salīm Sālim (Cairo: Maṭba'a Dār al-Kutub, 1976), 44-52.

²⁷ Ibn Zur'a, *Kitāb al-Qiyās li-Aristūṭālīs al-Ḥakīm*, 10.

²⁸ Ibn Sīnā, *ash-Shifā': al-Qiyās*, 59.

seems possible to argue that the three terms in the syllogism are arranged to form two propositions and then two premises and that the dual meaning is expressed by the plural form of the “thing”.²⁹ Ibn Rushd’s comment is very short. Here he says that by “things” Aristotle means the premises (*muqaddimāt*), since a syllogism cannot be formed from a single premise.³⁰

The verb *waḍa’a* in the phrase (iii) “are put” (*wuḍi’at*) is used like everyday language. Ibn Bājja says that the word is used in the sense of “Let us put this here like that”, and in the definition of syllogism it is used in the sense of “Let us put this premise here like that and assume that it is true”.³¹ Ibn Rushd points out that this verb, which means “to put” in everyday language, can also be expressed by the verb *tasallama*, which means “to be accepted”. For him, *wuḍi’at* here means *tusullimat*.³² Ibn Sīnā also says that what is meant by *wuḍi’at* here is *sullimat*, which means “to be accepted”. Ibn Sīnā discusses this meaning of the word in detail in the context of the absolute syllogism and the five arts.³³ Ibn Zur’a, on the other hand, interprets the verb *waḍa’a* differently and thinks that it refers to the discourse in which something is put for something else, whether by affirmation or negation, that is, the proposition, which we can define as the discourse/sentence that does not express prayer, command, addressing, invocation, or question, but as the discourse/sentence that contains a judgment, in linguistic terms, the “declarative discourse/sentence” (*ikhbārī*). Ibn Sīnā interprets both parts of the definition together, stating that the phrase “when more than one thing is put into it” should be understood as “when you accept the things that contain the things that are propositions”, and that the acceptance of all the things that make up the composition should be understood here.³⁴

²⁹ Ibn Bājja, *Ta’āliq ‘alā Kitābay al-Qiyās wa at-Taḥlīl li-al-Fārābī 1*, 181.

³⁰ Ibn Rushd, *Talkhīṣ Kitāb Anālītīqā al-Uwal aw Kitāb al-Qiyās*, 139.

³¹ Tekin, “İslam Mantuk ve Felsefe Geleneğinde Bir Fârâbicilik Örneği,” 100; Ibn Bājja, *Ta’āliq ‘alā Kitābay al-Qiyās wa at-Taḥlīl li-al-Fārābī 1*, 180.

³² Ibn Rushd, *Talkhīṣ Kitāb Anālītīqā al-Uwal aw Kitāb al-Qiyās*, 139.

³³ Ibn Sīnā, *ash-Shifā’ al-Qiyās*, 55-58.

³⁴ Ibn Sīnā, *ash-Shifā’ al-Qiyās*, 58.

As for the phrase (iv) “something else follows” (*lazima shay' mā ākhar*), some philosophers add to it the phrase *ghayruhā*, which we can translate as “except for them”. Although Ibn al-Muqaffa' does not mention this addition in the definition, he does mention and explain it in the commentary.³⁵ In our opinion, the part at the end of al-Kindī's definition which is the adjective of “another thing” is actually a commentary on another thing. al-Kindī says that another thing “is not clear in that discourse, nor is it thing out of that discourse.”³⁶

We can see this addition in the texts of Ibn Sīnā, Ibn Bājja, and Ibn Rushd. Ibn Rushd says that this statement is clear and does not need further explanation.³⁷ Ibn Sīnā and Ibn Bājja have clarified this expression as well. Ibn Sīnā interprets the expression *ākhar ghayruhā*, which means “another thing except for them”, together and argues that it means that the conclusion is not the same as one of the accepted premises. Indeed, if it is accepted, it is meaningless to establish a syllogism for it.³⁸ Ibn Bājja states that the commentators take *ākhar* (another) and *ghayruhā* (except for them) as synonyms, but their meanings are different. According to Ibn Bājja, *ākhar* refers to substance and *ghayruhā* to accident.³⁹ Ibn Zur'a treats the expressions “another” and “something follows” separately. Ibn Zur'a says that what is meant by “another” here is available for the predicate syllogism, but not for hypothetical syllogisms. As is well known, in a connective conditional syllogism, the conclusion is the same as the minor premise. The expression “something follows” refers to the difference between syllogistic connections (*iqtirānāt qiyāsiyya*) and non-syllogistic connections (*iqtirānāt ghayr qiyāsiyya*). While syllogistic connections result in a single thing, non-syllogistic ones result in universal affirmative and universal negative.⁴⁰

³⁵ Ibn al-Muqaffa', *al-Mantiq li-Ibn al-Muqaffa'*, 65

³⁶ Al-Kindī, *Risāla fī Kammiyya Kutub Aristūṭālīs*, 380.

