

Chapter 2

Averroes against Avicenna on Human Spontaneous Generation: The Starting-Point of a Lasting Debate

Amos Bertolacci

Introduction

Among the legends on Averroes's life reported in Ernest Renan's *Averroès et l'averroïsme* (1852), allegedly 'the most absurd' is the one that he draws from *De philosophia et philosophorum sectis* by Gerardus Joannes Vossius (1577–1649) (published posthumously in 1658) and from the *Historia critica philosophiae* (1767) by Johann Jakob Brucker (1696–1770). The story goes that Avicenna went to Cordoba during Averroes's lifetime, and Averroes, out of hate, tortured and killed him.¹ The tale of Avicenna's presence in Cordoba and his killing by Averroes has a long history that goes back to the thirteenth century.² On a historical level, the legend in question is obviously wrong, since Avicenna lived more than a century before Averroes and never moved to Andalusia. The persistence of the account of

¹ Ernest Renan, *Averroès et l'averroïsme* (Paris: Durand, 1852; repr. Paris: Maisonneuve & Larose, 1997), pp. 47–48.

² See Marie-Thérèse d'Alverny, 'Survivance et renaissance d'Avicenne à Venise et à Padoue', in *Venezia e l'Oriente fra tardo Medioevo e Rinascimento*, ed. Agostino Pertusi (Florence: Sansoni, 1966; repr. in Ead., *Avicenne en Occident*, Paris: Vrin, 1993, article XV), pp. 75–102 (80–83). At p. 83 of this study, d'Alverny reports a version of the legend, contained in a decree of Pietro Barozzi, bishop of Padua, of May 1489, according to which Avicenna would have succeeded in killing Averroes before being brought to death himself by the latter's poison. Dag Nikolaus Hasse, 'Averroes in the Renaissance', in *Averroes Latinus: A New Edition* (Leuven: Peeters, 2002), pp. xv–xviii (xvii), identifies the immediate source of Barozzi's report in the world chronicle by Giacomo Filippo Foresta (or Foresti) da Bergamo (1434–1520). See also Akasoy in this volume.

A. Bertolacci (✉)

Suola Normale Superiore di Pisa, Piazza dei Cavalieri,
7, Palazzo della Carovana Stanza 112, 56126 Pisa, Italy
e-mail: a.bertolacci@sns.it

Averroes's enmity against Avicenna, however, even after the chronological and geographical details of the latter's life had become clear to Western scholars, is significant at a philosophical level, since it represents the reflex – in which doctrinal confrontation is amplified to physical aggression – of an indisputable fact, namely, Averroes's actual 'affectation à contredire Avicenne,' as Renan says. The immense impact of Avicenna's philosophy on subsequent authors includes, besides countless instances of positive reception, also some noteworthy examples of critical attitude. Among the opponents of Avicenna, Averroes was certainly one of the most strenuous and radical.

Criticisms of Avicenna are frequent and widespread in Averroes's philosophical and theological works.³ The piecemeal investigation of these criticisms accomplished in previous scholarship has not fully evidenced, and sometimes even obscured, the paramount importance that Avicenna's philosophy had for Averroes.⁴ When, on the contrary, these critical references are considered more closely and studied cumulatively, they reveal Averroes's keen interest in Avicenna's thought, and his desire to formulate a systematic and definitive rejection of his philosophy.⁵ This is attested by several facts. First of all, some of Averroes's treatises are openly devoted to the rebuttal of Avicenna's positions, expressing this intention in their titles.⁶ Secondly, even in works whose anti-Avicennian aim is not explicit from the outset, criticisms are numerous, often repeated, and frequently accompanied

³ The case of the medical works might be different. Averroes's commentary on Avicenna's *Urjūzat al-ṭibb*, for example, allegedly shows a positive attitude towards Avicenna (see Renan, *Averroès et l'averroïsme*, p. 48).

⁴ Although some of them, singularly taken, have attracted the attention of scholars, a comprehensive list and an overall study of these polemical references is still a *desideratum*. The lacunae of the pioneering list in Marcantonio Zimara, *Tabula dilucidationum in dictis Aristotelis et Averrois*, in Aristotle, *Opera cum Averrois commentariis*, 12 vols (Venice: Giunta, 1562; repr. Frankfurt am Main: Minerva, 1962), supplementum III, fols 42–43, are only partially filled by 'Abd al-Rahmān Badawī, 'Avicenne en Espagne musulmane: pénétration et polémique', in *Milenario de Avicenna* (Madrid: Instituto Hispano-Arabe de Cultura, 1981), pp. 9–25 (15–24), and Miguel Cruz Hernández, *Abū-l-Walīd Muḥammad Ibn Rušd, Averroes: Vida, obra, pensamiento, influencia* (Cordoba: Publicaciones de la Obra Social y Cultural Cajasur, 1997 [1986]), pp. 371–375.

