Islam and Rationality

*The Impact of al-Ghazālī. Papers Collected
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Recent studies of al-Ghazālī, including several included in this volume, have emphasized al-Ghazālī's deeply complicated involvement with philosophy. The interest in his philosophical thought marks a welcome departure from previous scholarship, which has tended to take al-Ghazālī's dismissal of the "incoherence of the philosophers" at face value. Most studies have focused on al-Ghazālī's engagement with peripatetic philosophy as mediated and developed by Avicenna (Ibn Sīnā, d. 428/1037).[1] Looking beyond Avicenna, Stephen Menn has pointed out al-Ghazālī's adoption of the autobiographical style of Galen of Pergamon (d. *c.* 200 CE) and the role of its precedent in al-Ghazālī's fashioning of his own intellectual persona in his famous *al-Munqidh min al-ḍalāl* (*The Deliverer from Error*).[2] My aim in this chapter is to pursue the issue of al-Ghazālī's engagement with Galen further by examining his use of the latter's teleological approach as a means of reasoning toward the nature of God as well as of analyzing and elaborating on the divine law. I will argue that al-Ghazālī's thought contains a certain methodological and substantive orientation that owes an identifiable debt to Galen. This orientation can be described as empiricist, in that it bases conclusions on inductive reasoning from empirical observations; and it is fundamentally teleological, in that it assumes the existence of a divine, providential *télos* (Gr. "end, goal, purpose") aimed at perfecting creation for the benefit of its creatures (*maṣlaḥa*). This empiricist teleology is evident in a number of al-Ghazali's writings, especially in his *al-Ḥikma fī makhlūqāt Allāh* (*The Wisdom in God's Creations*), and it is central to his theory of the "aims of the law," *maqāṣid al-sharīʿa*.

I will first outline the teleological principle in al-Ghazālī's legal thought and show how he applies this principle and its accompanying terminology to the much wider issue of learning about God in creation. I will then investigate the sources from which al-Ghazālī is likely to have drawn his teleology. I suggest that his main inspiration was the work of Galen, both directly through its Arabic translation and indirectly through the mediation of Avicenna and a

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1 See, e.g., Janssens, "Al-Ghazālī's *Tahāfut*," or Griffel, *Al-Ghazālī's Philosophical Theology*.

2 Menn, "The *Discourse on the Method* and the Tradition of Intellectual Autobiography."

cluster of texts that entered Arabo-Islamic thought via translations and rework-ings of late antique Christian works. I conclude with a brief discussion of the most innovative feature of al-Ghazālī's teleology, namely, its integration of the empirical observation of creation and the study of Qurʾanic scripture into a single epistemological framework.

Teleology in Law

The idea that the divine law serves human benefit (*maṣlaḥa*)[3] was historically most fully elaborated by Muʿtazilite thinkers, and it was closely connected to the ethical claim that God is obligated to bring about the optimum in His cre-ation.[4] Abū Bakr al-Qaffāl al-Shāshī (d. 365/976), a Shāfiʿī jurist whose legal thought was deeply influenced by Muʿtazilite ethics, wrote:

> If you affirm that things have a creator who is wise and powerful, then He must intend good for His servants, rendering satisfaction for them accord-ing to virtuous governance that is based on seeking their benefit.[5]

For al-Qaffāl as for the Muʿtazilites in general, the beneficiality of the law was the necessary conclusion of a deductive process of reasoning: from the divine attributes of wisdom and power, they deduced that the law issued by the wise and omnipotent Creator must benefit those for whom it is laid down. Arriving at this result is a logical necessity and thus requires no actual observation of the individual points of law.

Al-Ghazālī, as is well known, was at least nominally an Ashʿarite, and he shared his peers' disdain for Muʿtazilism. Why and how, then, did the rational-ist concept of *maṣlaḥa* come to play such a central role in his legal thought? An answer is suggested by the following passage in his legal-theoretical work *Shifāʾ al-ghalīl fī bayān al-shabah wa-l-mukhīl* (*The Quenching of Thirst in Explaining Analogy by Similarity and Suggestiveness*). After arguing that observance (*riʿāya*) of humans' good reason is one of the purposes of the lawgiver (singl. *maqṣūd al-shāriʿ*), he comments:

> Although we say that God may to do to His subjects as He wills and that the observance of their good reason is not incumbent upon Him, we do

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3   Opwis, *Maṣlaḥa and the Purpose of the Law*, 65–88.

4   Zysow, "Two Theories."

5   al-Qaffāl al-Shāshī, *Maḥāsin al-sharīʿa*, 25.

not deny that reason indicates what is advantageous and disadvanta-
geous and warns against ruin and urges the attractions of what is of
benefit. Nor do we deny that the messengers were sent for the good of
creation in religion and worldly matters as a bounty from God, not as a
duty obligatory upon Him (...). And we have only made this point lest we
be associated with the teachings of the Muʿtazila and lest the nature of
the student recoil from what we say for fear of being soiled with a rejected
dogma, contempt for which is rooted in the souls of the Ahl al-Sunna.[6]

Al-Ghazālī here makes a point of distancing his position from that of the
Muʿtazilites: although he, too, holds that the goal of the law is to promote the
benefit of humankind, he does not declare the rendering of benefit to be a
moral obligation upon God, as the Muʿtazilites had done. What allows him,
rather, to arrive at the same conclusion and to defend the inherent beneficial-
ity of the sacred law is the method of induction. In contrast to the deductive
approach of the Muʿtazilites, al-Ghazālī identifies observable human needs on
the one hand and patterns within the body of the law on the other and then
points out that the latter display the feature of appropriateness (*munāsaba*) in
catering to the former. The match between human needs and the rules of the
law, he argues, points toward the overall aims (*maqāṣid*) that the divine law,
through its individual rules, seeks to secure. One such aim, for example, is that
"property is intended (*maqṣūda*) to be preserved for its owners; this is known
by the prohibition to infringe on others' rights, and the obligation of liability,
and the punishment of the thief."[7]

These aims, once identified, can be used to formulate new legal rules to
adjudicate novel scenarios by evaluating potential new rules, and specifically
their "legal causes" (*ʿilal*), against the standard of the aims that have been iden-
tified inductively from the correlation between human needs and divine laws.
Figure 4.1 illustrates this relationship between human needs, legal rules, and
overall aims.

