

Reconsidering Avicennan Theory of Science: Şadr al-Sharī'a and Taftāzānī's Discussions of the Issue of the Subject Matter

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Teftâzânî'nin Mevzû Meselesi Üzerine Tartışmaları*

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Abstract: Post-classical period witnessed intense debates on aspects of the Avicennan theory of science. Among them one set of discussions concerned the issue of subject matter (mabâhith al-mawdû') in a science. They were raised by Şadr al-Sharī'a (d. 747/1346) in the introduction of his al-Tawdîh, a commentary on his legal theory text al-Tanqîh. Therein, he raised three questions: (1) whether the subject matter of a science can be multiple, (2) what restricting subject matter of a science means, and (3) whether one thing can be the subject matter of multiple sciences. Taftāzānī (d. 792/1390), a proponent of the Avicennan theory, objected to Şadr al-Sharī'a's positions in his al-Talwîh, the most well-known supercommentary on al-Tawdîh. The paper analyzes this debate on the issue of subject matter in sciences, and thus sheds light on the reception of an important aspect of the Avicennan theory of science in the postclassical period.

Keywords: Avicennan theory of science, subject matter of a science, restrictive aspect, Şadr al-Sharī'a, al-Tawdîh, Taftāzānī, al-Talwîh.



Introduction

The theory of science that was prevalent in the pre-modern Islamic world was drawn from Aristotle's *Posterior Analytics* (1993). It was translated into Arabic by Abu Bishr Mattā Ibn Yūnus (Aristotle, 1999) and appropriated and developed by Muslim philosophers such as al-Fārābī (2008), Ibn Sīnā a.k.a. Avicenna (2006), and Ibn Rushd (2015).¹ It was Avicenna's articulation of the theory which was read and discussed in the postclassical period. Hence, despite being originated in Aristotle's works, considering the impact of Avicenna's articulation and later philosophers' engagement with his works, in this paper I will refer to it as Avicennan theory of science.²

Avicenna's most extensive discussion of the theory is presented in the *Burhān* of his *al-Shifā* (2006). The core of the theory is presented in *Burhān* II.6, where Avicenna points out that all sciences, particularly theoretical sciences have principles, subject matters, and problems. These are defined by noting that principles are premises from which a science gets its demonstrations, subject matters are things whose states are investigated in the science, while problems are propositions whose predicates are essential accidents of that subject matter, or its species, or its accidents. There is doubt about the states or essential accidents, hence they are investigated in the science (İbn Sīnā, 2006, p. 102).

The theory as articulated by Avicenna in this and other works, had a tremendous impact on the conception of sciences in the Islamic world. However, there were significant challenges to that theory in the postclassical period (particularly during the 13th-14th centuries). Some scholars criticized the theory for considering subject matter and principles as an element of a science. Previous studies have looked at postclassical debates on the principles and problems of a science (K. Tekin, 2022). This paper will focus on another set of challenges to the Avicennan theory of science, that is the issue of subject matter (*mabābiḥ al-marwū*).³

¹ Tekin (2014) points out importance of *Posterior Analytics* in the curriculum of the Peripatetic school, and its reception in Islamic philosophy and beyond.

² Strobino (2021) provides a thorough study of Avicenna's theory of science, while Odaş (2021) focuses on the core of the theory, i.e. elements of sciences.



Before getting into the debates on the issue of the subject matter, a brief overview of Avicenna's discussion of the topic will be helpful. In the *Burbān* II.6, Avicenna presents possibilities of a science having a single or multiple subject matters. In the latter case, with the condition that they be united by a genus or have a harmonious connection. Multiple subjects could be united by the purpose of the science or a shared principle. Avicenna also notes that a science might be taking its subject absolutely or not. In *Burbān* II.7, Avicenna points out interconnection of various sciences through divergence or convergence of their subject matter or subject matters. Hence, the criterion for differentiation of sciences per this chapter is the subject matter, and that is by differentiation in one subject matter, or multiple subject matters. In the latter case, differentiation of subjects is evident. In the former case, that is if they share a single subject, then either one of the sciences investigates it absolutely while the other looks at it from an aspect, or they each investigate a different aspect of the subject (İbn Sînâ, 2006, pp. 109–113). Existence of the subject matter of a science was taken for granted in the science. Problems of the science were limited to investigations of the essential accidents of the subject matter, and not the subject matter itself.³

The topic of subject matter, as indicated by Avicenna's discussion, was discussed in the books of demonstration, a part of the logical curriculum. Therefore, it is rather surprising to see engagement with this topic in Islamic legal theory books in the postclassical period. Şadr al-Sharī'a's (d. 747/1346) *al-Tawdīh*, a commentary on his legal theory text *al-Tanqīh* provides a noteworthy example which we will look at in this paper. In fact, Şadr al-Sharī'a himself would acknowledge logic books as the loci of this topic but he felt a need to discuss the topic in his commentary on the introduction of his summa of legal theory whence he challenged some of the assumptions of the Avicennan theory about the subject matter. There, Şadr al-Sharī'a (1) questioned possibility of having multiple subject matters in a science, (2) discussed the meaning of restricting a subject matter in a science and (3) considered the possibility of one thing being the subject matter of multiple sciences.

