



BRILL

Avicenna on Animal Goods

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Abstract

Investigating historical sources for positions on animals and animal ethics within philosophy of the Islamic world is a profound challenge, given the quantity and diversity of possible source texts. This article argues that Ibn Sīnā's (Avicenna, d. 428/1037) philosophy provides a hitherto unappreciated account of animal well-being. By tracing his conception of providence to that of essences, and by highlighting the role of psychological powers in ensuring the attainment of essential goods, this article argues that Avicenna can account both for essential goods and interests proper to individual species and for the capacity of animals to attain these goods and interests. This account rests on Avicenna's rich teleology, which includes the role of the lawgiver as the upholder of justice within human society. In the end, human goods and animal goods are articulated with the same overarching account, which human beings are called to know.

Keywords

Animals – Avicenna – philosophy – animal ethics – providence – teleology

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الخير الحيواني عند ابن سينا

بثني سوّمَا

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الخلاصة

يمثل النظر في المصادر التاريخية بحثاً عن المواقف المتعلقة بالحيوانات وأخلاق الحيوان في الفلسفة الإسلامية تحدياً كبيراً، نظراً لكثرة المصادر وتنوعها. ندعي في هذا البحث أن لابن سينا (ت. 1037\428) تصورا لمصلحة الحيوان جديراً بالبحث إلا أنه لم يلق الاعتبار المناسب حتى الآن. فمن خلال ربط مفهومه للعناية الإلهية بمفهوم الماهية، وتسلط الضوء على دور قوى النفس في ضمان بلوغ المصالح الذاتية، ندعي أنه يمكن لابن سينا أن يقدم تصورا قادراً على تفسير الخير الذاتي والمصالح الخاصة بكل نوع على حدة، وقدرة الحيوانات على بلوغ هذا الخير وهذه المصلحة، بناءً على الفكر الغائي الثري عند ابن سينا، المؤسس على دور المشرّع باعتباره القائم بالعدل داخل المجتمع البشري. ففي نهاية المطاف، يتم التعبير عن الخير البشري والخير الحيواني بنفس التصور العام، المفروض على البشر معرفته.

الكلمات المفتاحية

الحيوانات - ابن سينا - الفلسفة - أخلاقيات الحيوان - العناية الإلهية - الغائية

Investigating historical sources for positions on animals and animal ethics within philosophy of the Islamic world is a profound challenge, given the quantity and diversity of possible source texts. Falling under the umbrella of philosophy are texts and thinkers of three disciplines: *falsafa* or Greek-influenced philosophy, *fiqh* or jurisprudence, and *kalām* or theology. The theological debates covered by contemporary scholarship include the long-appreciated Mu'tazilī concern for animal suffering (as in the case of 'Abd al-Jabbār (d. 415/1024), in Heemskerk 2000; and in varieties of commentaries on the Qur'an in Tlili 2012), and recent scholarship on animal well-being within jurisprudence includes the positions of the different schools of jurisprudence on the treatment of animals (according to which Shāfi'ism is most benevolent; Tlili 2015). Within philosophy, scholarship has been broadly limited to the examples of Abū Bakr al-Rāzī (d. 313/925 or 323/935), the Ikhwān al-Ṣafā' (fl. 4th/10th century), and Ibn Ṭufayl (d. 581/1185) (Adamson 2016). Important consideration of

animal well-being sometimes even occurs untethered to any of the three traditions (as in the case of Abū l-‘Alā’ al-Ma‘arrī (d. 449/1058); Blankinship 2020). Further, examination of animal thought and animal living is consistently present throughout philosophical texts and works that in turn utilize philosophical positions, such as medical texts, cosmologies, and encyclopedias of natural science and history.¹

Without doubt, Ibn Sīnā (Avicenna, d. 428/1037) is one of the most influential thinkers of philosophy of the Islamic world. He indeed wrote extensively about animals, for example in his scientific study *Kitāb al-Ḥayawān* (“The Book of Animals”), and many of these remarks are only recently receiving the attention they deserve (Alpina forthcoming a; earlier exceptions include Musallam 2011 and Kruk 2002). Much scholarship has been dedicated to the psychological power of estimation (*wahm*), which accounts for a variety of the sophisticated activities of which animals are capable. This work has in turn led to comparison of Avicenna’s position with contemporary philosophy of mind (Alwishah 2016). Nevertheless, it is unusual for specifically Avicennan (or Aristotelian, pre-Avicennan) texts to receive attention on the notion of animal ethics or animal well-being. This omission is owing partly to the fact that Avicenna, like many *falāsifa*, never dedicates a single discussion to the topic and partly to the fact that Avicenna’s rationally divided hierarchical metaphysics does not appear particularly inviting to non-rational animals. Further, Avicenna’s position as a controversial thinker within Islamic intellectual history does not encourage those looking for an explicitly *Islamic* ethics to consider his thought. These points notwithstanding, I think it would constitute a loss not to consider his work on the topic of animal well-being and animal ethics for two reasons, the first philosophical and the second historical. First, Avicenna’s theory offers a rich understanding of teleology, essences, and inter-related goods. While essentialism is not itself particularly popular in contemporary ethics, his account, I will argue, can get one to the notion of species norms, which does overlap with contemporary approaches to animal ethics (in addition to being a historically novel intervention on the question of providence and essences). There is, to put it plainly, a lot of good stuff there, if we are willing to do the digging and intellectual work. Second, Avicenna’s importance within the history of philosophy is undeniable, and his work was a basic starting

1 These are texts that include philosophical positions and exposition whether or not they engage in philosophical reflection per se. Here I have in mind texts like Ibn Abī l-Ash‘ath’s (d. 360/970 or shortly after) *Kitāb al-Ḥayawān* (“The Book of Animals”) and Zakariyyā al-Qazwīnī’s (d. 682/1283) *‘Ajā‘ib al-Makhlūqāt wa-Gharā‘ib al-Mawjūdāt* (“The Wonders of Created Beings and the Rarities of Existing Things”).

point for many post-Avicennan *kalām* thinkers as well. Thus, I am not arguing that Avicenna himself is a key *Islamic* thinker, but that insofar as we are looking to the history of Islamic thought for important positions on animals, we ought also consider *falsafa* texts and specifically those of Avicenna. Doing so not only enriches our historical understanding, but, as I will argue, offers us positive developments.

In this paper, I will explore the ways in which animals are related to the good and goodness in Avicenna's system. I approach this problem in three waves: first, by looking at the Avicenna's explicit remarks on providence; second, by bringing these remarks to bear on the concept of 'good' as it relates to animals and their essences; and third, by connecting the previous conclusions to Avicenna's remarks on animals' innate abilities to discern goods and evils. I will argue that, for Avicenna, providence supplies the embedded principle(s) of good directedness in the world responsible for regulating animal well-being in a meaningful and (loosely) normative way. Thus, Avicenna's theory of providence, discussion of estimation, and claims regarding human responsibility offer us clear evidence that he indeed found animals worthy of moral consideration and metaphysical protection. The final section of this investigation considers whether this theory makes a claim upon human beings regarding their treatment of animals. There, I explore the extent to which one may extract a richer, moral normativity from Avicenna's remarks, and, barring that, the basis Avicenna's theory might give us for constructing such a claim.

1 Avicenna on Providence

Since there are many existing studies on the topic of providence in Avicenna, I will only briefly discuss the basics of Avicenna's presentation in this section, before addressing particular points. In what follows, I will take a perhaps unusual approach, and gather evidence to build a positive account of the influence of providence in animal particulars. I will do so on two fronts. The first, discussed in the next section, is on the level of essences and the relation of essences to the good. The second, discussed in the section after, is on the level of the awareness of the good granted to individual animals. My goal in these two sections is to present a case for a consistent concern on the part of Avicenna to account for the way in which goodness might be innately present in material particulars.

Avicenna's discussion of providence is an important intervention in a long-standing debate on the role of providence in the cosmos. In Graeco-Arabic translation, the term *ʿināya* frequently translated the Greek term *πρόνοια*, a term with a long history. In Plato's *Timaeus*, the cosmos is living, ensouled,

and rational on account of God's providence (Plato 1968, 30b8–c1: διὰ τὴν τοῦ θεοῦ γενέσθαι πρόνοιαν) and the concept of divine care is found as early as Plato's *Laws* (d'Hoine and Van Riel 2014, ix). Socrates' student Xenophon also uses the term πρόνοια in his *Memorabilia* (Couloubaritsis 2014, 18, where he discusses Xenophon I, 4.6). The term πρόνοια was later translated into Latin as *providentia* by the time of Cicero (Burns 2020, 5). While many now associate the concept of providence with Christian thought, πρόνοια was “a concept of Greek culture which was virtually absent from the Hebrew Bible and the New Testament” (Burns 2020, 1).² For our purposes, while it is important to highlight the historical provenance of πρόνοια, the term *ināya* is primarily the one we will see below, itself frequently translated as “providence.” To some extent, that is a fair translation, insofar as within discussions of Greek thought, *ināya* itself translates πρόνοια from which we also get *providentia* and thus providence. However, *ināya* itself is a term with a somewhat different meaning that operates in a separate and unique context, and by itself means to take care for, to mind, or to be occupied with something.³ When God is the one responsible for the *ināya*, we get the concept of divine providence. Importantly, this term is specific to discussions within *falsafa* (Gardet 1971). A frequent synonym of *ināya* is *tadbīr*, usually translated as “governance” or “management,” which similarly highlights God's rule of the world. As we will see below, Avicenna himself uses both terms.

Alexander of Aphrodisias (2nd–3rd century CE) was a fundamental source of an Aristotelian account of providence in the Arabic tradition. While Aristotle himself did not discuss providence per se, Aristotle's thought, for example the discussions of the Prime Mover in *Phys.* 8 and an Unmoved Mover in *Meta.* 12, was used to develop a theory on his account (Alexander of Aphrodisias 2003, 17–30). Alexander's treatise on providence, *Περὶ προνοίας*, was extremely influential, and was translated into Arabic as *Fī l-'Ināya*, itself surviving only in two Arabic manuscripts (Alexander of Aphrodisias 2003, 9–16). This text, like many from Alexander, was widely influential in philosophy in the Islamic world.⁴

2 This claim is of course not to say that divine care is not a Biblical notion, but pertains only to the specific concept denoted by “πρόνοια,” which later came to be used throughout Christian discourse.