This conceptualization of the law can be called empiricist, because it relies
on the observation of individual, concrete phenomena—that is, individual
human needs and individual rules of the law—not only to propose a funda-
mental harmony between the two but also to develop a method for analogically
extending this harmonious relationship to hitherto undetermined cases. It is
also teleological, because it embodies the belief that the divine law, rather than
representing an arbitrary set of commands, is structured by identifiable and

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6   al-Ghazālī, *Shifāʾ al-ghalīl*, 162–63; the translation is from Zysow, "Economy of Certainty," 345.
7   al-Ghazālī, *Shifāʾ al-ghalīl*, 160.
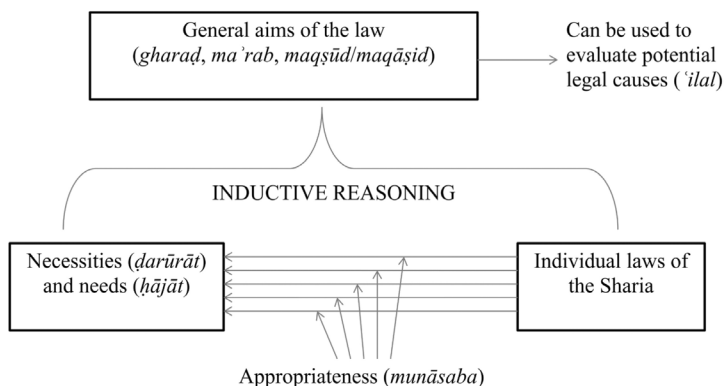
FIGURE 4.1 *Al-Ghazālī's empiricist teleology in law.*

intelligible aims whose overall function is to meet human needs and thus to secure the welfare of humankind.

Nature, Creation, and God

Al-Ghazālī's empiricist teleology was not limited to the realm of the law. His belief in an overall *télos* in divine creation, manifested in and graspable through the latter's details, permeated other aspects of his thought and several of his writings. For example, in *al-Maqṣad al-asnā fī sharḥ maʿānī asmāʾ Allāh al-ḥusnā* (*The Highest Goal in Explaining the Beautiful Names of God*), al-Ghazālī on several occasions directs the reader to

> observe God's attributes in the constitution of the human body. Its parts cooperate to establish an order (*niẓām*) for its purpose (*gharaḍ*) and aim (*maqṣūd*). The cosmos is the macrocosm of the human being.[8]

In other words, by observing phenomena in creation, whether within the human body or in the cosmos as a whole, one can discern an order in which parts cooperate to form a whole that achieves specific, recognizable aims. Al-Ghazālī thus depicts natural phenomena as manifestations of the divine names using the same methodology that allowed him to connect individual, beneficial legal rules to the overall aims of the law. He also produces a Qurʾanic proof text for his empiricist methodology, namely, the first half of verse 41:53:

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8   al-Ghazālī, *al-Maqṣad al-asnā*, 152, in the section on the divine name *mālik al-mulk*.

"We shall show them Our signs (*āyātunā*) on the horizons and within themselves until it will be clear to them that it is the truth."[9] Elsewhere, however, he makes clear that contemplation of the divine through His creation is inferior to contemplation of God Himself:

> The majority of mankind see everything except God. They seek evidence of Him in that which they see, and they are the ones who are addressed by God's words, "Have they not considered the dominion of the heavens and the earth and what things God hath created?" (Q 7:185). The devout (on the other hand) do not see anything except Him, and thus it is in Him that they seek evidence of Him, and they are the ones addressed by God's words, "Doth not thy Lord suffice, since He is witness over all creation?" (Q 41:53)[10]

In *al-Maqṣad al-asnā*, teleological references are scattered throughout the text. But in a chapter of *Iḥyāʾ ʿulūm al-dīn* (*The Revival of the Religious Sciences*) titled *Bayān kayfiyyat al-tafakkur fī khalq Allāh*, "Explication of How to Reflect on God's Creation" (henceforth *Tafakkur*), al-Ghazālī expands on this theme in a unified discussion of how the contemplation of God's handiwork (*ṣunʿ Allāh*) reveals His wisdom and allows the believer to encounter God's attributes.[11] Although al-Ghazālī admits that the objects of contemplation in creation are for all intents and purposes countless, he proceeds to outline, on about fifteen pages in the printed edition, the wisdom and benefits inherent in the sun, moon, plants, and animals, as well as the organs of the human body.

The same topic forms the subject of an independent treatise by al-Ghazālī, titled *al-Ḥikma fī makhlūqāt Allāh* (*The Wisdom in God's Creations*), which has received very little attention to date. Part of this neglect probably derives from Mourice Bouyges's and, following him, ʿAbd al-Raḥmān Badawī's listing of the work under the rubric of doubtful attributions to al-Ghazālī in their respective bibliographies of al-Ghazālī's writings.[12] Bouyges says that the attribution of *al-Ḥikma* to al-Ghazālī had been discussed among historians of Jewish philosophy. Bouyges himself adds, "we say only that *al-Ḥikma* would be worthy of al-Ghazālī."[13]

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9   al-Ghazālī, *al-Maqṣad al-asnā*, 107, on *al-ʿadl*.

10   al-Ghazālī, *al-Maqṣad al-asnā*, 139, on *al-ḥaqq*; the translation is from Robert Stade, *Ninety-Nine Names of God in Islam*, 99.

11   al-Ghazālī, *Iḥyāʾ ʿulūm al-dīn*, 15:2822–44.

12   Bouyges, *Essai de chronologie*, 89; Badawī, *Muʾallafāt al-Ghazālī*, 257.

13   "[D]isons simplement que le *Ḥikma* serait digne d'Algazal (…)"; Bouyges, *Essai de chronologie*, 89.

TABLE 4.1   *A comparison of corresponding sections in* al-Ḥikma fī makhlūqāt Allāh *and* Bayān kayfiyyat al-tafakkur fī khalq Allāh *in al-Ghazālī's* Iḥyāʾ ʿulūm al-dīn.

Ḥikma, 47	*Tafakkur*, in *Iḥyāʾ*, 15:2827
Then consider how He raised the nose in the middle of the face, and made it beautiful, and opened up its two nostrils; and how He placed the sense of smell in it, so as to indicate through the inhaling of smells its food and drink, and to luxuriate in fragrant smells and to avoid what is filthy. And [the nose also allows one] to inhale the spirit/refreshment of life to nourish the heart and to cool the internal heat.	Then [consider how] He raised the nose in the middle of the face, and made it beautiful, and opened up its two nostrils; and how He placed the sense of smell in it, so as to indicate through the inhaling of smells its food and its nourishing qualities. And [the nose also allows one] to inhale through the opening of the nostrils the refreshment of the air to nourish the heart and to cool the internal heat.
ثُمَّ انظر كيف رَفَعَ الْأَنْف في وَسَطِ الْوَجْهِ وَأَحْسَنَ شَكْلَهُ وَفَتَحَ مَنْخَرَيْهِ وجعل فيه حاسة الشم ليستدل باستنشاق الروائح على مطاعمه و مشاربه و ليتنع بالروائح العطرة ويجتنب الخبائث القذرة و ليستنشق ايضا روح الحياة غِذَاءً لِقَلْبِهِ وَتَرْ وِيحًا لِحَرَارَةِ بَاطِنِهِ	ثُمَّ رَفَعَ الْأَنْف مِنْ وَسَطِ الْوَجْهِ وَأَحْسَنَ شَكْلَهُ وَفَتَحَ مَنْخَرَيْهِ وَأَوْدَعَ فيه حاسَّة الشمّ ليستدل باستنشاق الروائح على مطاعمه وأغذيته وليستنشق بِمَنْفَذِ الْمَنْخَرَيْنِ رَوْحَ الْهَوَاءِ غِذَاءً لِقَلْبِهِ وَتَرْ وِيحًا لِحَرَارَةِ بَاطِنِهِ