³ Strobino (2017) provides an overview of *Burbān* II.7.



Şadr al-Sharī‘a’s *al-Tawdīh* as a whole, the issues of subject matter in particular, stimulated many supercommentaries and glosses. This attention was in no small part due to Taftāzānī’s (d. 792/1390) *al-Takwīh*, a supercommentary on *al-Tawdīh*, in which he objected to Şadr al-Sharī‘a’s criticism of the Avicennan theory of science holding on to established views.⁴ Taftāzānī’s criticism of Şadr al-Sharī‘a, in turn, provoked others to defend Şadr al-Sharī‘a’s three views, particularly fellow Hanafī interpreters. Among those who wrote superglosses on *al-Takwīh*, perhaps the most influential were Molla Hüsrev (d. 885/1480), who maintained a defense of Şadr al-Sharī‘a on this topic, and Hasan Çelebi (d. 891/1486) who concurred with Taftāzānī on some issues.⁵

While many later scholars engaged with the issue through superglosses on Taftāzānī’s commentary, a few wrote independent treatises devoted to commenting on this topic alone. Among the latter kind is Muḥammad b. Muḥammad al-Bukhārī’s (a.k.a. ‘Alā al-Dīn al-Bukhārī, d. 841/1438) treatise, which was described as “A Treatise on Removing Objections of the Author of *al-Takwīh* on the Three Issues Invented by the Author of *al-Tawdīh*” (al-Bukhārī, n.d.). As the title indicates it is a defense of Şadr al-Sharī‘a. Another treatise defending Şadr al-Sharī‘a against Taftāzānī’s criticism is entitled *Risāla fī l-‘ulūm wa mawdū‘ihā* (A treatise on sciences and their subject matters). Taşköprîzâde, an Ottoman scholar, wrote a comprehensive treatise on debates concerning the Avicennan theory in general. He entitled it *Raised Banner On the Issues of the Subject Matter (al-Liwā‘ al-Marfū fi Halli Mabāhith al-Mawdū‘)*. Taşköprîzâde not only included the debate between Şadr al-Sharī‘a and Taftāzānī in his

⁴ Köksal’s (2021) study which presents the impact of philosophical theory of science on the conception of Islamic legal theory includes a brief summary of the debate between Şadr al-Sharī‘a and Taftāzānī (pp. 68–71).

⁵ According to the Ottoman bio-bibliographer Katib Çelebi, other scholars who wrote glosses on *al-Takwīh* include al-Sayyid al-Sharīf al-Jurjānī, Muhyiddīn Muḥammad b. Hasan al-Samsūnī (d. 919/1513), Alā al-Dīn ‘Alī b. Muḥammad a.k.a. Musannifek (d. 871/1466), Alaeddīn ‘Alī al-Tūsī (d. 887/1482), Qādī Burhān al-Dīn b. Ahmad b. ‘Abdullah (d. 800/1397), Yusuf Bālī b. Molla Yegan (on its beginning), Muḥammed b. Yusuf Bali el-Rumī, Alaeddīn Alī el-Qūshī (d. 879/1474) (on its beginning), Ibn al-Barda‘ī, Ibn Kemal Pasha (d. 940/1534), Hizir Shah Menteşevi (d. 853/1449), Mevla Abdülkerim (d. 900/1494) (on its beginning), Muslihuddīn Mustafā i.e. Husamzade el-‘Atīq (incomplete gloss), Ebu-bekr b. Abī'l-Qasim al-Laysī al-Samarqandī, Muinuddīn al-Tunī (al-Tufī?), Mevlanazade Osman Khataī, Hocazade, Ahmed b. Mahmud known as Kadızade (d. 988/1580), and Hidayetullah al-‘Alāī (d. 1039) (Katib Çelebi, 1943, pp. 496–499).



treatise, but also considered this as the quintessential issue as indicated by the title of his treatise (Taşköprülüzade, 2022).

In this paper, I will mainly limit myself with an analysis of Şadr al-Sharī'a and Taftāzānī's positions on the issues of subject matter in a science. The paper is divided into three sections per the number of issues raised by Şadr al-Sharī'a. In each section, I will provide Şadr al-Sharī'a's objections to the Avicennan theory and his alternative views, followed by Taftāzānī's response. I will revert to Avicenna's views to explain some of their positions. The paper will thus shed light on the reception of an important part of the Avicennan theory of science in the post-classical period, particularly during the fourteenth century.

