How to Define Definition: An Analysis on the Dispute about the Relation between the *Definiens* and the *Definiendum* in the Post-Avicennan Arabic Logic

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Abstract: As standing at the very heart of the conception (tasawwur), definiton is not only the ultimate purpose of conception but also paves the way for the assent (tasdīg). Therefore, it would merely be surprising to find defitinion sections at right after the principles of conception, namely five universals, and before the first part of assent, viz. the proposition, in the books compiled through the tradition of post-Avicennan Arabic logic. Having begun with identifying what definition is, definiton sections proceed with its conditions, types, and the things that violate an ideal definition. This paper focuses on the absolute definition itself by considering it as a definiendum and its definition as its definiens to analyse whether this definiens satisfies one particular condition set in definition theory, namely the condition that a *definiens* must not be applied to anything other than the definiendum. In terms of this specific rule, we encounter with two opposing views on the convenience of the terms implying "necessity" (istilzām) utilized when formulating the *definiens* of absolute definition.

Keywords: Post-Avicennan logic, conception, assent, *definiendum*, *definiens*, definition, necessity.

Introduction

Knowledge in general, logic in particular has come to be studied in the basis of a twofold classification consisting of conception at one hand and assent¹ at the other, while both of these sections have principles utilized to attain their objectives, viz. the definition and the syllogism respectively. Due to the fact that it is aimed at formulating a proper definition by combining common features with specific ones of a definiendum², five universals stand as principles of conception, since they are the very content with which definition is formulated, though it is controversial whether common accident ('aradh 'āmm) is of any use in definition. For a definiens must consist of common and specific features of the *definiendum*, we can apply this rule to also the *definiens* of the absolute definiton. For instance in the case in which the absolute definition is defined as "the statement whose conception necessitates (vastalzimu) the conception of the definiendum"³ here statement is considered as the genus and rest of it as the differentia.

The problem is that whether this *differentia* is really enough to make *the absolute definition* differentiated from other things, particularly from *implicans* (*malzūm*) and the *definiendum* itself.

Assent is generally used as *taṣdīq's* corresponding term in English, though you may find a deep analysis of how to translate this term by Lameer. See Joep Lameer, *Conception and Belief in Sadr al-Dīn Shirāzī* (Tehran: Iranian Institute of Philosophy, 2006), 7-9; Lameer, "Ghayr al-Ma'lūm Yamtani' al-Ḥukm 'alayh: An Exploratory Anthology of a False Paradox in Medieval Islamic Philosophy," *Oriens* 42, no. 3–4 (2014), 403.

As Avicenna puts it: "What makes a thing what it is is the sum of the things in common with other things and its own characteristics", Avicenna, *Kitāb ash-Shifā': al-Madkhal*, ed. Ömer Türker, *Kitabü'ş Şifa: Medhal* (İstanbul: Litera Yayıncılık, 2006), 30.

Kātibī, Risālat ash-Shamsiyya, ed. C. Besbam Salih, Sharḥ ar-Risālat ash-Shamsiyya li-Taftāzānī, Amman: Dār an-Nūr al-Mubīn, 2016), 64; Taḥtānī, Taḥrīr al-Qawā'id al-Manṭiqiyya fī Sharḥ ar-Risālāt ash-Shamsiyya, ed. Ilyas Qabalan (Lebanon: Dār al-Kutub al-Ilmiyya, 2014), 171; Taftāzānī, Sharḥ al-Risālat ash-Shamsiyya, ed. C. Besbam Salih (Amman: Dār an-Nūr al-Mubīn, 2016), 195.

That is to say, is it justified to set an argument claiming that through the definition mentioned above, the definiendum itself stands as a definiens for its definition, and also the implicans⁴ constitutes a definition for the evident immediate implications (allawāzim al-bayyin)? Although we find a common defiance against the argument that this way of defining definition does not actually prevent the definiendum itself from being true of its definiens and the implicans from being true of the evident immediate implications in Taḥtānī's (d. 1365) commentary on Matāli' al $anw\bar{a}r^5$, Taftāzānī's (d. 1390) commentary on *Shamsiyya*⁶ and Sayyid Sharīf al-Jurjānī's (d.1413) gloss⁷ on Tahtānī's *Tahrīr al*gawā'id, Samargandī (d. 1322) is the one who explicitly advocates this argument. Also, Dawānī (d. 1502), who "had a powerful impcact on Ottoman intellectual life"8, seems to go along with Samargandī on this matter⁹. Therefore the argument asserting that the definiens of the absolute definition does not satisfy the condition of being true of the *definiendum* only (*māni*') is twofold: the first holds that the definiendum itself also provides the definition for its definiens since they are identical in essence (muttahidān dhātan) while the second asserting that implicans also must be regarded as definition. Thus, it is asserted that the definition which is formulated for the absolute definition by some prominent scholars in the post-Avicennan period is argued to have been violated by including two things: definiendum itself, and the implicans. In this paper, our concern will be the latter.