As Bouyges noted, the scholars of Judaism Abraham S. Yahuda and David Neumark had discussed *al-Ḥikma*, and both noted parallels between it and the *Tafakkur* chapter in al-Ghazālī's *Iḥyāʾ*.[14] Neither expressed doubts concerning *al-Ḥikma's* authenticity, although Yahuda seemed to believe that Martin Schreiner had called its attribution to al-Ghazālī into question.[15] Neumark explained the similarities by assuming that al-Ghazālī copied the text of one book into the other, thus acknowledging al-Ghazālī's authorship of both works.[16] A comparison of the two works indeed reveals a close textual resemblance. A discussion of the features of the nose, presented in Table 4.1, provides an example. (Note that since neither text has been critically edited, the textual variation should be viewed with caution.)

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14   Yahuda, *Prolegomena*, 11, n. 2; Neumark, *Geschichte der jüdischen Philosophie*, 1:487.

15   Schreiner, review of *Résumé des réflexions*, 124. Schreiner, however, seems to have simply been agnostic regarding the work's authenticity.

16   Neumark, *Geschichte der jüdischen Philosophie*, 1:487.

The reason why historians of Jewish thought such as Yahuda and Neumark discussed the attribution of *al-Ḥikma* to al-Ghazālī lies in a problem of chronology that they thought this attribution would entail. A work by the Jewish mystic Baḥya ibn Paqūda (fl. *c.* 431/1040) displays close parallels to *al-Ḥikma*, suggesting that Baḥya was familiar with the text; but Baḥya lived perhaps half a century before al-Ghazālī in Saragossa in al-Andalus.[17] Yahuda assumed that Baḥya copied from al-Ghazālī and thus must have lived after 1100, yet already Neumark suggested that the similarities might stem from a common source used by both Baḥya and al-Ghazālī.[18] The apparent problem was fully solved in 1938 by David Z. Baneth, who demonstrated that both Baḥya and the author of *al-Ḥikma* drew on an earlier text, *al-Dalāʾil wa-l-iʿtibār* (*Indications and Consideration*), which I will discuss below.[19]

More recently, Eric Ormsby has also voiced doubt regarding the authenticity of *al-Ḥikma*. His conclusion, made in a footnote, is based on the alleged existence of Muʿtazilite elements in the work;[20] however, he does not give details, and I have been unable to find any such elements in the text of *al-Ḥikma*. He also notes that the work is not mentioned in al-Ghazālī's other books nor in classical lists of his writings. However, this argument from silence is particularly weak with respect to a minor work such as *al-Ḥikma*, and in fact a work called *Kitāb Badāʾiʿ ṣunʿ Allāh* (*The Book of God's Marvelous Handiwork*) is named in the list of al-Ghazālī's works compiled by Abū ʿAbdallāh al-Wāsiṭī (d. 776/1374).[21] It seems likely that this is an alternative title for *al-Ḥikma*.[22] Ormsby mentions some parallels between *al-Ḥikma* and passages in the *Iḥyāʾ*, suggesting that these are attributable to shared sources used by the authors—especially Galen. But the parallel passages shown in Table 4.1, for example, are not found in the most likely source texts. The clear correlation, both structural and substantive, between *al-Ḥikma* and *Tafakkur*, together with the universally attested authorship of al-Ghazālī in the extant manuscripts,[23] make al-Ghazālī's authorship of *al-Ḥikma* seem almost certain.

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17   Lobel, *Sufi-Jewish Dialogue*, 119.

18   Yahuda, *Prolegomena*, 12; Neumark, *Geschichte der jüdischen Philosophie*, 1:487.

19   Baneth, "Common Teleological Source," 23–30; (Pseudo-)Jāḥiẓ, *al-Dalāʾil wa-l-iʿtibār*.

20   Ormsby, *Theodicy in Islamic Thought*, 48, n. 46.

21   Edited in al-Aʿsam, *al-Faylasūf al-Ghazālī*, 183. Kātib Çelebī (d. 1067/1657), *Kashf al-ẓunūn*, 1:230, lists a work by the title of *Badāʾiʿ ṣanī* by al-Ghazālī. See also Badawī, *Muʾallafāt al-Ghazālī*, 398–99.

22   Yahuda, *Prolegomena*, 11, n. 2, had already pointed to the possibility that the book is identical with *ʿAjāʾib ṣunʿ Allāh*, which appears in the list of al-Ghazālī's works in al-Murtaḍā al-Zabīdī (d. 1205/1791), *Itḥāf al-sāda*, 1:42.6. See also Badawī, *Muʾallafāt al-Ghazālī*, 396, 399. The two titles *ʿAjāʾib* and *Badāʾiʿ ṣunʿ Allāh* are likely variants of one and the same work.

23   Badawī, *Muʾallafāt al-Ghazālī*, 257.

Al-Ḥikma fī makhlūqāt Allāh is structured by the various areas of creation that al-Ghazālī addresses: the heavens, the sun, and the planets (twelve pages in the printed edition); the sea (three pages); water (two pages); air (four pages); fire (four pages); birds (eight pages); beasts of burden (one page); insects and spiders (eight pages); fish (four pages); and the human body (twenty-six pages). Al-Ghazālī introduces each section by quoting a relevant Qurʾanic verse. So, for example, the section on the anatomy of the human body is prefaced by the famous verses on foetal development at the beginning of Sūrat "al-Muʾminūn" (Q 23:12–14).[24] These verses are then followed by accounts of how the various body parts cooperate to serve the overall function of pre-serving the human body, accompanied by the argument that the way they are constructed is optimal; that is, they could not have been designed better. For al-Ghazālī, the beneficial nature of creation and its perfection serve as signs that point toward God. The most precious of these signs is the human intellect, because it is at the same time a supreme sign of God's marvelous handiwork and capable of deciphering God's other signs.