3 Thus, *ināya* also translated ἐπιμέλεια, “care,” and ἐπιμελής, “careful,” in the Graeco-Arabic translation movement.

4 Including for example, Averroes, who is indebted to Alexander's account of providence but who rejects the emanative positions of al-Fārābī (d. 339/950) and Avicenna, forming a distinct, Alexander-inspired alternative (see Taylor 2014, especially 460–461). Maimonides's (d. 600/1204) conception of providence was also indebted to Alexander, whom he discusses (see Davies 2019, especially 163–165).

Alexander presents Aristotle's view as being that providence holds below the sphere of the moon and provides for the needs of sublunar bodies, brought into effect by the heavenly bodies neither accidentally nor as a primary intention (Alexander of Aphrodisias 2003, 15–16; Sharples 1982, 199). The “*via media*,” as Sharples calls it, was intended as a response to the opposing Stoic and Epicurean models of providence, which allot providence to everything that happens or to nothing that happens, respectively (Sharples 1982, 198). Further, providence works specifically toward the preservation of the species rather than of the individual, and comes about by the motion of the heavenly bodies, which are themselves not recipients of providence (Alexander of Aphrodisias 2003, 21–22; Sharples 1982, 198–199). Nevertheless, Alexander “does insist ... that the gods have knowledge of the beneficial effects of their providence,” and this knowledge relates to the order, *niẓām*, of the world (Alexander of Aphrodisias 2003, 17; Sharples 1982, 205). Avicenna's account of providence is clearly relies upon many aspects of Alexander's account.

Before Avicenna, Alexander's account of providence formed the backdrop for al-Fārābī (d. 339/950). Al-Fārābī has various approaches to the notion of providence, even with respect to the name he gives the principle of divine care in the cosmos. At the beginning of his *Kitab al-Sīyāsa* (“Political Regime”), he claims that the activity of the active intellect is providence, *ināya*, for the rational animal, toward the end of human perfection and happiness, which is that the human being itself “comes to be at the rank of the active intellect” (al-Fārābī 1998a, 32; al-Fārābī 2015, 30). However, Badr El Fekak has highlighted that, in aphorism 87 of the *Fuṣūl Muntazī'a* (“Selected Aphorisms”), al-Fārābī uses the notions of *ināya* and *tadbīr* specifically to criticize other theories of providence with which he *disagrees* (al-Fārābī 1971, 91; al-Fārābī 2001, 56–57; El Fekak 2010, 14–15). For his own theory, and as El Fekak highlights, he uses the term *ʿadl*, justice, both in the aphorism 74 and in his *Mabādī'* (“On the Perfect State”). Specifically, in the latter al-Fārābī discusses the justice involved in the sublunar world (regarding form and matter) and in the heavenly bodies (regarding parts of the heavenly bodies), highlighting that in both realms no part has a greater right (*awlā*) than another (al-Fārābī 1998b, 460–461 and 124–127, respectively; El Fekak 2010, 7, 11). In the case of form and matter in the sublunary world, al-Fārābī speaks of the contraries in matter as each “ha[ving] a claim (*ḥaqq*) as it were against the other,” so that, “Justice herein is, then, that matter be taken from this and given to that” (al-Fārābī 1998b, 146–147; El Fekak 2010, 7–8). El Fekak traces the theme of justice back to the First Cause's role as giving each thing “its allotted share (*quṣṭa*) of existence in accordance with its rank,” in virtue of which “the First is just (*ʿadl*)

and its justice (*‘adāla*) is in its substance,” all of these terms carrying clear legal connotations (al-Fārābī 1998b, 94–97; El Fekkak 2010, 13–14). Avicenna, to my knowledge, does not utilize such a characterization of the First Cause, instead emphasizing the First’s status as pure good, an inheritance of the reworking of Proclus’s *Elements of Theology*, known in Arabic as the *Kitāb fi l-Khayr al-Mahd* (“Book on the Pure Good”).⁵ In turn, Avicenna will highlight the benefit, use, or good that providence enables what it governs to attain.

Avicenna’s account of providence is heavily indebted to another source – Galen (d. ca. 216 CE), who was well versed in both Aristotelian biology and Plato’s philosophy (his epitome of Plato’s *Timaeus* was itself translated into Arabic). Providence is a recurring theme in Galen’s lengthy account of the teleological structure of animals, *On the Usefulness of the Parts of the Body*, Περὶ χρείας μορίων, translated from a lost Syriac intermediary into Arabic as *Fī Manāfi’ al-‘dā’* (“On the Usefulness of the Parts”) (Wakelnig 2018, 143–144 n7). While it is neither thematized nor explained, the wise, creative power at work in the world and specifically in the parts, functions, and powers of animals is frequently said to be providential, προνοήτικος, or to act providently, προνοητικῶς. In the surviving Arabic translation, this quality of care is translated consistently as *‘ināya*. Explicating the role of providence is even something of a moral obligation, and Galen says in Book 10 that he received chastisement in a dream owing to his intention to omit a particularly difficult geometrical explanation of vision, since doing so would have amounted to a failure to lay out the Creator’s providence (πρόνοια/*‘ināya*) (Galen n.d., folio 182a; Galen 1909, 92–93; Galen 1968, 490–491).⁶ Throughout, Galen highlights the role of providence in animals, echoing Hippocrates’s constant attribution of “justice and providence (*al-‘adl wa-l-‘ināya*) in [the Creator’s] creation of the bodies of animals” (Galen n.d., folio 55a; Galen 1907, 172; Galen 1968, 88; my translation), for example, in ensuring the safety of the foot, a cause of great wonder (*‘ajab*) (Galen n.d., fol. 57b; Galen 1907, 179; Galen 1968, 192). As will become clear below, Avicenna recurrently draws the reader’s attention to the parts of animal (and plant) bodies, and will draw a connection between wondrous animal bodies and providence. Importantly, Galen claims that understanding use also informs us of the inner parts (*al-‘dā’ al-bāṭina*) of the body, defects of which might be diagnosed on a disruption of external action, for example, being unable to walk

5 Importantly, translations of Proclus were sometimes attributed to Alexander himself. See Endress 1973 and the related discussion in Wisnovsky 2003, 102–103.

6 That the concept of nature was replaced with the concept of the Creator in one version of *Fī Manāfi’* was highlighted by Wakelnig 2018, 131–132, and again 143–144 n7.

due to a broken bone in the leg. As another example, Galen mentions the rational power seated in the brain, whose activity can also be disrupted because of a brain injury. Thus, Galen clearly organizes mental powers under the same teleological explanatory apparatus as body parts, which, as I will argue below, Avicenna follows in accounting for the preservation of animal well-being through psychological powers that are themselves embedded in the brain.

Turning to Avicenna, our first, and the standard, text for his theory of providence comes from the *Ilāhiyyāt* (“Metaphysics”) of his magnum opus, *al-Shifā’* (“The Healing”). Avicenna discusses providence in several passages, but his definition occurs in IX.6.⁷ He writes:

It must, hence, be known that providence (*al-‘ināya*) consists in the First’s knowing in himself [the mode] of existence of the order of the good in His being, in himself, as a cause of goodness and perfection in terms of what is possible, and in His being satisfied [with the order of the good] in the manner that has been mentioned. He would thus intellectually apprehend the order of the good in the highest possible manner, whereby what He intellectually apprehends in the highest possible way as an order and a good would overflow from Him in the manner, within the realm of possibility, that is most complete in being conducive to order. This, then, is the meaning of providence.

AVICENNA 2005, 339

Here we find two facets of the action that constitutes providence. The first is the epistemological act by which the First knows the order of the good by way of an apprehension of himself as the cause of the good. The second is the ensuing effect of his being the cause of the good, which is that good emanates from the First cause in the most complete way possible. These two facets are important insofar as each has a different *reach*: the epistemic act is of the First alone, while the metaphysical emanation extends beyond the First. The question of the metaphysical reach of providence and its effects form a separate front of providence’s domain, in addition to the questions of divine knowledge and the problem of evil (as articulated by Gardet 1971).⁸ The question for us as readers

⁷ Translations of this text are from Marmura, infrequently modified. For an extensive examination of providence in *al-Ishārāt wa-l-Tanbihāt* (“Pointers and Reminders”), see Shihadeh 2019.

⁸ There is a related, but distinct, topic here, which is the question of ethical determinism. Beyond the bounds of this paper, there have been many studies on the topic in Avicenna. See Belo 2007, 21–53, for a determinist reading, and see De Cilles 2014, 66–95, for what we might call a compatibilist reading.

is *how far* providence goes, and specifically, whether it stops before it reaches the sublunary worlds of material particulars.

To some extent, Avicenna has already specified the extent of the First's reach, insofar as the definition of providence follows a rhetorical claim about what falls under providence's responsibility, as Avicenna points to the way in which the natural world is organized.

There is no way for you to deny the wondrous (*'ajība*) manifestations in the formation of the world, the parts of the heavens, and the parts of animals and plants (*ajzā' al-ḥayawān wa-l-nabāt*) – [all of] which do not proceed by coincidence but require some sort of governance (*al-tadbīr*).

AVICENNA 2005, 339

First, the description of the parts of animals as wondrous in connection with providence echoes the Galenic claim we saw above regarding the great wonder in providence's creation of animal bodies. Second, the allusion to *tadbīr* – governance or arrangement – raises the question of what sort of governance providence provides for material particulars. Catarina Belo distinguished governance as one of two aspects of Avicenna's account of providence, highlighting that this governance entails the series of causation of intellects and spheres (Belo 2007, 108–109). Jules Janssens considers Avicenna's discussion of providence in Avicenna's *al-Mabda' wa-l-Ma'ād* ("Provenance and Destination") and *al-Ta'liqāt* ("Notes"), where we find both that the First's providence applies to particulars only regarding the species (more on this below), and that all that emanates from the essence of the celestial spheres is a good, since, as part of the order of the good, they seek the good themselves (Janssens 2014, 449–450). We find the same emphasis on the secondary causes earlier in the *Ilāhiyyāt* of the *Shifā'*, where Avicenna writes:

We will make known the manner of God's providential care of all [things], the manner of the providential care of each cause for what succeeds it, and the manner in which the providential care of the generated things among us is [undertaken by] the first principles and the intermediary causes.