1. Possibility of Multiple Subject Matters in a Science

1.1. Şadr al-Sharī'a's first objection to the Avicennan theory

The first issue on which Şadr al-Sharī'a disagrees with the Avicennan theory of science is his objection to the view that a science could have more than one thing as its subject matter. The established view among scholars was that a science could have multiple things as subject matter such as in the case of medicine, clearly a position based on Avicenna's above-mentioned view. Some scholars considered the subject matter of medicine to be multiple things including human body, medicines etc. (Eshera, 2023). Şadr al-Sharī'a disagrees and, instead, contends that the subject matter could not be multiple things with an exception, i.e. only if the subject matters are corelatives. He asserts that in sciences where the investigation concerns relation (*idāfa*) of one thing to another, such as in legal theory where the investigation concerns "establishing indicants for judgment (*ithbāt al-adilla li-l-hukm*)," and in logic where investigation concerns "reaching a conception or assertion from a conception or assertion (*isāl tasawwur aw tasdiq ilā tasawwur aw tasdiq*)," what is being investigated is accidents, some of which stem from one of the related matters, and others from the other related matter. Therefore, the subject matter would be both related items. Şadr al-Sharī'a claims that "if what is investigated is not the relation (*idāfa*) then the subject matter cannot be many things because unity and diversity of sciences is through unity and diversity of the knowns (*ma'lūmāt*), that is the problems. There-



fore, divergence in the subject matter necessitates divergence in the science” (Şadr al-Sharī‘a, 1906, pp. 141-142).

A potential response to Şadr al-Sharī‘a’s worry might be that if the custom has allowed multiple subject matters to be considered a science, then there is no problem. It might be in response to such a potential objection that Şadr al-Sharī‘a notes that if by a science what is meant is the conventional usage, that is to say that considering a set of problems one science is determined by convention without regard to a meaning which would necessitate unity, then this view should not be taken seriously because it would open the path for everyone to establish new conventions as they wish. To put it differently, Şadr al-Sharī‘a challenges the view that a science could have unity due to terminological that is conventional use, meaning that a discipline is considered to have unity just because the custom has been so without any regard for a meaning that would give it unity. This, in his view, is unacceptable because each person could come up with new terms and designate randomly a set of problems as constituting one science. As an example, he suggests, someone might propose that law and geometry are one science with two things as its subject matter, namely actions of liable persons and magnitude. As for the example of medicine which is typically given to illustrate a science with multiple subject matters by purporting that it investigates multiple topics as its subject matter including human body and medicines, Şadr al-Sharī‘a rejects it by claiming that medicine has one subject matter, that is human body. Other topics such as medicines are investigated insofar as human body is healed or harmed by them (Şadr al-Sharī‘a, 1906, p. 142).

Şadr al-Sharī‘a’s position on the first issue sharply contrasts with the common scholarly view based on Avicennan theory of science which was reflected in an adage that sciences are differentiated by differentiation of their subject matters. So by emphasizing differentiation by way of the knowns, that is problems of a science, Şadr al-Sharī‘a clearly signals a different criterion for distinguishing sciences from each other, a point that will be further evident in his explanations on the following two issues. Thus, it is no surprise that Taftāzānī who was well familiar with the Avicennan theory of science would object, as we will see next.

1.2. Taftāzānī’s rearticulation and response to the first issue



Taftāzānī, as we have indicated, objects to all three of Ṣadr al-Sharī'a's criticism of the common understanding of the theory of science regarding the issues of subject matter. However, as an exemplary verifier, he first paraphrases Ṣadr al-Sharī'a's views and then presents his rejoinder. As rearticulated by Taftāzānī (1996), the first objection to the Avicennan theory is that permitting the number of the subject matters in a science to rise beyond two things is incorrect. Ṣadr al-Sharī'a believes what is investigated in a science is either the relation (*idāfa*) between two things or not. If the subject matter is the relation between two things, then either accidents stemming from both relatives are investigated or not. Legal theory, for instance, has a subject matter in which the attributes stemming from both relatives are investigated. Sometimes the subject matter is not a relation of two things, as in law (*fiqh*) in which human actions are investigated in terms of being obligatory, forbidden, etc. Taftāzānī, at this point, mentions logic among those sciences in which the investigation concerns the relation (*idāfa*), however, the conditions stemming from one of the correlatives does not have any bearing on the investigation, per Ṣadr al-Sharī'a's view elsewhere in the text (Taftāzānī, 1996, p. 39). Otherwise, if the subject matter of a science becomes multiple things, it means that the problems of the science would differ from each other. This then would necessitate occurrence of different sciences, since sciences differ from each other because of their diverging objects of knowledge (*ma'lūmāt*) (Ṣadr al-Sharī'a, 1906, p. 142).

Taftāzānī believes Ṣadr al-Sharī'a's position on the first issue is debatable. Accordingly, Taftāzānī provides the following objection against Ṣadr al-Sharī'a's criticism that having multiple subject matters in a science would lead to divergence of problems which would in turn lead to divergent sciences:

"If by divergence (*ikbtilāf*) of problems their multiplicity is meant, we do not accept that it leads to divergence of the science. Obviously, problems of one science are multiple. However, if it is meant that they [problems] are not connected (*'adam tanāsubihā*), we do not accept that mere multiplicity of the subject matters necessitates this. Rather, this would be the case if the multiple subject matters were not interconnected (*mutanāsiba*). However, the commu-



nity (*qawm*) have explained that multiple things could become the subject matter of a science with the condition that they be connected. The aspect by which they are connected can be participation in an essence (*dhātī*), such as line, surface, and mathematical body for geometry. They all participate in a genus which is magnitude (*miqdār*), that is continuous quantity which is sustained by an essence. Or it [the aspect that connects multiple problems] could be [their participation] in an accidental matter (*'araḍī*), such as human body, its parts, diet, medicines, humors etc., which when made the subject matters of medicine they participate in being related to health which is the purpose of that science. This shows that they [authorities] did not neglect abiding by a meaning which necessitates unity” (Taftāzānī, 1996, p. 39).