From the element of design that he sees as ever-present in creation, al-Gha-zālī inductively concludes that the goal of creation is to promote benefit and to avoid harm—the very same logic that he proposed for the divine law in his works of legal theory, which derived the purposeful nature of the law from the observed correlation between the law on the one hand and the generation of benefit and fulfillment of needs on the other. For example, a description of the various benefits of water leads to conclusions regarding God's intentions and nature:

> So behold the vastness of this blessing and the ease of accessing it, and yet [our] unawareness of its real value, despite the intensity of the need for it, to the extent that were it to become scarce, life in this world would become miserable. From this, we know that God, by sending it down and making it easy [to procure], wished the world to be inhabited by animals, plants, and minerals, as well as [providing] other benefits [so bountiful] that someone trying to enumerate them will fall short. So praise be to the great dispenser of favors.[25]

A close reading of *al-Ḥikma* reveals that also the work's terminology mirrors that of al-Ghazālī's legal discussions. Table 4.2 presents a summary of the tele-ological terms used in *al-Ḥikma* and their relative frequency.

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24   al-Ghazālī, *al-Ḥikma fī makhlūqāt Allāh*, 43.
25   Ibid., 36–7.

TABLE 4.2   *Occurrences of teleological terms in al-Ghazālī's Ḥikma.*

Root	Terms used	Number of occurrences
Terms denoting the fulfillment of human benefit and needs:		
n-f-ʿ	نفع, منافع, منفعة	62
ṣ-l-ḥ	مصلحة, أصلح	57
h-w-j	محتاج, حاجة	57
Terms denoting harm and necessity:		
f-s-d	مفاسد, مفسدة	9
ḍ-r-r	ضرورة, ضرر	28
Terms denoting divine *télos*:		
q-ṣ-d	مقاصد, مقصد, قصد	14
ʾ-r-b	مآرب, مأرب	9
Terms denoting suitability and appropriateness:		
l-ʾ-m	يلائم, ملاءمة	2
n-s-b	مناسبة	8
w-f-q	وفاق, موافقة	at least 5

Al-Ghazālī's Sources

What and who inspired al-Ghazālī's teleological approach? Al-Ghazālī's Ashʿarite affiliation cannot sufficiently explain his teleological approach. While al-Ashʿarī himself employed teleological arguments, the Ashʿarī school subsequently sidelined these arguments to emphasize God's sovereign will vis-à-vis the Muʿtazilite claim that God was obligated to create the optimum (*al-aṣlaḥ*) and that the law therefore had to serve humans' best interests.[26] While the idea that the law serves human benefit appears to have been a universal assumption of Islamic jurists, including Ashʿarīs,[27] this purposefulness remained strangely undertheorized in the wider Ashʿarī system, both in law and in theology.[28]

The next obvious source would be Avicenna. As is becoming increasingly evident, Avicenna had a strong influence on al-Ghazālī. Al-Ghazālī's scrapbook of Avicennan quotations, MS London Or 3126, shows that the material he

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26   Compare al-Ashʿarī's *al-Lumaʿ*, 17–19, with Abū Bakr al-Bāqillānī's commentary, which is quoted in Ibn Taymiyya, *Darʾ taʿāruḍ al-ʿaql wa-l-naql*, 7:304–6.

27   Zysow, "Economy of Certainty," 347.

28   For al-Ghazālī's teacher al-Juwaynī, see Opwis, *Maṣlaḥa and the Purpose of the Law*, 41–5.

received from Avicenna included texts that affirmed a teleological structure in creation. In this work, al-Ghazālī quotes the metaphysical section of Avicenna's *al-Shifāʾ* (*Healing*), which urges his readers to "contemplate the state of the usefulness of the organs in animals and plants and how each has been created. There is [for this] no natural cause at all, but its principle is necessarily [divine] providence."[29] This passage is immediately followed in the manuscript by another quotation from Avicenna's *al-Shifāʾ* that also invokes a teleological argument. Further, the second quotation makes reference to anatomical details (eyebrows, eyelashes, and the arches of the feet) and uses teleological terminology familiar from al-Ghazālī's *al-Ḥikma*, including the concepts of need (*ḥāja*), benefits (*manāfiʿ*), necessity (*ḍarūra*), and providence (*ʿināya*).

A second indication of the overlap between Avicenna and al-Ghazālī in terms of the teleological approach can be found in Avicenna's *al-Ishārāt wa-l-tanbīhāt* (*Pointers and Reminders*), where Avicenna acknowledges the argument from design even though he discounts it vis-à-vis the "superiority" of metaphysical arguments for God's existence. Contemplating pure being, he claims, is sufficient to establish God's existence and oneness; it is not necessary to consider God's creation, "even though it is an indicator toward Him" (*wa-in kāna dhālika dalīlan ʿalayhī*).[30] (In his commentary on the *Ishārāt*, al-Ṭūsī justifies this bifurcation by arguing that while contemplation of creation yields only probable knowledge, contemplation of God's self leads to certain knowledge.)[31] As Qurʾanic proof text, Avicenna quotes the same verse that al-Ghazālī would also later call upon in his *al-Maqṣad al-asnā*, namely, 41:53. For both Avicenna and al-Ghazālī, empirical reasoning from the design of creation represents a viable, though inferior, path to recognizing God, while the contemplation of God Himself is the high road, reserved for the elect.

Avicenna was familiar with the teleological argument and even, it seems, endorsed it in principle. However, he was a metaphysician, and his use of the argument appears to be limited to the minor instances quoted by al-Ghazālī. Al-Ghazālī's adoption and development of the teleological approach as a prominent feature of his philosophical thought thus clearly goes beyond Avicenna's engagement with teleology, and it suggests that the primary source of al-Ghazālī's engagement lies elsewhere. This primary source, I believe, was the Graeco-Roman physician Galen of Pergamon and his work *De usu partium* (*On the Usefulness of the Body Parts*)—a connection that Ormsby speculatively

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29   Ibn Sīnā, *al-Shifāʾ*, *al-Ilāhiyyāt*, 362; cf. MS London Or 3126, fol. 238a.