³⁷ Ibn Rushd, *Talkhīṣ Kitāb Anālitiqā al-Uwal aw Kitāb al-Qiyās*, 140.

³⁸ Ibn Sīnā, *ash-Shifā': al-Qiyās*, 64.

³⁹ Ibn Bājja, *Ta'ālīq 'alā Kitābay al-Qiyās wa at-Taḥlīl li-al-Fārābī 1*, 182.

⁴⁰ Ibn Zur'a, *Kitāb al-Qiyās li-Aristūṭālīs al-Ḥakīm*, 109-110.

The interpretations of the expression (v) “from necessity” (*min al-idtirār*) differ. Ibn Zur’a says that “from necessity” was introduced to distinguish syllogism from induction and example. What follows in induction and example does not necessarily follow. In syllogism, the conclusion follows necessarily. Ibn Zur’a states that saying that the conclusion is necessary is different from saying that the conclusion follows necessarily. The former indicates the necessary presence of the predicate in the subject, whereas the latter indicates that the conclusion follows necessarily the premises, even if its predicate is contingently present in the subject.⁴¹ Ibn Sīnā agrees with Ibn Zur’a that the necessity in syllogism arises not from the matter (*mādda*) but from the composition (*ta’līf*), that is, from the form (*ṣūra*), but he disagrees with the view that this phrase was introduced to distinguish syllogism from the other two kinds of reasoning. Ibn Sīnā says that this phrase in the definition means “always” in such a way that in one matter it is like this and not like that in another.

Accordingly, for example, a syllogism such as “No human being is a horse, every horse neighs, so no human being neighs” gives a result in terms of matter, but in terms of form, it does not give such a result in every matter. This is because there is no such syllogism in which the minor premise is universal negative, and the major premise is universal affirmative in the first figure. Ibn Sīnā states that this statement is not interesting to him who states that it was introduced to distinguish syllogism from induction and example. According to Ibn Sīnā, when the premises are accepted, nothing follows from induction and example, neither always nor not always, that is, no conclusion follows. However, as in the previous example, there may be non-syllogistic compositions that give a conclusion in some matters but not in others. Sometimes these compositions may give a conclusion, but since they are not always, they are not counted among the moods of syllogisms.⁴² Ibn

⁴¹ Ibn Zur’a, *Kitāb al-Qiyās li-Aristūṭālīs al-Ḥakīm*, 110.

⁴² Ibn Sīnā, *ash-Shifā’ al-Qiyās*, 64-65.

Bājja states that this expression is introduced to distinguish syllogism from other things, but he does not explain what they are. According to him, this expression is useful for introducing part of the whatness of syllogism. He says that this means that its following and being per se are always being.⁴³ Ibn Rushd, on the other hand, interprets the expression “follows from necessity” together. Accordingly, following is divided into two as necessary and non-necessary. While the following in syllogism is necessary, the following in induction, example, and syllogisms with positive and negative results is not necessary, and this expression is used to distinguish syllogism from them.⁴⁴ As can be seen, Ibn Rushd agrees with Ibn Zur'a in his assessment about induction and example, and with Ibn Sīnā in what he calls syllogisms that give positive and negative results.

Ibn Zur'a interpreted the following phrase (vi) “because of the things that are put per se” (*li-wujūd tilka al-ashyā' al-mawḍū'a bi-dhātihā*) together, whereas other philosophers interpreted only the phrase *bi-dhātihā*, perhaps because they found it comprehensible. Ibn Zur'a thinks that what is meant by this statement is to distinguish the syllogism in question from syllogisms that can be satisfied with one of two premises. For example, the syllogism “A is equal to C and C is equal to B, so A is equal to B” is actually based on the premise “Things equal to the same thing are equal”, but this premise is not present here. Aristotle, on the other hand, holds the view that both premises must be present even if the conclusion of the syllogism is clear, as in the first figure, and he does not rely on the syllogism with missing premises. In this case, it is clear that the premises of the second and third figures should not be missing. Like the first figure, the second and third figures are perfect syllogisms, but while the first figure is clear (*ẓāhir*), the second and third figures are not clear (*ghayr ẓāhir*). Ibn Zur'a gives the exam-

⁴³ Ibn Bājja, *Ta'ālīq 'alā Kitābay al-Qiyās wa at-Taḥlīl li-al-Fārābī 1*, 182-183.