This passage shows that Taftāzānī does not accept Ṣadr al-Sharī‘a’s view that the subject matter of a science cannot be multiple things. Rather, in line with the Avicennan theory, he notes that one science can have multiple things as its subject matter if these are proportionally or harmoniously connected by an essential or accidental thing, as exemplified by geometry and medicine, respectively. Taftāzānī, however, agrees with Ṣadr al-Sharī‘a that the theory should be rigorous so that no one can bring together multiple and unrelated problems and claim that they are one science.

Taftāzānī also accuses Ṣadr al-Sharī‘a of contradicting himself in his examples. The subject matter of legal theory (*usūl*), Taftāzānī contends, is multiple things and not two things as asserted by Ṣadr al-Sharī‘a. Taftāzānī states that the notion of indicant (*dalīl*) which Ṣadr al-Sharī‘a takes to be one of the two related matters in legal theory, in fact, consists of multiple things because predicates of the problems in legal theory are not essential accidents of the indicant (*al-dalīl*), rather they are essential accidents of the Book (*Kitāb*), Prophetic Tradition (*Sumna*), Concensus (*Ijmā‘*) and Analogy (*Qiyās*) (Taftāzānī, 1996, p. 39). The point being made is that the subject matter of legal theory in fact is these four things, thus, showing that legal theory has multiple subject matters, contradicting Ṣadr al-Sharī‘a’s claim.



Some defenders of Şadr al-Sharī‘a such as Ala al-Dīn al-Bukhārī (al-Bukhārī, n.d.) and the author of anonymous treatise mentioned above, thought that the example of geometry was not really helpful in defending the possibility of multiple subject matters in a science, because they thought its so called multiple subject matters were actually united by the genus of point, line, surface and body, which is continuous quantity. In fact, this is acknowledged by holders of the common view as well. However, Avicenna points another reason for considering these as being a legitimate subject matter which was that they had a harmonious relationship, that is the relation between point and line is like that of line and surface and so on (İbn Sīnâ, 2006, p. 104). Considering this second alternative, one could imagine other kinds of subjects that may not be united by a genus but still present a harmonious connection making them worthy of being the subject matter of a science. Besides, Avicenna envisions sharing a purpose or principle as unifying multiple subject matters, which Taftāzānī alludes to by accidents that provide unity in a science. So it seems to me that while Şadr al-Sharī‘a had a legitimate worry about multiple subject matters leading to divergence of problems, and possibly also resulting in randomly putting divergent topics together under one science, it does appear that the Avicennan theory allows for harmonious topics or topics united by a shared purpose to be considered under one science.

2. Modification of the Subject Matter

2.1. Şadr al-Sharī‘a’s second issue regarding subject matter

The second issue that Şadr al-Sharī‘a raises concerns the restrictive aspect (*qayd al-haythiyya*) which is sometimes mentioned in expressing the subject matter of a science. For instance, one may say that “the subject matter of a science S is X *with respect to* Υ ” or “X *insofar it is* Υ .” The emphasized part in this statement, i.e. “*with respect to* Υ ” or “*insofar it is* Υ ” indicates a restriction on X, i.e. we are not investigating X as such, but rather from an aspect or perspective which is indicated by the said restriction. According to Şadr al-Sharī‘a, such a restrictive aspect has two meanings. The first is that “the thing together with that aspect (*haythiyya*) is the subject matter, such as when it is stated that existent qua existent is the subject matter of the science of metaphysics. Therefore, in it



[metaphysics], essential accidents such as unity, multiplicity etc. which attach to it [existent] insofar it is existent, are investigated. That aspect (*haythiyya*) itself is not investigated in the science because the subject matter is that thing whose essential accidents are investigated, and not the thing which is investigated or its parts” (Şadr al-Sharī‘a, 1906, p. 146). Considering that the subject matter in a science is the thing whose essential accidents are investigated in the science, Şadr al-Sharī‘a asserts when the restrictive aspect (*haythiyya*) denotes the subject matter, then the restrictive aspect cannot be investigated. Rather, its essential accidents would be investigated. At other times, however, the restrictive aspect indicates the essential accidents, which is its second meaning.

According to Şadr al-Sharī‘a, the restrictive aspect (*haythiyya*) in the second sense, clarifies the essential accidents that are investigated in the science. He notes that one thing can have many species of essential accidents. One science would investigate one of its many species of essential accidents. Hence, the restrictive aspect would help clarify which species of essential accidents is the subject of investigation in that science. Şadr al-Sharī‘a provides examples from medicine and astronomy. Subject matter of medicine is human body *insofar* (*min haythu*) it is subject to health and sickness. Subject matter of astronomy is bodies of the universe *insofar* (*min haythu*) they have a configuration (*şaklan*). According to Şadr al-Sharī‘a, in these examples, the second meaning of the restrictive aspect is at work. Otherwise, the two sciences that are mentioned would have only investigated accidents that inhere due to the two restrictive aspects, and the said aspects themselves would not have been investigated in the science, which is contrary to reality (Şadr al-Sharī‘a, 1906, p. 146).