⁴ According to Arabic-Islamic logicians what implies corresponds with *almalzūm* (*implicans*) and what is implied with *al-lāzim* (Khaled El-Rouayheb, *Relational Syllogisms and the History of Arabic Logic* (Leiden: Brill, 2010), 264.

Taḥtānī, Taḥrīr al-Qawā'id al-Mantiqiyya fī Sharḥ ar-Risālāt ash-Shamsiyya, 196-7.

Taftāzānī, Sharḥ Al-Risālat Al-Shamsiyya, 196.

⁷ Jurjānī, *Ḥāshiya 'alā Sharḥ ash-Shamsiyya*, ed. Muḥsin Bīdarfar (Qum: Manshūrāt al-Bīdār, 2005), 208-9.

Khaled El-Rouayheb, Islamic Intellectual History in the Seventeenth Century: Scholarly Currents in the Ottoman Empire and the Maghreb (Cambridge: Cambridge University Press, 2015), 30.

Dawānī, Sharḥ al-Muḥaqqiq Dawānī wa 'Abdullāh al-Yazdī 'alā Tahdhīb al-Mantiq li-Taftāzānī, ed. Ahmad al-Malibārī (Kuwait: Dār ad-Diyā', 2014), 165.

To analyze both the *definiens* of the *absolute definition* and the argument set against, we first begin with taking a look at the definition provided for the *absolute definition* by Avicenna and the particular section on the relation between the *definiendum* and the *definiens* in his *Metaphysics*, then the prominent scholars in the post-Avicennan period, and will go deep with assessments of the scholars who got involved in the matter.

Avicenna on Defining Definition

Having stated that the definition theory shall be examined deeply in the Posterior Analytics, in al-Madhal, the first book of al-Shifa, Avicenna (d. 1037) asserts that "only if the meaning of the thing (dhāt) is compound of various meanings there is a definiens for it". Here, after stressing that only for compound things there can be found a definition, since the definition itself is also compound of meanings, Avicenna defines the absolute definition as a "statement which is compounded of the meanings with which we obtain its essence" 10. When we look at his Metaphysics, there is a distinct chapter on the definition and the relation between definiens and the definiendum in which he examines definition in close relation with his understanding of essenceexistence. While the efficient causes are related to existence and not the essence, components of the the definition stand as the causes for the essence. Thus existence may be regarded in relation with description, and essence with the definiton 11. Regarding this, he makes a clear distinction between definition (hadd) and description (rasm). Therefore, when the definitions given by Avicenna are examined it is evident that the relation between essence and the definition are clearly pointed out:

The definition is the phrase signifying the quiddity of the thing¹².

¹⁰ Avicenna, Kitāb ash-Shifā': al-Madkhal (Kitabü'ş Şifa: Medhal), 41.

Avicenna, Kitāb ash-Shifā': al-Burhān, ed. Ömer Türker, Kitabü'ş Şifa: Burhan (İstanbul: Litera Yayıncılık, 2006), 204.

¹² Avicenna, *Remarks and Admonisions*, ed. Shams C. Inati (Wetteren: Universa

For definition is that which indicates quiddity¹³.

The quotations above indicate that Avicenna's theory of definition is closely linked with his metaphysics. In relation with this, what can be drawn from the definitions formulated for the *absolute definition* by him is that he makes a clear distinction between the definition (*ḥadd*) and the description (*rasm*) corresponding them with the essence and the existence respectively¹⁴.

Definition After Avicenna

When we examine how the definition is defined after Avicenna, it is important to note that later logicians must have been acquainted with Fakhr al-Dīn al-Rāzī's (d. 1210) criticism against the *complete definition*¹⁵ and it must have affected the way they treated definiton, yet this part of the matter exceeds our account in this paper.