AVICENNA 2005, 322

These intermediary causes are ultimately responsible for the generation of the sublunary world, and especially the lowest of the celestial intellects, the so-called "Giver of Forms," namely, the Active Intellect, which is responsible for planting natural forms in appropriately prepared matter (Hasse 2000, 187–189;

Alpina 2014, 170).⁹ Providence is at work there too, but this trail is not the one I will follow in this investigation.

In an earlier Avicennan text, we find that the notion of providence is again immediately tied to animals and their parts, although in exactly what way this connection occurs is still, at this point, an open question. This understudied text in which Avicenna addresses both providence and animals is his *Risāla fī l-'Ishq* ("Epistle on Love"). There we find not only frequent allusion to providence as an explanatory principle but, as we will see throughout this study, we also find a slightly different account of the presence of goods and good-directed action in material particulars. In effect, we find Avicenna working out on what grounds animal particulars are capable of attaining their goods and whether that capacity stems from providence. He begins the *Risāla* by making a basic connection between organization, innate perfection, and the task of innately working toward the maintenance of that perfection:

Every organized being (*al-huwiyyāt al-mudabbara*) strives by nature toward its perfection (*kamāl*), i.e. that goodness of reality which ultimately flows from the reality of the Pure Good, and by nature it shies away from its specific defect which is the evil in it, i.e., materiality and non-being.

AVICENNA 1894, 2¹⁰

Here Avicenna takes basic facts about teleology as his starting point: that essential ends are built into the nature of organized beings, and that individuals will naturally strive toward whatever constitutes their own telos or perfection. But his choice of words in this passage has already made the basic connection we are interested in: these organized beings are part of the Good's governance, *tadbīr*, in virtue of being governed, *mudabbar*. As Avicenna continues, we find the way in which this governance might be effected *from the inside*. He writes, "It is something necessary from His wisdom and the excellence of His governance (*al-tadbīr*) that there is deeply planted (*yugharrizu*) into everything the general principle of love (*'ishq*)" (Avicenna 1894, 3). Throughout the rest of the *Risāla*, Avicenna examines love as an inherent principle found in anything that has a proper perfection, which includes not only animals and plants, but inanimate objects as well.

⁹ Those two are usually identified in secondary scholarship although Avicenna never explicitly does so.

¹⁰ Translations of this *Risāla* are my own, with consideration of Fackenheim 1945.

Although the *Risāla*'s description of that by which providence ensures the good differs from what we found in the later text, in both cases Avicenna points to the fact that the good in the world stems from divine providence or governance. In the text from the *Ilāhiyyāt*, we find that the First emanates in the way that most ensures the order of the good. In the *Risāla*, we find that divine wisdom and governance results in an innate love, one that, as I will discuss below, is for specific goods. Another point these texts share is the connection of providence with a basic order, for immediately after the implanting claim in the *Risāla*, we find the following:

As a result of that [implantation] there comes about a preservation by what [the Good] gave from the emanation of the universal perfections and a yearning for their origination in their absence, so that the matter of ruling (*siyāsa*) proceeds by it according to the wise order. So, therefore, the existence of this love in all organized existents [is] a necessity – an existence [that] never separates.

AVICENNA 1894, 3

I will linger on this notion of implanted or innate capacities below, but I want only to highlight here that, according to Avicenna, providence or the governance of the world does not cease merely because the influence is indirect. Providence's influence here clearly goes beyond the bounds of, for example, the First's knowledge or even immediate causation. As we saw above, the distinction Avicenna makes between the First's epistemic act of knowing and the metaphysical act of emanating leaves room for a difference in reach between the two, for providence is not reducible to an act of knowing alone – that is only part of what providence is. Further, in the *Risāla*, Avicenna also leaves space for a separation between what God is directly responsible for and the ensuing indirect effects, *which nevertheless are owing to His governance*. This distinction highlights that Avicenna takes providence to be responsible even when there are mediating interim causes. This distinction will accompany us throughout this investigation, and as I will argue below, we need only be circumspect about what we assume this governance entails. For example, it can simply amount to providing species with tools for self-governance depending on their needs.

Having presented some of the basic texts on providence, I will now turn to discuss the relation of providence to particular animals and their specific goods. Put concisely, I will argue that providence provides for animals in the sublunar world by working as an embedded good-directed principle that is at

work on the level of the essence, in terms of essential features.¹¹ This question in particular has been debated in the scholarship on Avicenna and providence. For example, Olga Lizzini has recently concluded that Avicenna's notion of providence leaves "individuals, as such" – for our purposes, individual animals – bereft of any meaningful influence from providence (Lizzini 2019, 28). In the following section I will examine the connection between providence, goodness, and essences, and argue that it is in this way that providence can be said to be active within material particulars. The role of essences – specifically the common nature shared between particular instantiations of an essence – not only goes to counterbalance the negativity instantiated particulars inherit from their material condition. The fact that animals have essences creates the condition within which we find *things* in the sublunar world at all.

2 Animals, Goods, Essences

When considering the relation of goods to animals, an obvious place to look is teleology. In general, the notion of ends is likely to get one the notion of a good, although the extent to which one can call these ends goods in any moral sense is up for debate. Further, it is not immediately clear that these goods are meaningfully tied to providence for Avicenna. In this section, I will examine the relation of the First's act of making as it relates to essences, and, in particular, to the ends and goods built into essences as such. This discussion connects to Avicenna's description of the generation of the intelligible order from the First, a discussion that is analogous to his discussion of providence in IX.6. With respect to this production, I will argue that the relation of an essence to the good is due to the First's reflexive act, which I discussed in the previous section. Further, the teleology that follows upon the First's reflexive act according to Avicenna is of a different sort than the teleology that ensues from the reflexive act of Plotinus's (d. 270 CE) Intellect, as Avicenna will indicate. This difference results in relevant changes to the role of teleology within animal essences and animal bodies.

A basic feature of Avicenna's theory of essences is his conceiving of them on three levels: (1) essences qua essences; (2) essences as universals existing in the mind; and (3) essences as particulars in extramental reality (Rashed 2004; Benevich 2019b). Essences as (1) are also referred to as natures, which individuals share in common between them, i.e. horseness as the nature shared by all horses, and which is neither universal nor particular (Benevich 2019b, 227). As

11 Essential features as opposed to the necessary accidents responsible for evil.

Benevich points out, the indeterminate essence qua essence becomes determinate in particulars when something is added, e.g. when one points to the particular instantiation of the essence. We see this point made in *Ilāhīyyāt* v.1, where Avicenna says, “Thus, ‘horseness’ – on the condition that, in its definition, it corresponds to many things – becomes general; and, because it is taken with properties and accidents to which one points, it is specific. ‘Horseness,’ however, is in itself only ‘horseness’” (Avicenna 2005, 149). This point is important insofar as Avicenna will connect providence to the production of natures later in v.1. He writes:

Animal, then, taken with its accidents, is the natural thing. What is taken in itself is the nature, of which it is said that its existence is prior to natural existence [in the manner of] the priority of the simple to the composite. This is [the thing] whose existence is specified as being divine existence because the cause of its existence, inasmuch as it is animal, is the providence of God, exalted be He. As regards its being with matter and accidents and this individual – even though through the providence of God, exalted be He – it is due to the particular nature.

AVICENNA 2005, 156

First, Avicenna claims that providence plays a role in *both* a nature in its non-particularity and in the particular nature. He can claim that since, as we saw above, the particular nature here is not somehow definitionally distinct from the common nature. It is particular only by being in this matter here, not by being somehow separate from its nature. In its particularity, such an instantiation of an essence is the means by which the essence (or nature, or species) continues to exist at all (Benevich 2019b, 229). It is due to providence that the common nature is as it is (this is the “divine existence”; on the connection to Ibn ‘Adī (d. 363/974), see again Rashed 2004; Menn 2013), and that the common nature exists at all, owing to its continued instantiation in individuals.

Avicenna further discusses the connection between providence and essences in his defense of the notion of an end or purpose (*ghāya*), and in turn of final causes, in VI.5. In the discussion of the second doubt that Avicenna therein raises (i.e., whether the final cause entails an infinity of ends), we find a short digression explaining that evil is a necessary but not essential end. When explaining the necessary results of essential ends (*al-ghāyāt al-dhātīyya*), Avicenna claims, “Thus, for example, it is necessary within divine providence (which is munificence (*jūd*)) that every possible existent should be given the good existence [proper to it] (*wujūduhū al-khayrī*)” (Avicenna 2005, 225; after this claim he moves on to discuss the entailment of things like harm

from fire, which is a necessary consequence of fire's essence). Although we lack the qualifier *khāṣṣ*, this notion of a specific good existence seems to function analogously to the "proper existence" Avicenna speaks of in 1.5, which, as Bertolacci has shown, is equivalent to Avicenna's notion of essence (Bertolacci 2012, 268).¹² These essential ends obtain again in the case of the substance of a species, e.g. horse (Avicenna 2005, 226).

In Avicenna's discussion of munificence, we read further that essences which are deficient in any way not only have ends, but also have *maṣāliḥ*, interests.¹³ Avicenna says:

An end (*ghāya*) and [something] needed in what is intended befalls only [someone] whose essence is deficient. This is because the end is either in terms of himself in his essence, or in terms of the interests of his essence, or in terms of some other thing in his essence, or in terms of the interests [of this other thing].