We can rephrase Şadr al-Sharī‘a’s differentiation of two kinds of restrictive aspects as follows. In the first case, let us consider that the subject matter of a science S is X insofar it is Y. We know that Y is not one of the problems in S. Then it is evident that Y denotes the subject matter and is a part of the subject matter. This is the first meaning of restrictive aspect according to Şadr al-Sharī‘a. However, suppose that the subject matter of a science S is A insofar it is B. We know that B is among the problems investigated in the science S. This shows that B does not (or cannot) signify the subject matter per the Avicennan theory, be-



cause the subject matter of a science itself cannot be investigated in the science, rather its essential accidents would be investigated (İbn Sînâ, 2006, p. 131). This shows that B merely indicates the kind of accidents that are investigated. Therefore, in such cases we are confronted with the second meaning of the restrictive aspect, according to Şadr al-Sharī'a. Şadr al-Sharī'a seems to be providing a rather neat and understandable distinction regarding the restrictive aspect. However, as we will see next, Taftāzānī thought all this was unnecessary as one could consider both kinds of restrictions as a limitation of the subject matter.

2.2. Taftāzānī's rearticulation and response to the second issue

The second issue, per Taftāzānī's paraphrasing, concerns verification of the modification in determining the subject matter of a science, such as when it is stated that the subject matter of this science is X with respect to (*min haythu*) such and such. The word *haythu*, in these phrases signifies the aspect (*jiba*) and perspective (*i'tibār*) (Taftāzānī, 1996, p. 39). Şadr al-Sharī'a, as we have seen and as noted by Taftāzānī, pointed out two functions of the restrictive aspect, one of them was that it is part of the subject matter, hence, it cannot be investigated in the science. The second function or meaning of the restrictive aspect, according to Şadr al-Sharī'a was that it indicates the species of accidents which are investigated in the science. In this latter case, the restrictive aspect could be one of the matters the science investigates.

Taftāzānī rejects Şadr al-Sharī'a's second argument noting that one could state the following:

"We don't accept that in the first case it is a part of the subject matter (*juz' al-marwū'*), rather it is a restriction (*qayd*) for its being the subject matter (*li-marwū' iyyatih*), meaning that the investigation will concern the accidents that inhere in it from this respect and with this perspective (*i'tibār*). Accordingly, if we also consider the restrictive aspect (*haythiyya*) in the second case to be a restriction on the subject matter, as it is the apparent meaning of the discourse of the community (*al-qawm*), and not as the explanation of the essential accidents as held by the author [Şadr al-Sharī'a], then the investigation of them in the science won't be an investigation of the parts of the subject matter. Hence, it would not implicate us with what implicates the author, that is participation of two sciences in a



single subject matter, essentially and perspectively (*al-i'tibār*)” (Taftāzānī, 1996, p. 40).

In this passage, Taftāzānī not only points out that the restrictive aspect can be considered as delimiting the subject matter of a science in both cases which are mentioned by Ṣadr al-Sharī'a but also that if the latter's view is held then it would lead to multiple sciences sharing one subject matter, which is not acceptable per the Avicennan theory. Following the established view, Taftāzānī does not believe that the restrictive aspect indicates essential accidents. Rather it could be seen as limiting and specifying the subject matter. In other words, the thing together with the restrictive aspect is the subject matter in all cases.

I believe Taftāzānī's take on the function of restrictive aspect is based on Avicenna's description of a similar case in the *Burbān* II.7. In explaining the subalternation of sciences, Avicenna mentions four kinds of subalternation regarding sciences that are under a more general science, but are not a part of the general, due to particularization of their subject matters. The first kind of particularization of the subject matter is by way of an essential accident. In this case, the accidents that inhere in the particularized subject are investigated with regard to (*min jihat*) the essential accident that particularized it. Subject matter of medicine, which is a subordinate of natural philosophy, is given as an example, since it is particularized by the essential accidents of health and sickness (Ībn Sīnā, 2006, p. 110). As we can see, Avicenna is pointing out how a subject matter that is under a more general one can be particularized by way of essential accidents, thus showing that he considers the essential accidents in these cases as delimiting the subject matter. In fact, this is more evident in Avicenna's discussion of the second kind of particularization of a subject matter, which is when a topic that is under a more general science becomes special/particular (*akbass*) science by way of a foreign accident (*arad gharīb*) that is settled in the subject itself, with its form, and not merely connected to it. Avicenna states that in this case the subject matter together with that foreign accident is taken to be one thing, and the essential accidents that inhere from the aspect through which the foreign accident is connected are investigated (Ībn Sīnā, 2006, pp. 110–111). Here, we can see that the subject matter together with the foreign accident is



taken to be one thing, which again shows that in such cases Avicenna would consider the restrictive essential accidents together with the subject matter as the subject matter. Hence, I would argue that Avicenna's views on particularization of sciences by accidents influenced Taftāzānī's understanding of the restrictive aspect as delimiting the subject matter, and thus rejecting Ṣadr al-Sharī'a's proposed division.