30   Ibn Sīnā, *al-Ishārāt wa-l-tanbīhāt*, 3:54–5.

31   Ibid.

endorses but does not explore.[32] *De usu partium* is a substantial anatomical work about the various parts of the body, their constitution and function. Although the bulk of the work consists of minute and detailed anatomical descriptions, Galen always concludes his descriptions by emphasizing that the body part or organ under study is perfectly designed to fulfill its function and therefore indicates the existence of a wise creator. Stephen Menn has already argued that al-Ghazālī found in Galen a kindred spirit in his disillusionment with the limitations of the rationalism of the philosophers and that he saw in Galen's stress on proper demonstration and experience a viable corrective to the philosophers' shortcomings. Al-Ghazālī mentions two of Galen's books in his *Munqidh*, one of which is *De usu partium*, in Arabic *Manāfiʿ al-aʿḍāʾ*:

> The second group are the natural philosophers (*al-ṭabīʿiyyūn*): they are a party who devote most of their efforts to investigating the natural world and the wonders of animals and plants and plunge into the science of the anatomy of the parts of animals. And what they see there of the wonders of God's craftsmanship (*ʿajāʾib ṣunʿ Allāh*)[33] and the inventions of His wisdom compels them to acknowledge a wise creator who is aware of the ends and purposes of things (*ghāyat al-umūr wa-maqāṣidihā*). No one can study anatomy and the wonders of the benefits of the parts (*manāfiʿ al-aʿḍāʾ*) without acquiring this necessary knowledge of the perfection of the governance of the constructor in the construction of animals, and especially the construction of human beings.[34]

The "natural philosophers," for al-Ghazālī, represent a group that holds that things are what they are due to the agency of natures: "They believe that the faculty of intelligence in humans follows the mixture [of the four humors]." Their denial of the afterlife makes them unbelievers; however, what distinguishes them from the materialists (*dahriyyūn*), whom al-Ghazālī discusses in a previous paragraph, is the former's recognition that natures or the "four humors" are causal intermediaries that themselves depend on God as their creator.[35] Given that Galen's *De usu partium* was the most prominent work of natural philosophy on anatomy and that al-Ghazālī referenced the title of the

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32   Ormsby, *Theodicy in Islamic Thought*, 45–6.

33   Note that this is quite likely the alternative title of the *Ḥikma*.

34   al-Ghazālī, *al-Munqidh min al-dalāl*, 19; the translation follows Menn, "Discourse on the Method," 184, with some modifications.

35   This was, indeed, Galen's position; see Hankinson, *Cause and Explanation in Ancient Greek Thought*, 382–8.

book in his writing, it is clear that al-Ghazālī was familiar with the work, which had been available in a complete Arabic version since Ḥunayn ibn Isḥāq's (d. 260/873) translation in the third/ninth century.[36] An examination of the Arabic translation of the work, which remains unedited, reveals that most of the material in al-Ghazālī's discussion of the human body in *al-Ḥikma* indeed originates from Galen's *De usu partium*. Furthermore, much of the repertoire of teleological terms found in *al-Ḥikma*—including *maqāṣid*, *ma'ārib*, *manfa'a*, and *'ināya*—is already found in the Arabic version of *De usu partium* as well as in Arabic translations of late antiquity works drawing on it (see below).[37] The only significant Ghazalian term I have not yet encountered in these earlier works is the root n-s-b (*munāsaba*, *munāsib*, etc.) to denote the appropriateness of the relationship between creation or individual laws on the one hand and God's overall aims on the other. In *Manāfi' al-a'ḍā'* (as also in places in al-Ghazālī's own writing)[38] the same idea seems to be expressed primarily by the root w-f-q (*muwāfaqa*, *awfaq*, etc.), as when judging the specific connection between fingers and muscles to be "appropriate to what is needed and beneficial (*muwāfiq li-l-ḥāja wa-l-manfa'a*), and this is because the Creator (…) did not make this in an idle manner or in jest."[39] However, Ḥunayn uses the term *munāsib* in his description of *De usu partium*, so it is possible that it is also found in the translation itself.[40]

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36   For Ḥunayn ibn Isḥāq's inclusion of *De usu partium* in a list of the works of Galen that he translated, see Bergsträsser, "Ḥunain ibn Isḥāq," 27–8 (Arabic text) and 22 (German). At least five manuscript copies of the Arabic text appear to be extant: MS Bibliothèque Nationale de France, Fonds arabe 2853, copied in 682/1283; National Library of Medicine, Bethesda, Maryland, MS A 30.1, undated (*c.* 17th century); Escorial, MS 850, copied in 539/1145; Iraqi National Museum, Baghdad, MS 1378–5, undated (*c.* 16th century); and John Rylands, Manchester, MS 809, undated (*c.* 17th century). See Ullmann, *Die Medizin im Islam*, 41, and Sezgin, *Geschichte des arabischen Schrifttums*, 3:106. Subsequent references to *Manāfi' al-a'ḍā'* are to the first mentioned manuscript at the BNF Paris, which is complete and well readable.

37   For uses of the root ṣ-l-ḥ see *Manāfi' al-a'ḍā'*, e.g., fols. 26b, 43b, and 58b; for n-f-' see, e.g., 16a, 40b, and 43a; for *'ināya* see, e.g., 34b, 55a, 58a, and 60a; for ḥ-w-j see, e.g., 16a, 62b, and 63a; for '-r-b see *al-Dalā'il wa-l-i'tibār*, e.g., 2 and 51.

38   For al-Ghazālī's use of the root w-f-q see, e.g., *al-Ḥikma fī makhlūqāt Allāh*, 19, 46, 51, and 70.

39   Galen, *Manāfi' al-a'ḍā'*, fol. 16a. For additional examples, see fols. 34b, 43b, 58b, 62b, and 63a.

40   Bergsträsser, "Ḥunain ibn Isḥāq," 28 (Arabic text).

Avicenna and Galen

The influence of Galen provides an explanation for a riddle involving the two passages that al-Ghazālī copied from Avicenna's *al-Shifāʾ*. The first of these, quoted above, straightforwardly affirms divine teleology in the structure and functioning of creation. The second, however, veers into the subject of prophecy:

> Reciprocal transactions (*al-muʿāmala*) must have law and justice (*sunna wa-ʿadl*), and law and justice necessarily require a lawgiver and a dispenser of justice (*sānn wa-muʿaddil*). This [lawgiver] must be in a position that enables him to address people and make them adhere to the law. He must, then, be a human being. He must not leave people to their private opinions concerning [the law] so that they disagree, each considering as just what others owe them, unjust what they owe others.
>
> Thus, with respect to the survival and actual existence of the human species, the need (*ḥāja*) of this person is greater than the need for such benefits (*manāfiʿ*) as the growing of hair on the eyebrows [and the pulpebral margins], the concave shaping of the arches of the feet, and many others that are not necessary (*ḍarūra*) for survival but are, at best, useful for it. [Now,] the existence of the righteous man to legislate and to dispense justice is possible, as we have previously remarked. It becomes impossible, therefore, that divine providence (*ʿināya*) should ordain the existence of those [former] benefits (*manāfiʿ*) and not these [latter], which are their bases.[41]

Al-Ghazālī's combination of these passages into a single section in his Avicennan scrapbook may seem puzzling, but it is explained by the likelihood that al-Ghazālī knew that they have a common origin and purpose. It seems that Avicenna, too, was familiar with Galen's thought, and these passages formed part of his response to Galen—who championed the argument from design in favor of a wise creator but who did not believe in prophecy. These ideas coincide in the eleventh book of *De usu partium*, where Galen describes the beneficial design of the eyebrows and the eyelashes, which protect the eye by their existence but do not interfere with its function because they cease to grow at a certain length. In the context of this discussion Galen remarks that

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41   Ibn Sīnā, *al-Shifāʾ*, *al-Ilāhiyyāt*, 364–5, Marmura's translation.