AVICENNA 2005, 232

The immediate purpose of this specification in the text, which occurs in a discussion of munificence, is to narrow down the structure of an act of true munificence, in which the agent is in no way benefitted (cf. al-Fārābī 1998b, 91).¹⁴ Essences, insofar as they have not only goods, but interests, entail a (loosely stated) normative network of related goals. More importantly, this network of goods is not owing to some sort of *material* deficiency, but is connected to the essence itself, and fills out the notion of proper goods. I take the basic distinction between an essential end and an interest to be the following. Animals, at the very least, should eat and reproduce – these are essential ends for all animals. Interests are things that support those ends, such as an animal's ability to defend itself, for example either by having horns or by climbing up along the sides of steep mountains, or such as having a reliable source of food not disappear. These things are useful and therefore good, but not essentially so – we can imagine an animal living without reliable food or a means of protection, but they would likely not live long, as we see in cases of threatened species and

12 Bertolacci discusses 1.5 alone; the connection of that discussion to this passage is my extrapolation.

13 Avicenna's use of this term has obvious legal and theological connotations. On its development within jurisprudence, see Opwis 2010.

14 The term *jūd* is also recurrent in mentions of providence and the Creator in Galen's *Fī Manāfi' al-A'ḍā'*.

extinction.¹⁵ The distinction itself reveals a rich teleology and an understanding of animal well-being that can be filled out in species specific ways. We will see in the following section that Avicenna also understood the psychological structure of individual animals in such a way that they are capable of working toward these goods, such that an animal's essence seems in turn to be granted tools for realizing and ensuring their own goods.

These passages set up an important discussion in VIII.7, where Avicenna discusses the relation of the intelligibles to the First principle. He explains that in the case of the First's generation of the intelligibles, the First does not need to look to anything outside of itself. Rather, with a self-reflexive act the First generates the intelligibles from His essence. Avicenna writes:

For He intellectually apprehends His essence and what His essence necessitates. He knows from His essence the manner in which the good comes to be in all [things]. Thus, the form of the existents follows the intelligible form He conceives in the intelligible order [which is conceived by] Him [...].

AVICENNA 2005, 291

Here we have a parallel description of the First's generation of the good in the world, and this description is so far similar to his later description of providence in IX.6. Avicenna continues describing this production, and separates the generation of the First from the emanation account we find in Plotinus.

[...] [But] not in that it follows it as light follows that which gives light and warming [follows] heat. Rather, He knows the manner in which the order of the good [takes place] in existence and that it [proceeds] from Him; and He knows that existence emanates from this act of knowing, according to the ranking that He intellectually apprehends as good and as order.

AVICENNA 2005, 291

Avicenna will later call this process providence. The First's knowledge of the manner in which the good exists in the emanation that follows His epistemic

15 Another example might be eyebrows. I could live without mine, but they do serve an important purpose, and without them my life would be a little more difficult. In that way, we would call them an interest related to my animal essence, which includes feeding myself, which, for humans, usually includes being able move, which vision and healthy eyes help me do.

act is what sets the First's causality apart from emanation on the model of automatic warming that follows heat. This model effectively comes from Plotinus, parts of whose *Enneads* were translated into Arabic in the 3rd/9th century. This paraphrase, which included parts of *Enneads* IV–VI, survives in three recensions – the *Theology of Aristotle*, the *Epistle on Divine Science*, and the so-called *Sayings of the Greek Sage* – none of which were attributed to Plotinus himself (Rosenthal 1974; Aouad 1989; D'Ancona 2004). In Arabic, one can find the fire-heat model as a description of the One's generation in the *Epistle on Divine Science*, where in the account of the act of the First agent, we read, "Fire is a heat [that] is completing the substance of fire. Then, from that heat another heat comes about in some [other] thing ... that is because the fire makes another power like its power" (Badawī 1966, 179). Avicenna's change to the emanation structure here serves at least two purposes. First, it maintains a strict distinction between the First cause and everything else. Second, it emphasizes the specificity of the good in existence, or the way or manner in which things have specific goods. The specificity of that relation has implications for Avicenna's conception of teleology, which differs immensely from Plotinus's.

Plotinus's discussion of the generation of the world in VI.7(38).1–3 notoriously denies any deliberation or foreknowledge to Intellect. The cause of this denial is Plotinus's commitment to the absolute priority of the intelligible over the sensible, owing to which nothing in the intelligible can be for sake of the lower, sensible thing. That means that goats do not have horns because goats need to fight off coyotes, an experience common only to embodied goats. Were that the case, part of the essence of goat, which is in the Intellect, would be for the sake of the embodied goat, and that would be perverse. An important result of this denial is that, "no conception of what is good or beneficial for a physical animal can serve as an explanation of the existence of any of its organs" (Thaler 2011, 161). In turn, because of the emanative hierarchy that underlies Plotinus's system, teleology, especially with respect to non-rational animals, has a non-Aristotelian, non-Galenic character. Thus, in looking for a notion of teleology in Plotinus's account of animals and their goods, one finds that Plotinus understands all animal goods as part of and for the sake of the perfection of life itself within Intellect (Thaler 2011, 176). Thus, horns (κέρατα/*qurūn*) exist to ensure not the protection of the goat, but the perfection of all life within Intellect, life being what Plotinus calls the activity of the Good (Plotinus VI.7(35).9–10, .21; Badawī 1966, 151; Thaler 2011, 178–179). Thus, any essential good that might belong to a goat or horse as such is itself meaningful and indeed comes to be not because of the goat or the horse's needs, but in order that the life of Intellect be complete. In the Arabic paraphrase, the surviving passages of VI.7(38) (which are dispersed throughout *ThA* v,

VIII, and X and *Greek Sage I* and IX) contain much amplification by an adaptor or editor, showing just how difficult Plotinus's discussion is. In turn, the complicated and controversial teleological theory in VI.7(38) was not clear or even presented as a unified theory in Arabic, as far as we know.¹⁶ Although Avicenna shares a commitment to an emanative structure, his account of the order of the good and of essences – and of material substances – precludes this problem. Crucial to this preclusion is the fact that corporeality is also related to an animal's essence, as I will discuss below. Providence, as we have seen, ensures species-specific teleology with respect to an essence's structure. Those teleological goods are organized in the order of the good, not subsumed for the sake of the general intelligible of life itself. Thus, Avicenna is in a position not only to explain essential goods more clearly, but also to account for interests that are genuinely for the sake of the relevant animal (species): we can meaningfully say that it is in the goat's interest that he have his horns. Insofar as anything has an essence, it has a good particular to that essence around which the essence is necessarily organized. In fact, as creatures capable of demonstrations and making essential definitions, human beings should be able to explain what these goods are.

We can take this conclusion to lie in contrast to the conclusion drawn by Lizzini, who argues that Avicenna's providence ceases before reaching the world of particulars, qua particular (Lizzini 2019, 28). Her argument rests on the fact that the First's own emanation ceases before the sublunary world comes about (Lizzini 2019, 22). I do not intend to contest Lizzini's construction of the *material* aspect as it relates to providence. Rather, I take my position to complement it by explaining the direction material particulars nevertheless receive from their essences, which themselves *are* objects of providence. Insofar as the forms that we find in the sublunary world – even as they come from the Giver of Forms – are actual instances of their essences, the good the First emanated as part of His providence exists and is operative in the sublunary particulars – even with their material limitations. The essences that provide the nature common to individuals of a species ensure that the goods the First emanated extend to the material world, and these essences act as ontological mediators between material particulars and the Good. As a result, the fact that the sublunary world is not directly under the rule of the First does not amount to a complete disconnect between the material world and the First's providence. Since the placement of goodness in the world is embedded in essential

16 It is worth highlighting that there is no indication that Plotinus's treatise *On Providence*, III.2–3, was ever translated into Arabic. For a discussion of creation and providence in Plotinus, see Noble and Powers 2015.

structures, it is also embedded in the instances of those essences and in substantial forms. That fact makes the order of the good present in the sublunary world in an immanent way.

3 Animals on Their Own Goods

To further substantiate the conclusions of the previous section, I offer here some evidence that Avicenna took goods to be tied to animals as living, material beings, and in such a way that these goods are due to their essential structure. Effectively, I want to show in what way an essential good, which is universal, is realized in the parade of discrete individuals who substantiate and, in their infinity, ensure the survival of the species. I will discuss the following three points of connection between animals and their goods. First, substantial forms are teleologically structured around specific essential goods. Second, individual animals are inherently capable discerning their specific essential goods. Third, animal psychological powers support the animal's discernment and attainment of their goods. To some extent, this is a matter of teasing out necessary concomitants of the essence that the material particular realizes or derives from that essence. If we turn from Avicenna's investigation of causality and goodness in the science of metaphysics to claims elsewhere regarding animal essences and goods, we again find pertinent material that corroborates the conclusions of the metaphysical investigation. To a large extent, we will see that Avicenna's investigation in natural science will give examples of what he explains in metaphysics, that is to say, natural philosophy supplies the "that," and metaphysics the "why" (Bertolacci 2002, 142ff., where he discusses this relationship in the case of causality). The passages we will look at here all loosely fall under the explanation of need fulfillment in animals and show us in what way(s) Avicenna accounts for the fact that animals are able to look after their own interests and in turn protect the survival of their species.

In a basic way, animal powers are connected to the essential or substantial forms that define individual animals, though we may wonder what all we can say is part of the essential form of, e.g. the human being, in instances of humanity. In discussion of form in his *Physics* 1.6, Avicenna claims that, "An example [of a single, composite thing] would be humanness, since it includes the powers of nature as well as the powers of the vegetative, animal, and rational soul; and when all of these are in some way 'combined,' they yield the essence of humanness (*al-māhiyya l-insāniyya*)" (Avicenna 2009, 46).¹⁷ Although this

¹⁷ Translation from McGinnis.

passage discusses the human animal, there are two things important for our purposes. First, the psychological powers are said to be part of what yields the essence, in this case, of humanity. Further, that includes not only “high” rational powers, but even those shared with animals and plants. Second, the essence yielded applies in the case of material particulars, even with the powers of nature. In his discussion of this passage from the *Physics*, Andreas Lammer further presents Avicenna’s explanation of what the human being is from the logical discussion of Avicenna’s *al-Najāt*, which again includes substantiality, corporeality, and psychological powers related to the body and soul (Lammer 2018, 172).