Taftāzānī suggests that if the restrictive aspect were not to be considered a delimitation, then this would imply that multiple sciences are sharing in one subject matter, which is contrary to the Avicennan view that sciences are distinguished by their distinct subject matters. So, in Taftāzānī's view, it is better to consider the restrictive phrase "with respect to" as merely determining the subject matter.

Taftāzānī notes a famous problem that could emerge for the common view. The problem seems to be that "the restrictive aspect (*ḥaythiyya*) cannot be of accidents that are investigated in the science because it necessarily cannot inhere in the subject matter by its own aspect. Otherwise, this would imply that a thing precedes itself because a thing by which another thing inheres in a thing necessarily precedes the inhering thing (*al-'arīḍ*)" (Taftāzānī, 1996, p. 40). Taftāzānī here tries to point out that if the restrictive aspect (*ḥaythiyya*) refers to accidents, then this implies that when the said accidents are investigated in the science they are viewed as inhering in the subject with regard to themselves. However, if A inheres in B by mediation of C, this means that C is prior to A. In the case of accident A which is the restrictive condition, it means that A inheres in B insofar it is A. This implies that A is prior to A, which is absurd.

Taftāzānī uses the example of medicine to illustrate the point. As we may recall, the subject matter of medicine according to some is "human body with respect to health and sickness." In this case, the problem raised is that health and sickness are not things which inhere in human body insofar it heals and gets sick. Similarly, motion and rest are not things which inhere in body, the subject of natural philosophy, insofar it moves and rests. The well-known response to this problem, Taftāzānī notes, is that the intention is "with respect to the possibility of health and sick-



ness and motion and rest, and the capability (*isti'dād*) for this. And this is not one of the accidents and investigated matters in the science."

Taftāzānī apparently was not satisfied with this solution, hence he offers the following solution. The verification, Taftāzānī states, is that "since subject matter is the thing whose essential accidents are investigated in the science, it is restricted (*quyyida*) by an aspect (*ḥaythiyya*) meaning that the investigation of accidents takes place with regard to restrictive aspect (*ḥaythiyya*), and by considering it, which means that in all investigations this universal meaning is followed. It does not mean that all accidents which are investigated are definitely attached to the subject matter by mediation of this *ḥaythiyya*" (Taftāzānī, 1996, p. 40). Taftāzānī here rejects the belief that the restrictive term is a medium by which all accidents inhere in the subject matter. Rather, he believes that the restrictive term is what should be considered in investigating all accidents in a science.

On this second issue, although Ṣadr al-Sharī'a's position seems plausible, I believe Taftāzānī's objections are in line with Avicenna's implicit view in *Burhān* II.7. I should add that Avicenna sometimes does mention the possibility of a subject matter being shared by different sciences, which investigate it from different perspectives, giving the example of astronomy and natural philosophy as sharing body of heaven and earth as the subject matter but investigating them from different angles (Ībn Sīnā, 2006, p. 115). Even in this case, Avicenna differentiates between the subject itself, and the subject from a perspective, which are clearly not the same thing. Hence, it seems that Taftāzānī attends to Avicenna's more careful analysis in *Burhān*, thus his reservation against Ṣadr al-Sharī'a's otherwise plausible view. It seems that Avicenna's just mentioned view on the possibility of multiple sciences sharing a subject matter is the source of Ṣadr al-Sharī'a's next argument, but we can already anticipate Taftāzānī's rejection based on his understanding of the restrictive aspect.



3. Possibility of Different Sciences Sharing an Essentially or Perspectively One Subject Matter

3.1. Şadr al-Sharī‘a’s presentation of third issue

Şadr al-Sharī‘a’s third objection regarding the issue of subject matter is raised against the established view that one thing cannot be the subject matter of two sciences. This view seems to be deduced from the above-mentioned adage that sciences are primarily differentiated by differentiation of their subject matters. Hence, if two sciences were to share the same subject matter, then they would not be differentiated from each other. Şadr al-Sharī‘a disagrees with this view believing that it is not impossible to have a subject matter shared by two sciences, and rather it is what had been occurring. Şadr al-Sharī‘a’s argument is that one thing can have various kinds or species of attributes (Şadr al-Sharī‘a, 1906, p. 149). He states that “a truly one (*al-wāhid al-ḥaqīqī*) thing [God] has many attributes, and it does not hurt to have some of them as real (*baḥqīqiyya*), others as relational (*idāfiyya*) [such as creation], and yet others as negational (*salbiyya*) [such as being pure of matter]. However, nothing inheres in it due to its part because it does not have any parts. Therefore, some accidents must inhere in it due to its essence in order to avoid regress in the origin of the attributes” (Şadr al-Sharī‘a, 1906, p. 152). The point being made is that even a truly One, i.e. God, has many kinds of essential accidents, hence the possibility of one thing having many species of essential accidents which could be subjects of investigation in different sciences.