Regarding the definitions formulated for the *absolute definiton* after Rāzī it is apparent that there can be found two different statements one of which points out the necessary relation between the *definiens* and the *definiendum* while the other includes no such thing. Though Khūnajī (d. 1248) may be regarded as the first to provide a definition for the *absolute definition* which includes a necessary relation between the *definiens* and the *definiendum*, Kātibī (d. 1277), who is among those influenced by Khūnajī¹⁶, presents a new definition which we have not seen in

Press, 1983), 70.

¹³ Avicenna, *The Metaphysics of the Healing*, ed. Michael Marmura (Provo: Brigham Young University, 2005), 216.

¹⁴ Avicenna, Kitāb ash-Shifā': al-Burhān (Kitabü'ş Şifa: Burhan), 204.

For a detailed account of the matter see Mehmet Özturan, "An Introduction to the Critique of the Theory of Definition in Arabic Logic: Is Complete Definition Circular?," Nazariyat: Journal for the History of Islamic Philosophy and Sciences 4, no. 3 (2018): 83–114; Eşref Altaş, Fahreddin er-Râzî'nin İbn Sînâ Yorumu, "Fahreddin Er-Râzî'nin İbn Sina Yorumu ve Eleştirisi (İstanbul: İz Yayıncılık, 2009); Bilal Ibrahim, Freeing Philosophy from Metaphysics: Fakhr Al-Dīn Al-Rāzī's Philosophical Approach to the Study of Natural Phenomena, PhD Thesis (Montreal: Mcgill University, 2013).

¹⁶ Khūnajī, *Kashf al-Asrār 'an Ghawāmīz al-Afkār*, ed. Khaled el-Rouayheb (Berlin

Avicenna's works¹⁷.Yet, what makes Kātibī's definition more interesting is the way his commentators accepting and defending it. Before we examine the definition proposed by Kātibī and defended by his commentators we will first endeavour clarifying the definition given by Khūnajī.

As being one of the prominent scholars whose works were regarded as reference books¹⁸, Khūnajī is said to have introduced several novelties in his remarkable logic book *Kashf al-asrār* which "had a powerful impact" on the succeeding scholars¹⁹. And here is how he defines the *absolute definition*:

The *definiens* of the thing is that of which knowledge is the cause of the knowledge of the thing [defined]²⁰.

Similarly, in his short logic handbook, *al-Jumal*, which most probably predates $al\text{-}Kashf^{21}$, his definition here is somewhat a short one:

The *definiens* of the thing is that of which knowledge is the cause of its knowledge.

As seen above, Khūnajī reveals a necessary relation between the *definiens* and the *definiendum* in terms of aquaring the knowledge of the latter.

When we look at the way in which another prominent scholar, who is a contemporary of Khūnajī, Abharī (d. 1265) defines the absolute definition, we encounter with two different formulations one of which is the same with Avicenna's definition in the

[&]amp; Tehran: Free University of Berlin, Institute for Islamic Studies & Iranian Institute for Philosophy, 2010), vi.

Mehmet Özturan, "Müteahhirîn Dönemi Mantığında Tasavvurat: Ali b. Ömer Kâtibî ve Kutbuddin Râzî Örneği" (İstanbul: İstanbul Üniversitesi, 2013), 255.

¹⁸ Ibn Khaldūn, *The Muqaddimah: An Introduction to History*, ed. Franz Rosenthal (London: Routledge & Kegan Paul, 1958), III 143.

¹⁹ Khūnajī, Kashf al-Asrār 'an Ghawāmīz al-Afkār, xxi, xxv, xlviii.

²⁰ Khūnajī, Kashf al-Asrār 'an Ghawāmīz al-Afkār, 61.

²¹ Khūnajī, Kashf al-Asrār 'an Ghawāmīz al-Afkār, xlix.

²² Khūnajī, *al-Jumal*, Süleymaniye, Şehid Ali Paşa, no. 1805, 3a.

*Remarks and Admonitions*²³. In his short epitome ' \bar{I} sagh \bar{u} j $\bar{\iota}$, which has served as a textbook for a long time in the Ottoman scholarly circles, he defines it, in accordance with Avicenna, as follows:

A statement that indicates the essence of the thing.