Let me now turn to highlight that Avicenna ascribes to animals an innate ability to discern and to follow their own specific goods. This innateness, familiar from the discussion of *wahm* from *al-Nafs* (“On the Soul”) of the *Shifāʾ*, occurs earlier in the *Risāla fī l-Ishq* as well. As we will see, he raises a variety of suggestions in attempts to explain animal behavior that would seem to indicate an innate connection on their part to proper goods. Let us look first at the *Risāla*. In the discussion of love in animal souls, Avicenna distinguishes two types of love: natural (*ṭabīʿī*) and elective (*ikhtiyārī*). An example of the former is a stone that falls when dropped, which shows us a sort of love will always hold. That is, the stone cannot choose *not* to fall; it will always incline downward. The second type of love is different insofar as one who has this elective love can choose something *other* than what one loves (Avicenna 1894, 9). The example Avicenna offers is of a donkey who, while chewing barley, will choose to cease and to flee upon noticing the presence of a wolf (Avicenna 1894, 9). This example reveals the basic difference between the two sorts of love. In the elective case, an individual to whom this love occurs can turn away from an object of love for the sake of survival: “Because [one is] imagining (*takhayyul*) a harm occurring before it[self], it weighs the scope of the loss against the weights of the benefit (*naḥʿ*) of the loved object” (Avicenna 1894, 9). The donkey in the example performs this pseudo-calculus, weighing the benefit of eating (or even loss of) the food against the potential harm of being eaten, and at the appearance of the wolf, elects to flee.

Now, by means of what power the donkey is capable of performing this calculus is a good question, and in the *Risāla*, Avicenna’s answer is that animals have this capability owing to divine providence. He says, “Indeed, the animals without reason, even if they move by their own natural, innate (*mutaḡharraz*) love, [they have] from divine providence elective movement by which [they] bring about generation of the like,” i.e. ensure the propagation of the species (Avicenna 1894, 10). Ultimately, it is owing only to the innate connection to a proper good that animals have powers in the first place:

There is no doubt that each one of the animal powers and souls is characterized by an administration (*taṣarruf*) upon which an innate (*gharīzī*) love incites them. The [powers] would exist in the animal body utterly in vain if [they] did not have a natural aversion (*nufūr*) whose source [is] an innate detestation (*bighḍa*) and natural desiring whose source is an innate love.

AVICENNA 1894, 8

This explanation of animal powers is ultimately a specification of a claim at the beginning of the treatise that explains the nature of specific goods. Avicenna says, “The specific good is the inclination the thing has in reality and the reckoning regarding what is believed to be fit in reality. Then, the reckoning as good and yearning and repugnance and aversion [are] in the existent from the attachment to its goodness (*khayrīyya*)” (Avicenna 1894, 4).¹⁸

The attribution of capabilities innate to animal souls and crucial to the provision of specific goods is more familiar from Avicenna’s discussion of estimation, which he calls the most powerful judge in animals (Avicenna 1959, 182; Black 1993, 224–228). *Wahm* is peculiar in Avicenna’s theory of internal senses, because it is able to extract from sensibles meanings (*ma’ānin*) that are not themselves properly sensible. The most famous example of this function of *wahm* is the sheep’s ability to know that the wolf is hostile, even though hostility itself is not a sensible feature. This power is another way of identifying by what means the donkey from the *Risāla* knows to stop chewing barley and flee the wolf: what was there an innate detestation based on an innate love, is here the power of estimation. Estimation’s capacity to obtain these meanings is, in Avicenna’s mature psychology, that by which animals discern what is beneficial and harmful to them. This function of estimation is illustrated in a few ways, though Avicenna first describes its role in infants.

One of them is the emanative inspirations (*al-ilhāmāt al-fā’ida*) upon the whole from divine mercy (*al-raḥma l-ilāhiyya*), like the state of the infant recently born in his attachment to the breast (of his mother), and like the state of the infant whenever he is raised and stood upright, such that he is about to fall, he hastens to cling on to [something he can] take hold of owing to something innate (*li-gharīza*) in the soul, [which] divine inspiration (*al-ilhām al-ilāhī*) places in it.

AVICENNA 1959, 183–184, my translation

18 To some extent this passage foreshadows the “*wujūduhū al-khayrī*” from the *Ilāhiyyāt* I examined in the previous section (Avicenna 2005, 225).

Again, we see the notion of innateness, as well as the crucial role played by these so-called divine or emanative inspirations,¹⁹ which, whatever they are, are responsible for preserving the individual and keeping them from harm. Avicenna moves on to discuss these inspirations in animals.

Similarly animals have innate inspirations (*al-ilhāmāt al-gharīziyya*) ... and by these inspirations estimation comes to the meanings mixed with the sensibles about what harms and is beneficial (*yaḍurru wa-yanfaʿu*), such that every sheep is wary of the wolf, even if he has never seen [a wolf], nor had an affliction from a wolf. And many animals are wary of the lion, and the rest of the birds are wary of predatory birds, with the weak birds regarding them as bad without experience.

AVICENNA 1959, 184, my translation

Avicenna continues his discussion by describing experiences that further cause animals to perceive things as beneficial or harmful, but our interest lies in the presence and role of the innate inspirations that guide estimation to the harmful and beneficial without any experience *at all*. Avicenna's acknowledgment that there is something innate within individuals that directs them toward the beneficial and harmful echoes, in a more sophisticated framework, his claim in *Risāla*.

Often, these *ilhāmāt* are referred to or translated as instincts, since it is by means of them that estimation is capable of apprehending the meanings regarding harm and benefit regardless of experience. For, Avicenna adds, “even if (*wa-in*)” the sheep has never seen a wolf he will still flee, which suggests Avicenna does not think inspirations must be instrumental in new experiences alone, but may work as a general safeguard with respect to the good and the bad. This case may in fact differ from the example that follows the sheep – the case of the dog who fears wood. This dog might fear other things that share the qualities or form of the wood, and thus might fear things that are not, in themselves, dangerous to him (Avicenna 1959, 184–185). This mistake is largely due to the fact that animals do not have recollection because they lack deliberation; instead, they have only memory through retention, which is unreliable (Alpina forthcoming b). The inspirations, by contrast, function in such a way that the animal does not make a mistake in apprehending potential dangers. This point is important, because, owing to their lack of reasoning, animals are not strictly speaking capable of apprehending and desiring

19 One might recognize this term (*ilhām*) from the Qurʾān, where in Sūrat al-Shams (91:7–8) we read that God inspired (*alhamahā*) the soul regarding what is right and wrong.

real goods, but only apparent ones (Avicenna 2005, 224–225). Both nonhuman animals and human animal children lack the resources (i.e. reason) for discerning between apparently good ends in a reliable way, so Avicenna needs to account for the way in which they nonetheless act for their own preservation. Both innate love and divine inspirations account for this reality.

Set within a discussion of providence and the good, Avicenna's selection of words in his description of estimation is telling. First off, Avicenna explicitly claims that, whatever the inspirations are and whatever sense we can make of them, they are innate, divine, emanative, and a sort of mercy (*rahma*). Second, these aspects of *wahm*, an internal psychological power of the soul that in part constitutes animal essences, are responsible for the preservation of animals *in action*, at moments when they are most vulnerable, due to predators or to being new to existence. In characterizing these inspirations as divine, Avicenna need not be understood as contradicting himself. Instead, if we combine these claims of this section with the conclusions of the previous section, a clear picture comes to light. Recall that in the *Risāla*, Avicenna claimed that, "As a result of that [implantation] there comes about a preservation (*mustahfiz*) by what [the Good] gave from the emanation of the universal perfections" (Avicenna 1894, 3). In his discussion of the First's generation of the intelligibles, Avicenna claimed that "the form of the existents follows the intelligible form He conceives in the intelligible order," and fundamental to this intelligible order – and constitutive of providence – is the way in which the good is in it. Avicenna writes, "[The First] knows the manner in which the order of the good [takes place] in existence and that it [proceeds] from Him; and He knows that existence emanates from this act of knowing, according to the ranking that He intellectually apprehends as good and as order" (Avicenna 2005, 291). I argued above that this knowledge of the manner of the good in intelligibles (and therefore in the forms of existents) is crucial for the question of animal goods, since it gives us a rich teleology. Identifying that the good is intellected relative to the intelligibles amounts to claiming that the good is correlated with and built into essences, those essences that are later substantiated in material particulars. Further, the powers of the soul, i.e. the substantial form of the body (in the case of animals), derive from the soul and essential form (Alpina 2021, 193; Avicenna 1959, 4). Thus, they come along with the soul and the form as the means by which the animal sees to its interests. This account substantiates Avicenna's metaphysical claim that deficient (i.e. non-divine) essences have interests, because insofar as individual essences or species have specific goods and can pursue or fail to obtain those goods, there is a way that things can go better or worse for them. For this reason Avicenna needed to account for the way in which animals can pursue what is really good for them, and to invoke

the rich teleology that includes not only the physical bodies of animals, but also the psychological powers situated in the brain that in part constitute animal essences and function teleologically like the rest of the parts of animals, as we saw above in Galen (Alpina forthcoming b). Within these powers, Avicenna located, under various names, the capacity to identify and react appropriately to goods and harms in the world. These capacities, innate love and hate in the *Risāla* and estimation in *al-Nafs*, accompany essences and substantiate the good of which providence is the source and maker. Thus, when I say that for Avicenna providence works as an embedded, good-directed principle in the world – and that this world includes individual animals – it is these capacities (and the metaphysical apparatus that underlies them) to which I refer. And ultimately, the responsibility for all of those genuinely good-directed capacities lies with providence.²⁰

4 Teleology and Normativity

In this final section, I will briefly lay out the extent to which Avicenna discusses human beings in relation to animal goods, and then discuss where I think that leaves us with respect to any morally normative claims regarding human action toward animals. Two passages from the end of the *Ilāhīyyāt* are worth highlighting in regard to animal goods, providence, and human beings. The first, from Book x, is a discussion of ways to discern signs of the First and His goodness in the sublunar world, where Avicenna suggests understanding use and benefit as including animals and providence.