Traditionally, scholars believed the above-mentioned Avicennan view that divergence of sciences was due to diverging subject matters. With his assertions about the possibility of one thing being subject of investigation by two different sciences, Şadr al-Sharī‘a suggests that sciences may converge or diverge by convergence or divergence of what is to be known, which are problems, a position that is already signaled above in his exposition of the first issue. He contends that just as the problems could be united by their subjects which ultimately can be related to the subject matter of the science according to the established view, so they could also be united by their predicates which can be traced back to the species of essential accidents (Şadr al-Sharī‘a, 1906, p. 154). To support his view,



Şadr al-Sharī‘a mentions the subject matter of investigation in astronomy, which is bodies in the universe insofar they have configuration, and the subject matter of Heavens and the World (*al-Samā’ wa l-‘ālam*, de Caelo et Mundo) which is also bodies in the universe but insofar they have a nature. In astronomy and de Caelo, the subject of investigation is the same, but they differ due to divergence of their predicates (*mahmūlāt*). The restrictive aspects here indicate what is being investigated. They do not signify a part of the subject matter (Şadr al-Sharī‘a, 1906, p. 154). In other words, the subject of investigation is the same thing, but the problems are different because they are differentiated by the said aspect. In astronomy, bodies in the universe are investigated regarding having a configuration, whereas in de Caelo, they are investigated regarding having a nature. According to Şadr al-Sharī‘a, if it were the case that the said restrictive aspect indicated a part of the subject matter, then it would not have been investigated in the science, but it is, a point that was made in the previous issue as well.

As I suggested above, I believe Şadr al-Sharī‘a relies on Avicenna regarding this third issue. As noted, Avicenna also suggested that two sciences could be sharing a subject matter where each would investigate a different aspect, even giving a similar example from astronomy and natural philosophy. However, Avicenna seems to be differentiating the subject and the subject matter in such cases. In the case of astronomy, while the subject itself is bodies of the universe, but the subject matter of the discipline is bodies of universe insofar they have a configuration. Hence, as we can see, there is room to disagree with Şadr al-Sharī‘a on this third issue as well. But let us see how Taftāzānī objects.

3.2. Taftāzānī’s response to the third issue

Taftāzānī acknowledges that just as Şadr al-Sharī‘a disagreed with the community on the possibility of a science having multiple subject matters (first issue), similarly, he disagreed with them in regard to the impossibility of a single subject matter being the subject matter of multiple sciences (third issue). Taftāzānī also takes Şadr al-Sharī‘a to be holding the belief that just as sciences are distinguished by their distinct subject matters, so they could also be distinguished by their distinct predicates by making investigation of some accidents of an essentially or



mentally one thing to be a science, and others to be other sciences (Taftāzānī, 1996, pp. 40-41).

After showing the possibility of one subject matter being shared by two or more sciences, the actual case of some sciences which share the subject matter but are distinguished from each other by the predicates or essential accidents is handled per Şadr al-Sharī'a's argument. As we saw previously, Şadr al-Sharī'a used examples of astronomy, whose subject matter is bodies of the world, and *de Caelo* which is a science by which conditions of bodies, which are the foundations of the world, that is the heavens and what they contain and the four elements and their nature, motions, and positions are known (Taftāzānī, 1996, pp. 41-43).

As a defender of the Avicennan theory of science, Taftāzānī rejects Şadr al-Sharī'a's third view as well by noting three objections. The first is that Şadr al-Sharī'a's view is based on the idea that the restrictive aspect (*haythiyya*) sometimes is part of the subject matter and at other times it clarifies the thing that is investigated [essential accidents] which he already had rejected above, in response to the second issue.

Taftāzānī's second objection to the third issue is as follows:

“When they [previous scholars or the community] wanted to know conditions of external existents (*a'yān al-marwūdāt*) they posited essences (*al-baqā' iqa*) as species and genera. And they investigated essential accidents which surround it. Thus, they gained multiple problems which were united in being investigation of the conditions of this subject matter even if they had diverging predications. In this regard, they made them one science which is individuated by being written down and named. They allowed everyone to add to it what they observe from the conditions of that subject matter. What is preferred in science is to investigate all the essential accidents of the subject matter, as far as humanly possible. There is no meaning of a science except that a thing or multiple things which are connected are posited and we investigate all of their essential accidents and seek them. And there is no meaning of distinction of sciences other than that *this* looks at conditions of a thing and *the other* at conditions of the other thing which is different from it essentially or in perspective, that is by taking [that thing] in one of



the two sciences absolutely, and in the other, evidently, conditionally, or each one of them is restricted by a different restriction. These conditions are unknown and sought out whereas the subject matter is known, and its existence is evident. Therefore, it [the subject matter] is proper for distinction” (Taftāzānī, 1996, p. 44).

Taftāzānī’s main point here is that when scholars desired to know the external existents, they posited genera and species to refer to reality of things. It appears that investigations in sciences concern essential accidents of genera and species. The reason genera and species are subject matters is that they evidently exist, and people want to know about their conditions or accidents which inhere in them. Sciences consist of investigations of essential accidents of one thing or multiple things that are related. If one thing becomes the subject matter of two sciences it can only happen if one of the sciences considers it without a condition or delimitation and the other with a condition, or each one of them explores separate conditions, echoing Avicenna’s point in *Burbān* II.7 (2006, p. 115). Since the subject matters of sciences are evident to those studying it, it is seen as more worthy of being the thing which distinguishes a science from other sciences. Accidents, on the other hand are unknown conditions of the known subject matter. Hence, that which is not evident is not worthy of being considered the criterion by which sciences should be distinguished from each other.