Yet, in his comprehensive book named *Kashf al-ḥaqāʻiq* we come across with a completely different formulation which seems closer to the one we found in Khūnajī:

Definiens of the essence of the thing is that whose conception requires the conception of that thing [...].

While Khūnajī uses the terms "knowledge" and "cause" Abharī uses "conception" and "require" which they have similar meanings respectively.

As Khaled el-Rouayheb discusses which of these two prominent scholars might have an impact on the other regarding topics related to logic in his detailed *introduction* to *Kashf al-asrār*²⁶, mostly relying upon Kātibī's statements in his monumental commentary on *al-Kashf*, it would not be wrong to say that it is more likely that Abharī might be the one who was influenced by Khūnajī both in general and in this particular matter.

Due to the fact that having been influenced by Khūnajī²⁷, and being among Abharī's students²⁸, Kātibī stands as an important figure to shape the problem. Thus, it is important to pay attention to his way of defining the *absolute definition*. In his *al-Shamsiyya*, another essential handbook on logic studied in the Ottoman pe-

²³ Avicenna, *Remarks and Admonisions*, 70.

Abharī, Īsāghūji, ed. Talha Alp, Mantik: İsagoci Tercümesi & Mantik Terimleri Sözlüğü (İstanbul: Yasin Yayınevi, 2013), 18.

Abharī, Kashf al-Ḥaqā'iq, ed. Hüseyin Sarıoğlu. Keşfü'l-Hakâik fi Tahrîri'd-Dekâik (İstanbul: Çantay Kitabevi, 2001), 47.

²⁶ Introduction, Khūnajī, *Kashf al-Asrār 'an Ghawāmīz al-Afkār*, xxiv-xxv.

²⁷ Khūnajī, Kashf al-Asrār 'an Ghawāmīz al-Afkār, vi.

Müstakim Arıcı, Fahreddin Râzî Sonrası Metafizik Düşünce: Kâtibî Örneği (İstanbul: Klasik, 2015), 44.

riod for a long time, which has almost thirty²⁹ commentaries composed by notable scholars, he defines it as follows:

The *definiens* of the thing is that of which conception necessitates the conception of the thing, or its distinction from everything else.

And similarly in his much more detailed logic book when compared to *al-Shamsiyya*, defition is defined as follows:

The *definiens* of the thing is that of which conception entails the conception of the thing, or its distinction from everything else.

In his another book on logic, 'Ayn al-Qawā'id, we found that:

The *definiens* of the thing is that of which conception requires the conception of the thing, or its distinction from everything else.

Also in *Baḥr al-Fawāʻid*, his own commentary on the previous work, he explains it as:

The *definiens* of the thing is that of which conception entails the conception of the thing definied, or its distinction from everything else.

What we found in all these definitions quoted from his works on logic is that all of them implies a *necessary* relation between the *definiens* and the *definiendum*, though they are slightly altered from each other. Another important point is that when it is the case to point to the necessity, he uses different words corresponding with each other, but he prefers only the "conception" as referring to the meaning of the thing in the

²⁹ Arıcı, Fahreddin Râzî Sonrası Metafizik Düşünce, 54.

Kātibī, Risālat Al-Shamsiyya (Contained in Sharḥ Al-Risālat Al- Shamsiyya Li Taftāzānī), 64.

³¹ Kātibī, *Jāmi' ad-Daqā'iq*, Hacı Beşir Ağa, no. 418, folio 16a.

³² Kātibī, 'Ayn al-Qawā'id, Ragıp Paşa, no. 1481, folio 36a.

³³ Kātibī, *Baḥr al-Fawā'id*, Ragıp Paşa, no. 1481, folio 83a.

mind. And this is obviously not the word which was preferred by Khūnajī. Regarding this, Taftāzānī, one of the prominent scholars in the fourteeth century, states that "Kātibī abandoned the later logicians' definition" which is as follows:

The *definiens* of the thing is that of which knowledge is the cause of the thing.

According to Taftāzānī, the term "knowledge" used in the above mentioned statement, requires this definition to be true of the *definiens* which have broader extention than the *definiendum*, so that is why Kātibī abondened it and formulated a new one. This may be regarded as a supporting evidence for that the one who influenced Kātibī when modifying the definition presented by Khūnajī in the first place was his teacher Abharī, since he also uses the term "conception of thing" rather than "knowledge"³⁵.