> Moses claims that it is sufficient that God wishes to give shape and form to the matter in order to let it take shape and form instantly, and this because he believes that all things are possible with God … We do not accept this, but say: There are things which are impossible in themselves, and these God never wishes to occur, but he wishes only possible things to occur, and among the possible things he only chooses the best and most adequate and excellent (*ajwaduhā wa-awfaquhā wa-afḍaluhā*).[42]

Although Galen does not explicitly address the issue of prophecy, his juxtaposition of the views of Moses and Aristotle and his preference for the latter shows that he did not accord Moses any exceptional status.

Maimonides's rebuttal of Galen's position is well known, but the passages that al-Ghazālī quotes from Avicenna's *al-Shifāʾ* must be considered an even earlier refutation of Galen via an *a fortiori* argument. Avicenna makes implicit reference to Galen's arguments for the teleological nature of the constitution of the human body down to the hairs surrounding the eye, which, like other parts of the body, are designed for the optimal facilitation of human life. He then goes on to argue that the sending of prophets is a necessary corollary of such a teleology, since the existence of prophets is even more necessary for human flourishing than the practical length of eyebrows and lashes.

Al-Ghazālī, Galen, and Intermediaries

Al-Ghazālī also received Galen's ideas through indirect routes. As noted above, Baneth pointed out already in 1938 that al-Ghazālī's *al-Ḥikma* drew on a text titled *al-Dalāʾil wa-l-iʿtibār* (*Indications and Consideration*)[43] which seeks to discredit the positions of atheists and Manicheans by arguing for the visibility of divine providence in the teleological features of creation, from the planets all the way down to the human body, animals, and plants. Although the printed edition is attributed to al-Jāḥiẓ, it now seems likely that the author was in fact his contemporary, the Christian Jibrīl ibn Nūḥ al-Anbārī (fl. 240/850), whose name appears on the manuscript.[44] Jibrīl was the grandson of Abū Nūḥ

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42   Schacht and Meyerhof, "Maimonides against Galen," 70–1, quoting Galen's *De usu partium*, translated from Greek to English as *Galen on the Usefulness of the Parts of the Body*, 2:532–3; for the Arabic text, see *Manāfiʿ al-aʿḍāʾ*, fol. 203a.

43   In its manuscript the text is called *al-Fikr wa-l-iʿtibār* and will be referred to as such in the footnotes.

44   al-Anbārī, *al-Fikr wa-l-iʿtibār*.

al-Anbārī, who was a *catholicos* of Nusaybin (Nisibis) in the so-called Jazira of Upper Mesopotamia and the translator of Greek texts into Arabic.[45]

A separate, recently edited work with a very similar title, *al-ʿIbar wa al-iʿtibār* (*Examples and Consideration*), has similar content and is likewise attributed to al-Jāḥiẓ. Hamilton A. R. Gibb, who examined the manuscript, seems to have found no reason to doubt its attribution.[46] In the introduction, the author lists a number of works that he draws on. These include *al-Dalāʾil wa-l-iʿtibār* as well as a *Kitāb al-Tadabbur* (*Book of Reflection*) by Diodorus of Tarsus (d. *c.* 390 CE) and *De providentia* (*On Divine Providence*) by Theodoret of Cyrus (d. around 462 CE).[47] Diodorus's work is no longer extant, but the author of *al-ʿIbar* mentions it in the context of Diodorus's opposition to the pagan Emperor Julian the Apostate (reg. 361–363 CE), so it was likely a defense of Christian theology. Theodoret's *De providentia* has been edited and translated. The work provides a defense of divine providence by appealing to, among other things, the beneficial design of the human body.[48] It contains clear, systematic parallels with both *al-Dalāʾil* and *al-ʿIbar*. As but one example, all three works make the argument that the human speech organ is the model for musical instruments made out of bronze.[49] All three likewise follow Galen's *De usu partium* in drawing a teleological inference from the anatomical description of eyelashes and eyebrows.[50]

These texts, in turn, display significant overlap with al-Ghazālī's *al-Ḥikma*. However, a comparison of *al-Ḥikma*, *al-Dalāʾil*, and *al-ʿIbar* reveals that al-Ghazālī drew specifically on *al-Dalāʾil* but not on *al-ʿIbar* in his work. Table 4.3 provides an example. The discussion of memory in *al-ʿIbar* is clearly influenced by *al-Dalāʾil*, as indeed the author of the former admits. However, the source text is used selectively, in altered wording and with some information (e.g., the point about memory's retention of what one has received and given) omitted in the retelling. *Al-Ḥikma*, by contrast, corresponds almost verbatim to *al-Dalāʾil* and reproduces faithfully all of the material absent in *al-ʿIbar*.

While the indebtedness of the two *Iʿtibār* works to Galen's *De usu partium* is evident, it seems likewise clear that their source for the text was not Ḥunayn ibn Isḥāq's translation. This is indicated by a quotation from Hippocrates that

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45   See van Ess, *Theologie und Gesellschaft*, 2:469, 3:23, and 4:208.

46   Gibb, "Argument from Design." On the relationship between *al-Dalāʾil wa-l-iʿtibār*, *al-Fikr wa-l-iʿtibār*, and *al-ʿIbar wa-l-iʿtibār*, see Daiber, *Das theologisch-philosophische System*, 159–60.

47   Gibb, "Argument from Design," 152–4; Theodoret, *On Divine Providence*.

48   Theodoret, *On Divine Providence*, 4 (introduction) and discourse no. 3.

49   Theodoret, *On Divine Providence*, 27; *al-Dalāʾil wa-l-iʿtibār*, 50; *al-ʿIbar wa-l-iʿtibār*, 86.

50   Theodoret, *On Divine Providence*, 37; *al-Dalāʾil wa-l-iʿtibār*, 52; *al-ʿIbar wa-l-iʿtibār*, 87.

TABLE 4.3 *A comparison of corresponding sections in* al-Ḥikma fī makhlūqāt Allāh, al-Dalā'il wa-l-i'tibār, *and* al-ʿIbar wa-l-i'tibār.