If you wish to know that the things intellectually apprehended as useful (*nāfiʿa*) [and] conducive to benefits (*maṣāliḥ*) have been brought into existence in nature in the manner of the bringing to existence which you have known and ascertained, contemplate the state of the usefulness of the parts in animals and plants (*manāfiʿ al-aʿdāʾ fi l-ḥayawān wa-l-nabāt*) and how each has been created. There is [for this] no natural cause at all, but its principle is necessarily [divine] providence (*al-ʿināya*) in the way you know. In a similar way, one arrives at the true belief in these

20 For a striking contrast case that references Avicenna's account, see al-Suhrawardī's (d. 587/1191) account of species preservation (and the feathers of a peacock's tail). The so-called Lord of the Peacock Species providentially governs peacocks, but without help from animal souls, as discussed in Benevich 2019a, 42–46.

meanings. For they are dependent on providence in the way you have known providence to attach to these.

AVICENNA 2005, 362

In order to understand the benefits and goods we see in the world, we need to connect these benefits to the way that things exist in the natural world from the First cause, specifically, from the First under the aspect of providence. Thus, the paradigm case for the role of providence in the natural world is the teleological structure of animals. Having determined that there are real, essential goods proper to animal species that do indeed exist for them and to which animals guide themselves, passages such as this one must be read not as general but imprecise allusions to the relation between providence and animals. Instead, Avicenna has already established the metaphysical grounds on account of which he can meaningfully make this claim. We find a similar case in Book IX, where Avicenna discusses human happiness and the process of perfecting the human soul by way of rational intellection.

As to [the question of] how much conception of the intelligibles the soul of the human ought to achieve so that, by it, he might transcend the bound in which the like of this misery is found and [where], in crossing it and going beyond it, this happiness is hoped for, [this] is [something] to which I cannot testify [with an exactitude], but only by approximation.

AVICENNA 2005, 353

Although he claims to offer an account only “by approximation,” he continues by specifically listing what he finds requisite for the perfection of the human subject.

I am of the opinion that this [entails] that the human’s soul [should] have a true conception of the separate principles, having belief in them that is certain because of their existence for it through demonstration; [that the soul] should know the teleological causes of things occurring in universal motions, not the particular infinite ones; that there [should] become established for it the structure of the whole [cosmos], the relation of its parts to each other, and the order deriving from the First Principle [down] to the most remote of the existents that fall within its arrangement; that [the soul should] conceive providence and the manner thereof.

AVICENNA 2005, 353

As I have argued above, the mere fact that one must consider teleological causes in a universal sense does not sever essential goods from their instantiations in material particulars. Considering horseness as a common nature rather than as a material particular allows one to discern what is really part of the essence of horseness, as opposed to this particular horse you now consider. The unique aspect of this passage is the claim that one should conceive of the structure of the whole universe *down to its most remote existents*. I take this point to emphasize that one's engagement with the order of things should be in a universal way for the sake of accuracy, not because material particulars are untouched by essential goods. Since Avicenna claims that human beings ought to conceive of divine providence, its manner, and teleology, we have good evidence to think that he took understanding animals and their goods to be part of the process of human perfection. In fact, Avicenna echoes Galen on both the claim that human beings should understand the parts of animals and that this understanding should include the remote existents. In Book 3 of *Fī Manāfi' al-A'ḍā'* Galen expresses his understanding of true worship, saying, "In my view, true worship (*al-'ibāda l-ṣaḥīḥa*) is that I myself first²¹ know the manner of the wisdom (*ḥikma*) of the Creator, the manner of His power, and the manner of His munificence (*jūd*)," before then teaching this knowledge to others (Galen n.d., folio 55b; Galen 1907, 174; Galen 1968, 189). Later, in Book 17, Galen discusses the wisdom and wonder even in small, worthless beings, offering the flea, *burghūt*, as an example (Galen n.d., folio 295b; Galen 1909, 449; Galen 1968, 732). On the whole, when Avicenna says that we ought to be aware of the ways in which providence connects to existents and to animals, I take him to mean that we ought to understand animals and their teleological structure, as Avicenna himself studies within his *Kitāb al-Ḥayawān*.

As Avicenna makes clear in his discussion of the prophet and lawgiver in Book x, it is the job of the lawgiver to set down precise rules according to which human beings ought to live in human society. The necessity of the lawgiver rests on the fact that human beings are social beings who require communal living in order to survive and to reach perfection. Since society fundamentally operates on the basis of interaction (*mu'āmala*), a lawgiver is necessary to ensure justice is upheld within these interactions (Avicenna 2005, 364). Further, Avicenna sees the existence of the lawgiver as the ensurer of justice to be something guaranteed by divine providence.

21 Reading "*an a'lama anā min-hā kayfā*" at the beginning of line 21. My thanks go to Abdurrahman Mihirig for his suggestions on this passage.

Thus, with respect to the survival and actual existence of the human species, the need of this person is greater than the need for such benefits as the growing of hair on the eyebrows, the concave shaping of the arches of the feet, and many others that are not necessary for survival but are, at best, useful for it.

AVICENNA 2005, 365

Avicenna here draws a surprising analogy between the lawgiver and a basic example of teleology, the eyebrows that protect the eye from dirt and even the shape of the foot (which above Galen called wondrous). Both, Avicenna claims, come from the same source, and are thus analogous.

[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 should ordain the existence of those [former] benefits and not these [latter], which are their bases. Nor [is it possible] that the First Principle and the angels after Him should know [the former] but not [the latter]. Nor yet [is it possible] that that whose existence (in the order of the good) He knows to be [only] possible [in itself and yet] necessary for introducing the order of the good should not exist. And how can it not exist, when that which depends on its existence, [and is] built on its existence, exists? A prophet, therefore, must exist, and he must be a human.

AVICENNA 2005, 365

As Ahmed El Shamsy has noted, the reference here to the teleological function of eyebrows is a direct reference to Galen, and an indication that Avicenna (and al-Ghazālī (d. 505/1111) after him) incorporated the role of the prophet and the question of human moral perfection into the teleological structure of the world – both are part of, to quote El Shamsy, “divine teleology” (El Shamsy 2016, 102–103). Although Avicenna does not mention animals in this passage, this interconnection extends to them in two ways. First, the teleological role of the lawgiver is analogous not only to the eye coverings of animals, but also to the powers that ensure the essential goods of animals. Just as the sheep’s essential interests are served by the hair that protects her eyes and allows her to see the wolf – which the animal in turn sees as dangerous by means of estimation – the lawgiver teleologically ensures the essential interests of human beings. Second, the interests that Avicenna takes the lawgiver to uphold include animals. When he offers a terse overview of the domain of the lawgiver, animals are – albeit very generally – included, insofar as the deserts

or duties (*huqūq*) regarding profits (*arbāh*) relating to fruit (*thamarāt*) and animal breeding (*nitāj*) are within the lawgiver's purview (Avicenna 2005, 370).²² Thus, Avicenna saw the domain of Islamic legal theory to fall under the responsibility of the lawgiver, whom he also considered to be part of the teleological system that exists due to divine providence. As is well known, Islamic legal theory extensively considered the rights of animals and the care to which they were entitled (cf. Tlili 2015). The takeaway here is that Avicenna saw both the lawgiver responsible for human moral pronouncements and the specific goods of animals as part of one and the same order of divine teleology. Although we do not find a theory of justice here, the justice for which the lawgiver is responsible does not exclude animals (regardless of the extent to which it includes them).

Now, this commitment in and of itself does not yield moral normativity in the sense that would ground certain obligations toward animals. Getting moral normativity out of teleology is a well-established difficulty. From naturalist readings of Aristotle, to constitutivism in its various forms, trying to get normative reasons out of non-normative functions is not a settled issue, and I do not intend to touch on these modern debates here.²³ Rather, I want to highlight the point to which Avicenna's account brings us, a point that, on its own, does not give us normative claims. I take his account to accomplish three things. First, it acknowledges a spectrum of specific goods that animals have, in both the functional and final sense that form a foundational starting point for an animal ethic and can provide the notion of a species norm (e.g. Korsgaard 2018, 16–22). Second, it coordinates the goods of different species within one and the same system of the good, as a result of which animal goods and human goods trace back to one notion of goodness.²⁴ And third, he connects the role of laws and edicts of morality to this same order and source of good that includes provisions for animal well-being. What these commitments leave open is the exact source of moral normativity that in some sense obligates human beings to *act* in a certain way. Avicenna's own commitments lead him to connect this structure to prophethood, revealed law, and the worship of God (some details of which may be negotiable on his account, see Erlwein 2018, 45ff.). At any rate, what I take us to have found is, rather than a lack, a flexibility in Avicenna's account that may be uniquely helpful both in establishing

22 Again, this topic is proper to Islamic legal theory, cf. 'Izz al-Dīn ibn 'Abd al-Salām al-Sulamī's (d. 660/1262) *Qawā'id al-Aḥkām fī Masāliḥ al-An'am* ("Foundations of Judgements On the Interests of Created Beings"), discussed in Blankinship 2020, 3–4.

23 For a critical, but concise, overview of the issue, see Silverstein 2016.

24 That is, Avicenna clearly does not think that reason and nature are at odds. For a contrast case and post-Avicennan rejection of this harmony, see Shihadeh 2006, 180.

an Islamic animal ethic and in articulating this ethic in relation to accounts from contemporary theory.

Conclusion

In brief, here is what I take my argument to have shown. First, Avicenna, in his early *Risāla fī l-Ishq* and in the *Ilāhiyyāt* of his *Shifā'* discusses providence as something responsible for the order of the Good in the world. Up for debate was the extent of this order and the effect it does or does not have in the lives of sublunar individuals. Then, I turned to an examination of the role of the good within essences, where I argued that essences have a network of specific goods and interests due to providence's role in making essences. Next, I turned to examine evidence from Avicenna's psychological discussions, pointing to his account of innate love and aversion in the *Risāla* and then to estimation in *al-Nafs*, and arguing for the connection of both to providence. In this sense, I took providence to be responsible for providing an embedded good-directedness in the world and in animals. In the end, I argued that while Avicenna's discussion does not ground normative claims for human action towards animals, it offers a systematic account of goods in conjunction with which normative grounds might be established.