Samarqandī's Challenge

Shams al-Dīn al-Samarqandī (d. 1322)³⁶ in his outstanding book debates about the change in defining definition as follows:

Some of the later scholars said that: The *definiens* of a thing is that of which conception is the the cause of the conception of the thing, or its distinction from everything else. But this is controversial because this requires the *implicans* to be definitions for their *evident immediate implications*.

It is most probably that he refers to Khūnajī and Kātibī with

³⁴ Taftāzānī, Sharḥ Al-Risālat Al-Shamsiyya, 195.

³⁵ Abharī, Kashf al-Ḥaqā'iq (Keşfü'l-Hakâik fi Tahrîri'd-Dekâik), 47.

For more information about his date of death see Introduction, Samarqandī, Qisṭās al-Afkār fī Taḥqīq al-Asrār, ed. Necmeddin Pehlivan (İstanbul: Türkiye Yazma Eserler Kurumu Başkanlığı Yayınları, 2014), 20; Mehmet Sami Baga, "El-İşârât'ın "Garip" Bir Şerhinin Müellifi: Şemsüddin Semerkandî ve Beşârâtü'l -İşârât Adlı Eseri," Bingöl Üniversitesi İlahiyat Fakültesi Dergisi 3, no. 5 (2015): 221–46, 229.

³⁷ Samargandī, *Qistās al-Afkār fī Taḥqīq al-Asrār*, 150.

saying that "some of the later scholars". Having stated the deficiency of this way of definition, Samarqandī takes the old path, stating that:

The definiens is the statement that indicates the essence of the thing.

Here, Samarqandī asserts that defining definition in the way which includes some kind of necessary relation between the *definiens* and the *definiendum* results with a substantional problem causing it be true of *implicans* too. Because of that, he chooses to define the *absolute definiton* almost exactly the same way with Avicenna.

What about al-Shamsiyya Commentators?

Although Tahtānī does not make any deeper comment on the matter apart from stating the definition as "the means to the conceptual knowledge"39 in his commentary on al-Shamsiyya, he did commented in the one he wrote for 'Urmawī's detailed book. Sharh al-Matālī al-Anwār. Having refused the argument raised by Samargandī that the definition of the definiens formulated by Kātibī in al-Shamsiyya allows implicans to stand as definiens regarding their evident immediate implications⁴⁰, he clarifies his position in the following way. What is meant with the phrase "conception of the thing" mentioned in the definition in question actually implies the "conception that is acquired", which demands the means of thought (nazar) in the process of formulating a definition. Through nazar process, first something is realized in a way, then its essential and accidential properties are subjected to elaboration, only then some of those properties are put together to obtain its conceptual knowledge, that is, definition. Yet, it is not the case with implicans regarding their evident

³⁸ Samargandī, *Qisṭās al-Afkār fī Taḥgīg al-Asrār*, 150.

³⁹ Taḥtānī, Taḥrīr al-Qawā'id al-Manţiqiyya fī Sharḥ ar-Risālāt ash-Shamsiyya, 115.

⁴⁰ Taḥtānī, Sharḥ al-Maṭāli', ed. 'Ali Asghar Jaghfarī Walanī (Tehran: Muassasat-i Intisharāt-i Dānishgāh-i Tehran, 1393H), 196.

immediate implications, since there is no such naẓar process involved in it⁴¹. Here, Taḥtānī draws a strict line between what is gained through naẓar and what is not, clarifying the process of naẓar. According to him, whenever we think about, say, the word "ceiling", another ones "wall" crossing our minds at that moment is not related to naẓar process in contrast with defining the ceiling⁴². Although the former requires the meaning of latter in our minds, since no ceiling can be contamplated without walls, as causing its meaining crossing our minds at that very moment it is thought, this is not enough to claim that ceiling stands as a definition for the wall.

Taftāzānī also shed light on the topic in his commentary on *al-Shamsiyya*. He basically follows his teacher, Taḥtānī, claiming that formulating a definition involves *naẓar* process on the contrary of the way in which *implicans* requires *evident immediate implications* which cannot be predicated of⁴³.