⁴⁴ Ibn Rushd, *Talkhīṣ Kitāb Anālītīqā al-Uwal aw Kitāb al-Qiyās*, 139-40.

ple of the perfect person hiding in the house. This person is perfect, but his perfectness is not obvious to us.⁴⁵ According to Ibn Sīnā, the premises of syllogism, whether they are intelligible or expressed in language, must be followed by the conclusion because of their composition, not their matter. For the realization of the following in syllogism and the following of something from the premises, they should not need anything else to complete the following. For this, Ibn Sīnā gives an example similar to Ibn Zur'a's one and adds some other examples. Ibn Sīnā says that for the statement "C is equal to B and B is equal to D, so C is equal to D" to be complete, it is necessary to know "C is equal to what is equal to D" and "these that are equal to those that are equal are equal to each other". Therefore, in this respect, the statement in this example cannot be a syllogism. Because it needs premises to give the conclusion.⁴⁶ According to Ibn Bājja, what is meant here by "per se" is the meaning that is first understood and we can also use *bi-nafsihī waḥdihī* for the same meaning.⁴⁷ Ibn Rushd states that *bi-dhātihā* refers to the completeness of the syllogism and that there should not be any incompleteness in syllogism.⁴⁸ Although Aristotle's definition does not include such a phrase, Islamic philosophers sometimes added the phrase *lā bi-al-'araḍ* to *bi-dhātihā*. Ibn Sīnā, when speaking of the necessary following in syllogism, states that induction, example, sign (*alāma*), and the like are not necessary but can yield results accidentally. In this sense, it is seen that Ibn Sīnā evaluates the expression "not accidentally" in the context of the expression "from necessity" and not in the context of "per se". According to Ibn Rushd, the expression "not accidentally" is intended to avoid figures that give results in some matters, for example, in a syllogism in which both premises are affirmative in the second figure when their predicates are equal to their subjects in predication.⁴⁹

⁴⁵ Ibn Zur'a, *Kitāb al-Qiyās li-Aristūṭālīs al-Ḥakīm*, 110.

⁴⁶ Ibn Sīnā, *ash-Shifā': al-Qiyās*, 59-60.

⁴⁷ Ibn Bājja, *Ta'ālīq 'alā Kitābay al-Qiyās wa at-Taḥlīl li-al-Fārābī 1*, 182.

⁴⁸ Ibn Rushd, *Talkhīṣ Kitāb Anālītīqā al-Uwal aw Kitāb al-Qiyās*, 140.

⁴⁹ Ibn Rushd, *Talkhīṣ Kitāb Anālītīqā al-Uwal aw Kitāb al-Qiyās*, 140.

Conclusion

It is known that in classical philosophy and its methodology, the science of logic, basic terms were defined very clearly and intellectual action was developed on the basis of such definitions. The science of logic, which allows philosophy to be done directly, has used this possibility in relation to itself and has not only examined how to make a definition but has also applied its own theory of definition to its own basic terms. Aristotle's definition of syllogism is one of the definitions that we encounter in classical logic, which is quite clear and yet very difficult to understand. The definition of the syllogism, which was first expressed in Arabic in Ibn al-Muqaffa's text and Theodore's translation, was expressed in similar ways by Peripatetic logicians in the following period, as well as the basic terms in the definition were commented on. These restatements and interpretations make this difficult definition of syllogism comprehensible. Here I tried to explain Theodore's translation of Aristotle's definition of syllogism and the interpretations of Ibn al-Muqaffa', al-Kindī, al-Fārābī, Ibn Zur'a, Ibn Sīnā, Ibn Rushd, and Ibn Bājja. This work can be considered as a simple example for the comparative studies that will be done in the future about commentary styles of Islamic Peripatetic philosophers on Aristotle's theory of syllogism in *Prior Analytics*.

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