Ḥikma, 63	*Dalā'il*, 58-9	*'Ibar*, 94-5
أرأيت لو نقص من الإنسان من هذه الصفات الحفظ وحده كيف كون يكون حاله وكان لا يحفظ ماله وما عليه وما أصدر وما أورد وما أعطي وما أخذ وما رأى وما سمع وما قال وما قيل له و لم يذكر من أحسن إليه ولا من أساء له ولا من نفعه ممن ضَرّه وكان لا يهتدي لطريق لو سلكه ولا لعلم ولو درسه ولا ينتفع بتجّربه ولا يستطيع أن يعتبر بمن مضى. فانظر إلى هذه النعم	أرأيت لو نقص من الإنسان من هذه الخلال الحفظ وحده كيف كانت تكون حاله وكم من خلال كان سيدخل عليه في أموره اذا لم يكن يحفظ ماله وما عليه وما أخذ وما أعطي وما رأى وما سمع وما قال وما قيل له و لم يذكر من أحسن إليه ولا من أساء اليه وما نفعه ما ضَرّه ثم كان لا يهتدي الطريق لو سلكه مرارا لا تحصى ولا يعقل علما ولو درسه عمره ولا ينتفع بتجربة ولا يستطيع أن يعبر شيئاً على ما مضى فانظر إلى هذه النعم	أوأيت لو نقص الإنسان من هذه الخلال و الحفظ واحد كيف كانت تكون حالته اذا لم يحفظ ماله وما قيل له و لم يذكر من أحسن إليه و تعدى عليه وما نفعه من و كيف كان يرجع في طريق سلكه الى موضع فارقه و متى كان يعي علما و يبقى عليه معرفة شيء و ينتفع بتجربة ويعتبر شيئا بشيء قد غاب عنه خليقا أن يكون أمره بحبك بل كان ينسلخ من الانسانية فانظر من النعمة على الانسان

is reproduced both in *De usu partium* and in the *I'tibār* works. In the passage, Hippocrates describes saliva as the "vehicle of nutrition." Ḥunayn translates this expression straightfowardly as *markab al-ghadhā'*, while the *I'tibār* texts contain the more florid translation *maṭiyyat al-ghadhā'*.[51] The discrepancy supports the contention that the Galenic material in the *I'tibār* works made its way into the Islamic discourse through late antique reworkings and via a route of translation that bypassed the node of Ḥunayn.

The third/ninth century thus witnessed an influx into Islamic thought of teleological ideas that had initially been crafted by Christian thinkers to counter Manichean and Greek philosophical objections to the existence of God by demonstrating the presence of a divine *télos* in the design and structure of manifest reality. These works drew on Galen's *De usu partium*, which, though

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51   Compare *Galen on the Usefulness of the Parts of the Body*, 1:207, and *Manāfiʿ al-aʿḍā'*, fol. 63b, with (Pseudo-)Jāḥiẓ, *al-Dalā'il wa-l-i'tibār*, 55, and *al-ʿIbar wa-l-i'tibār*, 92; see also *al-Fikr wa-l-i'tibār*, fol. 179a, which also has "*maṭiyyat al-ghadhā'*."

not written by an Abrahamitic monotheist, was intended to serve, the author asserts, as a "true hymn of praise to our Creator" (*tasbīḥ wa-taqdīs khāliṣ li-khāliqinā*).[52]

Nature and Scripture

Al-Ghazālī inherited the teleological discourse from the Greek philosophical thought of Galen via the Christian theology of Jibrīl al-Anbārī (and of Diodorus and Theodoret) as well as the Muslim philosophy of Avicenna; these channels are illustrated schematically in Figure 4.2. The primary innovation that al-Ghazālī contributed to this discourse was its integration with Qurʾanic scripture. Galen (obviously) and al-Anbārī (evidently) do not quote the Qurʾan or any other sacred texts but rather limit their discussions to observable phenomena in nature. Al-Ghazālī, by contrast, embeds the empirical approach firmly in a scriptural framework by establishing inherent links between the two. He begins *al-Ḥikma* with the verse "Say: Behold what is in the heavens and on earth" (Q 10:101), thereby defining the empirical approach as the execution of a divine command. Further, he introduces each section of the work with a Qurʾanic verse that demonstrates the correlation between empirical observation and revelation.

Most interesting, however, are al-Ghazālī's reflections on the nature and potential of empiricism at the end of the *Tafakkur* chapter in the *Iḥyāʾ*:

> When the natural philosopher (*al-ṭabīʿī*) considers all that we have considered [here], his consideration will be a cause of his misguidance (*ḍalālihi*) and misery. And when the divinely aided person considers it, it will be a cause of his guidance and felicity. There is no speck of dust in heaven or on earth that God does not use to misguide through it whomever He wishes and to guide through it whomever He wishes.[53]

Al-Ghazālī stresses that observation of the same phenomena by an enlightened person (*muwaffaq*) on the one hand and by a natural philosopher on the other can lead the two in diametrically opposed directions: the former to guidance and bliss and the latter to misguidance and misery. (After all, Galen rejected prophecy and professed belief in the eternity of the world in *De usu*

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52   The English translation is from the Greek, but it also fits the Arabic version. *Galen on the Usefulness of the Parts of the Body*, 189; *Manāfiʿ al-aʿḍāʾ*, fol. 55b.

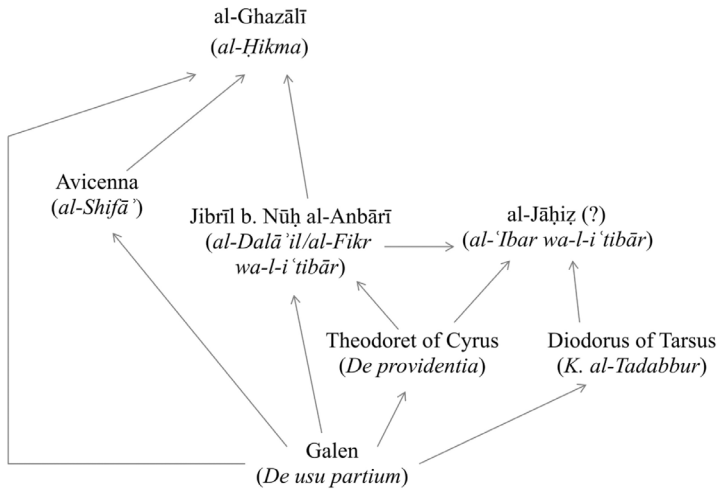53   al-Ghazālī, *Iḥyāʾ ʿulūm al-dīn*, 15:2844.