Moreover, an equally eminent contemporary and rival of Taftāzānī, Jurjānī tackles the argument put forth in critisizing Kātibī's definition in a way which is not distinct from his teacher, nor from his contemporary. In his super-commentary on Taḥtānī's commentary on al-Shamsiyya, Taḥrīr al-Qawā'id, he explains what Taḥtānī actually means by "that the conception of definiens requires the conception of definiendum" by saying that it actually should be considered as "that the conception of definiens is the means to the conception of definiendum through nazar process". And again, malzumat can not be regarded as satisfying this definition since there is no nazar process involved in it.

Dawānī's Assesment on Taftāzānī

In his commentary on Taftāzānī's well-known textbook which has been widely studied in the Ottoman period, *Tahdhīb al-manţiq*, Dawānī points out the change in the way the definition

⁴¹ Taḥtānī, Sharḥ al-Maṭāli', 197.

⁴² Taḥtānī, Sharḥ al-Maṭāli', 196.

⁴³ Taftāzānī, Sharḥ Al-Risālat Al-Shamsiyya, 196.

is defined. While Taftāzānī defines the absolute definiton as "the means to the conceptual knowledge" in his influential kalām work Sharh al- $Maq\bar{a}sid^{44}$; he defends Kātibī's way of defining it in his commentary on al-Shamsiyya. However, when we look at his book's short logic part, $Tahdh\bar{\imath}b$, we found that he does not utilize anyword meaning necessity nor does he mentions about the essence of the definiendum. Here is the definition:

Definiens of the thing is that which is predicated of the thing in order to acknowledge its conception.

In accordance with this, Dawānī pays attention to what could possibly be the motive behind this alteration, stating that "Taftāzānī abandoned the well-known phrase which is "that of which conception requires the conception [of the *definiendum*]" since it is spoiled by the *implicans* with regards to the *evident immediate implications*"⁴⁶. Apparently he thinks that Taftāzānī took the cunter-argument raised by Samarqandī seriously, in spite of the fact that he defended Kātibī's position in his commentary on *al-Shamsiyya*. Similarly, having mentioned about the way of clarification of the well-known definition in his commentary on *Tahd-hīb*, Dawānī cocludes that the defiance is deficient⁴⁷.

Conclusion

Definition theory, besides its being closely tied with metaphysics in the system of Avicenna, seems to be revised in the post-Avicennan period. Altough it is likely that the change took place in defining definition after Avicenna has much owing to Fakhr al-Dīn Rāzī's account and critique of Avicennan theory of definition, this would exceeds the aim of this paper. As a matter

⁴⁴ Taftāzānī, *Sharḥ al-Maqāṣid* (Lebanon: Dār al-Kutub al-'Ilmiyya), I 123.

⁴⁵ Taftāzānī, *Tahdhīb al-Manṭiq*, ed. 'Abd al-Qāhir al-Qurdī (Cairo: Maṭba'at as-Sa'āda, 1912), 7.

⁴⁶ Dawānī, Sharḥ al-Muḥaqqiq Dawānī wa 'Abdullāh al-Yazdī 'alā Tahdhīb al-Manţiq li-Taftāzānī, 165.

⁴⁷ Dawānī, Sharh al-Muhaqqiq Dawānī wa 'Abdullāh al-Yazdī 'alā Tahdhīb al-Mantiq li-Taftāzānī, 165.

of fact, it would not be wrong to say that there are two different views on how to define definition in the post-Avicennan Arabic logic: one belongs to those who follow Avicenna, implicating no such notion as necessity between the definiens and the definiendum, and the other view is of the group which includes Khūnajī, Kātibī, Taḥtānī. According to Dawānī's assessment we can regard Taftazani as he had defended Kātibī first, but then changed his mind in his short epitome. Samarqandī, on the other hand, clearly indicates that the way Khūnajī define the absolute definition and its slightly modified version by Kātibī results in this definitions being true of the implicans, causing it violate a sine qua non rule, which a definiens must be applicable to only its definiendum and nothing else. In a similar way, Dawānī also criticises the matter concluding that the verification provided by Taḥtānī is actually of no use. Whether the definition which was provided by Avicenna and defended by Samargandī or the one formulated by Khūnajī and slightly altered by Kātibī has overcome in the Ottoman tradition of logic would be the topic of another research.

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