Here it is worth mentioning the extent to which Avicenna's account of animal goodness differs from other, better-known examples. Two of the thinkers commonly raised as supporting a type of animal ethic are Abū Bakr al-Rāzī and Ibn Ṭufayl (both discussed in Adamson 2016). For al-Rāzī, human beings ought to work to minimize animal suffering as a way of imitating God (as argued by Adamson 2012, 271), while in Ibn Ṭufayl's *Ḥayy Ibn Yaqzān* the title character cares for animals and plants in explicit imitation of the providential care enacted by the heavenly bodies (Ibn Ṭufayl 1936, 110–115). Ibn Ṭufayl extrapolates this latter pattern from Avicenna himself, although Avicenna does not explicitly claim that human beings ought to undertake this imitative behavior.²⁵ However, the basic point in *Ḥayy*, i.e. that animals have specific perfections that ought to be respected, easily connects to Avicenna's theory as I laid it out above (on this point in *Ḥayy*, see Kukkonen 2014, 89). The main difference is that Avicenna does not take imitation as a starting point for ethical action,

25 The only potential exception of which I am aware occurs in Avicenna's commentary on the *Theology of Aristotle*, where we explicitly find a threefold mimetic program similar to what Ibn Ṭufayl has *Ḥayy* undertake. But even there, this pattern is not connected to providence (see Badawī 1978, 51).

and instead rests on human perfection and on the justice ensured by the laws of the lawgiver in accordance with the universal order of the Good. Insofar as animals receive care within Avicenna's account, it is as they fit into the broader network of providence and are thereby entitled to their own goods, and not insofar as they are potential recipients for providential behavior on the part of human beings. Further, the way in which animals are entitled to their own goods lays the groundwork for their intrinsic value. Although Avicenna is committed to a metaphysical hierarchy of rationality and to the unique value of reason, the theory of essential goods and providence that he lays out does offer some intrinsic value to animals. After all, a commitment to intrinsic value does not rule out a separate but related commitment to a hierarchy of value, a contemporary example being Tom Regan's now infamous example of the dog in the lifeboat.²⁶ But Avicenna's position can easily lead us to species perfection being intrinsically valuable, which is what I think we get in Ibn Ṭufayl, although I cannot argue for that here.

As a final point, I would like to offer a remark that, while potentially obvious, is worth articulating nonetheless. One might expect that those who uphold theories that allow or explicitly support human superiority – in the sense that human beings have either more of certain capacities or unique capacities – in turn to deny animals moral standing altogether or to a large extent. In fact, it is fairly easy to move from the claim that human beings are superior to the claim that animals do not matter morally, as human exceptionalism and an allowance of animal suffering seem to go hand in hand. The apparent congruity between human superiority and moral superiority, and the fact that some have attempted to use the former to claim the latter, make it easy to assume that a thinker who argues for the former in turn *must* argue for, or at least implicitly accept, the latter. However, there is no logical connection between the two, and human superiority does not, on its own, entail moral superiority (Paez 2019). In fact, even in the 6th/12th century, we find authors arguing against the assumption that human exceptionalism (in the form of higher-level rational thinking) entails moral superiority. Muḥyī al-Dīn Ibn al-ʿArabī (d. 638/1240) was quick to point out that the superior capacities of reason can produce and encourage moral degradation (Ibn al-ʿArabī 1946, 125; Ibn al-ʿArabī 1911, 321), as he was keen to claim that animals have an immediate awareness of the

26 In the example (from *The Case for Animal Rights*), Regan controversially maintains both that all subjects-of-a-life have equal intrinsic value, and that nevertheless their lives are not of equal value. Thus, human beings may sacrifice a dog rather than a human when they have one too many animals on a lifeboat. For an overview of and response to the questions, see Abbate 2015.

Truth out of reach for many ostensibly superior human beings (Ibn al-‘Arabī 1946, 85; Chittick 2008, 33–34). Of course, Avicenna does not make such grand claims about animals. But, as a key representative of *falsafa*, his attention to animals and their relation to the good reveals that even here, commitment to human superiority does not guarantee insouciance to animal well-being and animal goods.

Bibliography

- Abbate, Cheryl E. 2015. “Comparing Lives and Epistemic Limitations: A Critique of Regan’s Lifeboat from an Unprivileged Position.” *Ethics and the Environment* 20(1): 1–21.
- Adamson, Peter. 2012. “Abū Bakr al-Rāzī on Animals.” *Archiv für Geschichte der Philosophie* 94: 249–273.
- Adamson, Peter. 2016. “The Ethical Treatment of Animals.” In *The Routledge Companion to Islamic Philosophy*, edited by Richard C. Taylor and Luis Xavier López-Farjeat, 371–382. New York: Routledge.
- Adamson, Peter. 2018. “Human and Animal Nature in the Philosophy of the Islamic World.” In *Animals: A History*, edited by Peter Adamson and G. Fay Edwards, 91–113. Oxford: Oxford University Press.
- Alexander of Aphrodisias. 2003. *Traité De la providence. Περί προνοίας. Version arabe de Abū Bishr Matta ibn Yūnus*, introduced, edited and translated by Pierre Thillet. Paris: Verdier.
- Alpina, Tommaso. 2014. “Intellectual Knowledge, Active Intellect and Intellectual Memory in Avicenna’s *Kitab al-Nafs* and Its Aristotelian Background.” *Documenti e studi sulla tradizione filosofica medievale* 15: 131–183.
- Alpina, Tommaso. 2021. *Subject, Definition, Activity. Framing Avicenna’s Science of the Soul*. Berlin: De Gruyter.
- Alpina, Tommaso. Forthcoming a. “Exercising Impartiality to Favor Aristotle: Avicenna and ‘the accomplished anatomists’ (*aṣḥāb al-taṣrīḥ al-muḥaṣṣilūna*) in *Ḥayawān*, III, 1.” *Arabic Sciences and Philosophy. A Historical Journal*.
- Alpina, Tommaso. Forthcoming b. “Retaining, Remembering, Recollecting. Avicenna’s Account of Memory and Its Sources.” In *Aristotle’s De memoria et reminiscencia and Its Reception*, edited by V. Decaix, C. Thomsen Thörnqvist. Turnhout: Brepols.
- Alwishah, Ahmed. 2016. “Avicenna on Animal Self-Awareness, Cognition and Identity.” *Arabic Sciences and Philosophy* 26: 73–96.
- Aouad, Maroun. 1989. “La *Théologie d’Aristote* et autres textes du *Plotinus Arabus*.” In *Dictionnaire des philosophes antiques* 1, edited by R. Goulet, 541–590. Paris: CNRS.

- Avicenna. 1894. *R. fī l-ʿIshq*, in *Traitées Mystiques d'Aboû Alî Al-Hosain B. Abdallaâh B. Sînâ ou d'Avicenne*, III^{ème} fascicule, edited and translated by August Ferdinand Mehren, 1–27. Leiden: Brill.
- Avicenna. 1959. *Avicenna's De Anima*, edited by F. Rahman. Oxford: Oxford University Press.
- Avicenna. 2005. *The Metaphysics of The Healing*, translated by Michael Marmura. Provo: Brigham Young University Press.
- Avicenna. 2009. *The Physics of The Healing*, 2 vols., translated by Jon McGinnis. Provo: Brigham Young University Press.
- Badawī, 'Abd al-Rahman, ed. 1966. *Aflūṭīn 'inda l-'Arab. Plotinus apud Arabes. Theologia Aristotelis et fragmenta quae supersunt*. Cairo: Maktabat al-Nahda al-Miṣriyya.
- Badawī, 'Abd al-Rahman, ed. 1978. *Aristū 'inda l-'Arab*. Kuwait: Wakālat al Maṭbū'āt.
- Belo, Catarina C. 2007. *Chance and Determinism in Avicenna and Averroes*. Leiden: Brill.
- Benevich, Fedor. 2019a. "A Rebellion against Avicenna? Suhrawardī and Abū l-Barakāt on 'Platonic Forms' and 'Lords of Species.'" *Ishrāq: Islamic Philosophy Yearbook* 9: 23–53.
- Benevich, Fedor. 2019b. "The Priority of Natures Against the Identity of Indiscernibles: Alexander of Aphrodisias, Yaḥyā b. 'Adī, and Avicenna on Genus as Matter." *Journal of the History of Philosophy* 57(2): 205–234.
- Bertolacci, Amos. 2002. "The Doctrine of Material and Formal Causality in the « Ilāhiyyāt » of Avicenna's « Kitāb al-Šifā' »" *Quaestio* 2: 125–154.
- Bertolacci, Amos. 2012. "The Distinction Between Essence and Existence in Avicenna's Metaphysics: The Text and Its Context." In *Islamic Philosophy, Science, Culture, and Religion. Studies in Honor of Dimitri Gutas*, edited by Felicitas Opwis and David Reisman, 257–288. Leiden: Brill.
- Black, Deborah L. 1993. "Estimation (*Wahm*) in Avicenna: The Logical and Psychological Dimensions." *Dialogue* 32(2): 219–258.
- Blankinship, Kevin. 2020. "Suffering the Sons of Eve: Animal Ethics in al-Ma'arrī's *Epistle of the Horse and the Mule*." *Religions* 11(8), 412.
- Burns, Dylan M. 2020. *Did God Care? Providence, Dualism, and Will in Later Greek and Early Christian Philosophy*. Leiden: Brill.
- Chittick, William C. 2008. "The Wisdom of Animals." *Journal of the Muhyiddin Ibn Arabi Society* 46: 27–37.
- Couloubaritsis, Lambros. 2014. "Émergence de la thématique de la providence divine de Diogène d'Apollonie à Platon." In *Fate, Providence and Moral Responsibility in Ancient, Medieval and Early Modern Thought. Studies in Honor of Carlos Steel*, edited by Pieter d'Hoine and Gerd Van Riel, 3–21. Leuven: Leuven University Press.
- D'Ancona, Cristina. 2004. "The Greek Sage, the Pseudo-*Theology of Aristotle* and the Arabic Plotinus." In *Words, Texts, and Concepts Cruising the Mediterranean Sea*.