FIGURE 4.2 *Channels of transmission of Galen's teleology.*

partium.) His justification for this conclusion, namely, the statement that every particle in the cosmos can serve as a means of guidance as well as of misguidance, clearly refers to the Qurʾanic verse 2:26, "He guides by it [the Qurʾan] whom He wishes and leads astray (*yuḍillu*) with it whom he wishes, and he misleads no one but the evildoers." Here, then, we have come full circle: observing nature and reading the Qurʾan have been integrated into a single epistemological spectrum. Natural phenomena, in al-Ghazālī's conceptualization, are signs pointing toward God, in precisely the same way that the verses of the Qurʾan are literally signs (*āyāt*). By equating the signs in nature and the signs in scripture, al-Ghazālī is in effect raising the status of empirical observation and justifying the validity of its results, in contrast to the more dismissive attitude displayed by Avicenna toward contemplation of creation as a path to insight.

The Galenic discussions in al-Ghazālī's *al-Maqṣad al-asnā*, *Tafakkur*, and *al-Ḥikma* thus constitute a coherent hermeneutic approach to the cosmos, including humankind, nature, and divine revelation. It is an empiricist and teleological hermeneutics, in the same way that al-Ghazālī's conceptualization of the aims of the law (*maqāṣid al-sharīʿa*) represents an empiricist and teleological ethics: in each area, al-Ghazali begins with individual phenomena and inductively derives from them knowledge of God's commands and nature, respectively. In consequence, both theories suffer from the bane of empirical observation, namely, the inherent uncertainty of the knowledge that inductive reasoning produces. Avicenna still considered this a fatal weakness and

dedicated himself to the "high road" of allegedly certain metaphysical enquiry. Al-Ghazālī, on the other hand, appears to have chosen to follow a two-tiered approach, writing on metaphysics for the elite (see, for example, the introduction to his *Mishkāt al-anwār* [*Niche of Lights*])[54] while producing teleological treatises on the wonders of divine providence for non-metaphysicians.

Conclusion

The available evidence clearly suggests that al-Ghazālī was familiar with Galen's *De usu partium*, referencing it in *al-Munqidh* and drawing on it through Ḥunayn's Arabic translation as well as secondhand through Avicenna and through Jibrīl al-Anbārī, whose book, together with a host of similar Christian teleological works, entered Islamic discourse in the third/ninth century. Almost all of al-Ghazālī's teleological vocabulary, enumerated in Table 4.2, can be traced to these earlier works. The influence of this empiricist teleology is evident in al-Ghazālī's writings: he uses Galen's approach to exemplify, derive, and prove divine attributes by pointing at features in nature that create a sense of wonder (*ʿajāʾib*) and thus permit the beholder to follow his or her reason back to the originator of these wondrous features.[55] Al-Ghazālī employs the same teleological approach in the *Shifāʾ al-ghalīl* and in *al-Mustaṣfā*, arguing that divine law, like nature, displays a teleology that allows humans to learn about God (in the case of law, about His commands and His prohibitions) and that can be used fruitfully in the process of legal reasoning. In the realm of law this injection of a teleological methodology marked a breakthrough by providing a coherent and practical basis for the inclusion of considerations of human benefit in legal reasoning.[56]

Taking into account the influence of Galenic teleology on al-Ghazālī's thought helps us make sense of his otherwise perplexing views on creation, which fuse a voluntarist conception of God's activity with the famously cryptic statement that "there is in possibility nothing more wondrous than what is" (*laysa fī al-imkān abdaʿ mimmā kān*).[57] One could read both *Tafakkur* and *al-Ḥikma* as commentaries and defenses of this statement, that is, as empirical investigations into the perfect design that is observable in creation. The

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54   al-Ghazālī, *Mishkāt al-anwār*, 1–2.

55   al-Ghazālī, *al-Ḥikma fī makhlūqāt Allāh*, 17–18.

56   See Opwis, *Maṣlaḥa and the Purpose of the Law*, 65, and El Shamsy, "The Wisdom of God's Law."

57   Griffel, *Al-Ghazālī's Philosophical Theology*, 226.

confusion arises from mistakenly seeing al-Ghazālī in conversation either with the theological currents of Ashʿarite voluntarism and Muʿtazilite rationalism or with Avicennan philosophy, in which, as Frank Griffel has noted, "observational or empirical evidence of the perfection of God's creation plays next to no role."[58] In contrast to these, Galenic teleology, with its empirically grounded claim that the world was created with the utmost providence (*bi-l-ʿināya allatī lā ʿināya baʿdahu*),[59] enabled al-Ghazālī to argue for the perfection of creation without limiting divine agency.

What is remarkable is the seamlessness with which al-Ghazālī's manages to fuse Galenic thought with Qurʾanic descriptions of divine providence. Rather than being forced to rely solely on Galenic ideas to introduce teleology into the legal, philosophical, and theological debates of his time, al-Ghazālī appears to recover an element that was already present in the Qurʾan. The cluster of works discussed above shows that teleology, and particularly Galen's ideas, had been a hot topic in late antiquity, and the Qurʾanic discussion could fruitfully be read in the context of and in conversation with this debate. Nor did teleological arguments remain limited to the Qurʾan. Al-Ashʿarī himself was not averse to teleological reasoning,[60] and the famous *ḥadīth*-scholar Abū Ismāʿīl al-Khaṭṭābī (d. 388/998) penned a theological tract that emphasized the empirical dimension of reason and its ability to recognize design in nature.[61] By al-Ghazālī's time, however, teleology had fallen out of the discourses in which he participated, excepting some less rigorous discussions in works of Sufism.[62] Drawing directly and indirectly on Galen but at the same time grounding his approach squarely in scripture, al-Ghazālī succeeded in reintroducing teleology into the discourses of law and theology, which had become formalistic and voluntarist to the extent that they excluded considerations of divine design.

As of yet, there has been no systematic study of teleological thought in Islam that would allow us to judge the influence of al-Ghazālī's embrace of the teleological approach on later thought. However, a tentative survey demonstrates that Galenic teleology remains visible in the work of several major thinkers who followed al-Ghazālī, including Ibn Rushd (d. 595/1198), Ibn al-Nafīs (d. 687/1288), Ibn Taymiyya (d. 728/1328), and Ibn Qayyim al-Jawziyya

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58   Ibid.

59   Galen, *Manāfiʿ al-aʿḍāʾ*, fol. 34b.

60   See, e.g., al-Ashʿarī, *Risāla ilā ahl al-thaghr*, 147–56.

61   al-Khaṭṭābī, *al-Ghunya ʿan al-kalām wa-ahlihi*.

62   Griffel, *Al-Ghazālī's Philosophical Theology*, 226.

(d. 751/1351).[63] These appear to have deployed such teleological ideas to counterbalance the increasingly transcendentalizing forms of later Ashʿarism, which posited an unknowable God who created without purpose. The integration of Galenic teleology thus demonstrates that forms of Sunnī thought continued to draw actively, creatively, and explicitly on Greek philosophy in order to critique developments within Sunnī theology.

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