Taftāzānī’s third objection to Şadr al-Sharī’a’s third view is that each and every science has subjects which have many species of accidents. If the view proposed by Şadr al-Sharī’a is true, then anybody can turn them into multiple sciences by positing each species of a single subject matter a science by itself. In order to show absurdity of what this position implies, Taftāzānī gives the example of Islamic legal theory, which could be turned into numerous sciences if that idea is applied to it. Taftāzānī refers the reader to Avicenna’s major work on demonstration (the *Burbān* of the *Şifā*), for verifying these issues, clearly indicating that he developed his positions based on this work.

On this third issue, i.e. multiple sciences sharing one subject matter, while Şadr al-Sharī’a’s position seems to be based on Avicenna’s view, I have suggested that it does not reflect Avicenna’s overall discussion in



Burbân II.7. It seems that Taftâzânî's position is more in line with the implications of the Avicennan view that sciences diverge by divergence of their subject matters or subject matter (İbn Sînâ, 2006, p. 109).

Conclusion

Avicenna's appropriation of Aristotelian theory of science, which was developed originally by Aristotle to describe demonstrative sciences, was widely accepted in the Islamic philosophical tradition. Hence, in the postclassical Islamic intellectual history, it was Avicenna's works which became the loci of discussions for this theory. Many philosophers, following Avicenna presented succinct versions of the theory in books on logic, per its place in the Aristotelian arrangement. However, during the postclassical period of Islamic intellectual history (roughly after 12th century onwards), we can see discussions on it in books on religious sciences as well, because they were being modeled after the theory.

Crosspollination of the theory of science gave rise to substantial discussions on it in the introduction of religious disciplines. Among the religious disciplines, Islamic legal theory particularly provided a fertile ground for engaging with theory of science considering that it had a complex and controversial subject matter. Şadr al-Sharî'a's three issues on the subject matter in a science, which we have analyzed in this paper, illustrates this well as they were raised in his commentary on his own Islamic legal theory textbook. Rather than reiterating Şadr al-Sharî'a's three views on the issue of subject matter, I should note that they reflect a sensitivity of the discipline in which he raises them up, i.e. Islamic legal theory. For instance, in the first issue, he claimed that multiple subjects cannot be the subject matter of a science except when they are correlatives. This seems to be an exception for the discipline he was dealing with, Islamic legal theory, because many scholars considered its subject matter to be two things, i.e. indicants and judgments. Thus, Şadr al-Sharî'a seems to be designing a theory that fits the reality of the discipline he comments on. This should not implicate all scholars of legal theory, because Taftâzânî who objected to Şadr al-Sharî'a's views, himself was an author of commentaries on Islamic legal theory, yet he was fine with the Avicennan theory of science as understood commonly, and defended it.



The debate on the issue of subject matter continued in later centuries as well. While most scholars in later periods seem to held on to the common Avicennian view by taking the subject matter as the criterion for distinguishing sciences, some Ottoman scholars who wrote glosses on Taftāzānī's commentary seem to have sided with Şadr al-Sharī'a, propounding that predicates can also be the criterion of differentiation among sciences. Although one might suspect their allegiance to the same school of law as Şadr al-Sharī'a contributed to their defenses of his views, I have indicated that there were some ambiguities in Avicenna's articulation which might have given way to their position.

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Öz: Klasik sonrası dönem, İbn Sînâcî bilim teorisinin bazı yönleri üzerine yoğun tartışmalara şahitlik etmiştir. Meydan okumalardan bir tanesi mevzû meselesiyle ilgilidir. İbn Sînâcî teoriye göre her bilimin, onu öteki bilimlerden ayıran bir konusu/mevzusu vardır. Genelde konunun gerçek veya itibari birliğe sahip olduğu düşünölmekteydi. Mutlak veya itibari birliğe sahip olan tek birşey birçok bilimin konusu olamazdı. İbn Sînâcî teorisinin bu önkabulleri Sadrüşşerîa (ö. 747/1346) tarafından et-Tenkîh adlı metninin şerhi olan et-Tavzîh adlı eserinin girişinde meydan okundu. Burada üç mesele ortaya konmaktadır: bir bilimin konusunun birden fazla şey olup olmayacağı, bilimlerde konuyu haysiyet kaydıyla sınırlamanın ne anlama geldiği, tek bir şeyin birden fazla bilimin konusu olup olmayacağı. Sadrüşşerîa'nın İbn Sînâcî bilim teorisine karşı koyması Teftâzânî'nin söz konusu teoriyi et-Telvîh adlı şerhinde savunmaya itmiştir. Makale, bilimlerde konu meselesiyle ilgili bu tartışmayı önce Sadrüşşerîa'nın yönelttiği soru ve itirazları, akabinde Teftâzânî'nin cevaplarını tek tek sunarak incelemektedir. Böylece makale klasik sonrası düşünürlerin İbn Sînâcî bilim anlayışının önemli bir yönünün alınılanmasını gün ışığına çıkarmaktadır.

Anahtar Kelimeler: İbn Sînâcî bilim teorisi, bilimlerin konusu, haysiyet kaydı, Sadrüşşerîa, et-Tavzîh, Teftâzânî, et-Telvîh.