- Studies on the Sources, Contents and Influences of Islamic Civilization and Arabic Philosophy and Science. Dedicated to Gerhard Endress on His Sixty-Fifth Birthday*, edited by R. Arnzen and J. Thielmann, 159–176. Leuven: Peeters.
- Davies, Daniel. 2019. “Divine Knowledge and Providence in the *Guide to the Perplexed*.” In *Interpreting Maimonides. Critical Essays*, edited by Charles H. Manekin and Daniel Davies, 152–170. Cambridge: Cambridge University Press, 2019.
- De Cillis, Maria. 2014. *Free Will and Predestination in Islamic Thought. Theoretical Compromises in the Works of Avicenna, Al-Ghazālī, and Ibn ‘Arabī*. London: Routledge.
- D’Hoine, Pieter and Gerd Van Riel. “Introduction.” In *Fate, Providence and Moral Responsibility in Ancient, Medieval and Early Modern Thought. Studies in Honor of Carlos Steel*, edited by Pieter d’Hoine and Gerd Van Riel, ix–xiv. Leuven: Leuven University Press.
- El Fekkek, Badr. 2010. “Alexander’s *‘Ināya* Transformed: Justice as Divine Providence in al-Fārābī.” *Documenti e studi sulla tradizione filosofica medievale* 11: 1–17.
- El Shamsy, Ahmed. 2016. “Al-Ghazālī’s Teleology and the Galenic Tradition. Reading *The Wisdom in God’s Creations (al-Ḥikma fī makhlūqāt Allah)*.” In *Islam and Rationality. The Impact of al-Ghazālī. Papers Collected on His 900th Anniversary*, vol. 2, edited by Frank Griffel, 90–112. Leiden: Brill.
- Endress, Gerhard. 1973. *Proclus Arabus: Zwanzig Abschnitte aus der Institutio Theologica in arabischer Übersetzung*. Beirut: Orient-Institut.
- Erlwein, Hannah C. 2019. “Ibn Sinā’s Moral Ontology and Theory of Law.” In *Philosophy and Jurisprudence in the Islamic World*, edited by Peter Adamson, 29–52. Berlin: De Gruyter.
- Fackenheim, Emil L. 1945. “A Treatise on Love by Ibn Sina. Translated.” *Mediaeval Studies* 7(1): 208–228.
- al-Fārābī, Abū Naṣr. 1971. *Fuṣūl Muntazī’a*, edited by Fawzī M. Najjār. Beirut: Dār al-Mashriq.
- al-Fārābī, Abū Naṣr. 1998a. *Kitāb al-Siyāsa al-Madaniyya, al-Mulaqqab bi-Mabādī’ al-Mawjūdāt*, edited by Fawzī M. Najjār. Beirut: al-Maṭba‘a al-Kāthūlikiyya.
- al-Fārābī, Abū Naṣr. 1998b. *On the Perfect State (Mabādī’ Ārā’ Ahl al-Madīnat al-Fāḍilah)*, revised and translated by Richard Walzer. Oxford: Oxford University Press.
- al-Fārābī, Abū Naṣr. 2004. *The Political Writings*, vol. 1, translated and annotated by Charles E. Butterworth. Ithaca: Cornell University Press.
- al-Fārābī, Abū Naṣr. 2015. *The Political Writings*, vol. 2, translated, annotated, and with introductions by Charles E. Butterworth. Ithaca: Cornell University Press.
- Galen. n.d. *Fī Manāfi’ al-A’ḍā’*. Paris, Bibliothèque Nationale de France MS Arabe 2853.
- Galen. 1907. *Περὶ χρειαῶν μορίων. De usu partium libri XVII*, vol. 1, books I–IX, edited by Georg Helmreich. Leipzig: B. G. Teubner.
- Galen. 1909. *Περὶ χρειαῶν μορίων. De usu partium libri XVII*, vol. 2, books X–XVII, edited by Georg Helmreich. Leipzig: B. G. Teubner.

- Galen. 1968. *On the Usefulness of the Parts of the Body*. Περὶ χρήσεως μορίων. *De usu partium*, 2 vols., translated by Margaret Tallmadge May. Ithaca: Cornell University Press.
- Gardet, Louis. 1971. "Ināya." *Encyclopaedia of Islam, Second Edition*, vol. 3, 1203.
- Hasse, Dag Nikolaus. 2000. *Avicenna's De Anima in the Latin West: The Formation of a Peripatetic Philosophy of the Soul 1160–1300*. London: The Warburg Institute.
- Heemskerk, Margaretha T. 2000. *Suffering in Mu'tazilite Theology: 'Abd al-Jabbār's Teaching on Pain and Divine Justice*. Leiden: Brill.
- Ibn al-'Arabī. 1911. *Al-Futūḥāt al-Makkīyya*. vol. 1. Cairo.
- Ibn al-'Arabī. 1946. *Fuṣūṣ al-Ḥikam*, edited by Abū l-'Alā' 'Afīfī. Beirut: Dār al-Kitāb al-'Arabī.
- Ibn Ṭufayl. 1936. *Hayy ben Yaqdhān, roman philosophique d'Ibn Thofail. Texte arabe avec les variantes des manuscrits et de plusieurs éditions et traduction française*, edited by Léon Gauthier, 2nd edition. Beirut: Imprimerie Catholique.
- Janssens, Jules. 2014. "What About Providence in the Best of All Possible Worlds? Avicenna and Leibniz." In *Fate, Providence and Moral Responsibility in Ancient, Medieval and Early Modern Thought. Studies in Honor of Carlos Steel*, edited by Pieter d'Hoine and Gerd Van Riel, 441–454. Leuven: Leuven University Press.
- Korsgaard, Christine. 2018. *Fellow Creatures*. Oxford: Oxford University Press.
- Kruk, Remke. 2002. "Ibn Sina On Animals: Between the First Teacher and the Physician." In *Avicenna and his Heritage*, edited by Jules Janssens and Daniel De Smet, 325–341. Leuven: Leuven University Press.
- Kukkonen, Taneli. 2014. *Ibn Tufayl: Living the Life of Reason*. London: Oneworld Publications.
- Lammer, Andreas. 2018. *The Elements of Avicenna's Physics: Greek Sources and Arabic Innovations*. Berlin: De Gruyter.
- Lizzini, Olga. 2019. "Matter and Nature: On the Foundations of Avicenna's Theory of Providence: An Overview." *Intellectual History of the Islamicate World* 7: 7–34.
- Menn, Stephen. 2013. "Avicenna's Metaphysics." In *Interpreting Avicenna: Critical Essays*, edited by Peter Adamson, 143–69. Cambridge: Cambridge University Press.
- Musallam, Basim. 2011. "Avicenna: Medicine and Biology." *Encyclopaedia Iranica* 3(1): 94–99.
- Noble, Christopher Isaac and Nathan M. Powers. 2015. "Creation and Divine Providence in Plotinus." In *Causation and Creation in Late Antiquity*, edited by Anna Marmodoro and Brian D. Prince, 51–70. Cambridge: Cambridge University Press.
- Opwis, Felicitas. 2010. *Maṣlaḥa and the Purpose of the Law. Islamic Discourse on Legal Change from the 4th/10th to 8th/14th Century*. Leiden: Brill.
- Paez, Eze. 2019. "Humans May be Unique and Superior – and That is Irrelevant." *Animal Sentience* 23 (26). DOI: 10.51291/2377-7478.1403.
- Plato. 1968. *Timaeus*. In *Platonis Opera*, vol. 4, edited by J. Burnet. Oxford: Clarendon Press.

- Plotinus. 1959. *Plotini Opera. Tomus II*, edited by Paul Henry and Hans-Rudolph Schwyzer, including an English translation of *Plotiniana Arabica* or *The Theology of Aristotle*, by Geoffrey Lewis. Paris: Desclée de Brouwer.
- Rashed, Marwan. 2004. "Ibn 'Adī et Avicenne: sur les types d'existants." In *Aristotele e i suoi esegeti neoplatonici. Logica e ontologia nelle interpretazioni greche e arabe. Atti del convegno internazionale, Roma 2001*, edited by Vincenza Celluprica, Cristina D'Ancona and Riccardo Chiaradonna, 107–171. Napoli: Bibliopolis.
- Regan, Tom. 2004. *The Case for Animal Rights*, 2nd edition. Berkeley: University of California Press.
- Rosenthal, Franz. 1974. "Plotinus in Islam: The Power of Anonymity." In *Plotino e il neoplatonismo in oriente e in occidente: Atti del Convegno internazionale*, 437–46. Roma: Accademia Nazionale dei lincei.
- Sharples, R. W. 1982. "Alexander of Aphrodisias on Divine Providence: Two Problems." *Classical Quarterly* 32: 198–211.
- Shihadeh, Ayman. 2006. *The Teleological Ethics of Fakhr al-Dīn al-Rāzī*. Leiden: Brill.
- Shihadeh, Ayman. 2019. "Avicenna's Theodicy and al-Rāzī's Anti-Theodicy." *Intellectual History of the Islamicate World* 7: 61–84.
- Silverstein, Matthew. 2016. "Teleology and Normativity." *Oxford Studies in Metaethics* 11: 214–240.
- Taylor, Richard C. 2014. "Providence in Averroes." In *Fate, Providence and Moral Responsibility in Ancient, Medieval and Early Modern Thought. Studies in Honor of Carlos Steel*, edited by Pieter d'Hoine and Gerd Van Riel, 441–454. Leuven: Leuven University Press.
- Thaler, Naly. 2011. "Traces of Good in Plotinus's Philosophy of Nature: Ennead VI.7.1–14." *Journal of the History of Philosophy* 49(2): 161–80.
- Tlili, Sarra. 2012. *Animals in the Qur'an*. Cambridge: Cambridge University Press.
- Tlili, Sarra. 2015. "Animals Would Follow Shāfi'ism: Legitimate and Illegitimate Violence to Animals in Medieval Islamic Thought." In *Violence in Islamic Thought from the Qur'an to the Mongols*, edited by Robert Gleave and István Kristó-Nagy, 225–244. Edinburgh: Edinburgh University Press.
- Wakelnig, Elvira. 2018. "Medical Knowledge as Proof of Creator's Wisdom and the Arabic Reception of Galen's *On the Usefulness of Parts*." In *Greek Medical Literature and its Readers. From Hippocrates to Islam and Byzantium*, edited by Petros Bouras-Villianatos and Sophia Xenophontos, 131–149. London: Routledge.
- Wisnovsky, Robert. 2003. *Avicenna's Metaphysics in Context*. Ithaca: Cornell University Press.