⁵ Gerhard Endress, 'The Cycle of Knowledge: Intellectual Traditions and Encyclopaedias of the Rational Sciences in Arabic Islamic Hellenism', in *Organizing Knowledge: Encyclopaedic Activities in the Pre-Eighteenth Century Islamic World*, ed. Gerhard Endress (Leiden: Brill, 2006), pp. 103–133 (125), portrays Averroes's multi-levelled commentaries on Aristotle as an expression of 'the project to found an alternative encyclopaedia', to replace the one contained in Avicenna's works.

⁶ See, for example, the logical treatises *Qawl fī 'l-maḥmūlāt al-mufrada wa 'l-murakkaba wa-naqd mawqif Ibn Sīnā* ('Discourse on single and composite predicates and critique of Avicenna's position'), in Ibn Rushd, *Maqālāt fī 'l-manṭiq wa 'l-'ilm al-ṭabī'ī*, ed. Jamāl al-Dīn al-'Alawī (Casablanca: Dār al-nashr al-maghribiyya, 1983), pp. 87–94, and *Naqd madhhab Ibn Sīnā fī in'ikās al-qaḍāyā* ('Critique of Avicenna's doctrine on the conversion of propositions', *ibid.*, pp. 100–105); cf. Tony Street, 'Arabic and Islamic Philosophy of Language and Logic' (<http://plato.stanford.edu/entries/arabic-islamic-language/>), §1.4.2.

by long and detailed argumentations.⁷ This means that Averroes's attacks against Avicenna's positions are not occasional and incidental diversions, but represent a *leitmotiv* and an important target of these works. Thirdly, criticisms touch on all the main areas of Avicenna's philosophy, from logic to the different sections of natural philosophy, to metaphysics. Finally, Averroes often accuses Avicenna of fundamental flaws – such as linguistic misunderstandings, semantic confusions, methodological faults and recourse to unreliable sources – detrimental for the reputation of a thinker in general and a philosopher in particular.⁸ This being the case, it is not far-fetched to say that Averroes's philosophy has two main poles: a positive one, represented by Aristotle, and a negative one, constituted by Avicenna. Albeit negatively, Avicenna is one of the most important sources of Averroes's system, probably the most extensively quoted, after Aristotle, together with al-Fārābī.

Elsewhere, I have provided an overview of all Averroes's criticisms of Avicenna in his Aristotelian commentaries, and a more specific account of those contained in Averroes's Long Commentary on *Metaphysica*.⁹ In the present contribution, I wish to focus on the first criticism contained in this commentary, in the context of Averroes's exegesis of book 2 of *Metaphysica* (II, 993a30–995a20). At stake is Avicenna's doctrine of the asexual (so-called 'spontaneous') generation of human beings. In the general context of the confrontation between advocates and opponents of spontaneous generation, this more specific debate between Averroes and Avicenna deeply influenced Jewish thought and had a long-lasting impact on Latin philosophy until the Renaissance. In late medieval scholasticism and early modern

⁷ See Dimitri Gutas, 'Ibn Ṭufayl on Ibn Sīnā's Eastern Philosophy', *Oriens*, 34 (1994), pp. 222–241 (240). The attention that Averroes devotes to the rebuttal of Avicenna's positions is reflected in the care with which he discusses and refutes the doctrines of philosophers whom he associates with Avicenna. Charles Genequand, 'Introduction', in Ibn Rushd, *Metaphysics: A Translation with Introduction of Ibn Rushd's Commentary on Aristotle's Metaphysics, Book Lām*, ed. C. Genequand (Leiden: Brill, 1984; repr. 1986), pp. 1–58, contends, for instance: 'The care with which Ibn Rushd explains and refutes these objections of Themistius probably owes something to the use which Ibn Sīnā made of them' (p. 29).

⁸ That Averroes's rebuttal of Avicenna's philosophy is wide-ranging and radical has been colourfully expressed by saying that Averroes is insistent, assiduous, even 'obsessed' in criticizing 'his own arch-enemy' Avicenna: the two expressions occur, respectively, in Herbert A. Davidson, *Proofs for Eternity, Creation and the Existence of God in Medieval Islamic and Jewish Philosophy* (New York and Oxford: Oxford University Press, 1987), p. 311, and Dag Nikolaus Hasse, 'Spontaneous Generation and the Ontology of Forms in Greek, Arabic and Medieval Latin Sources', in *Classical Arabic Philosophy: Sources and Reception*, ed. Peter Adamson (London and Turin: The Warburg Institute and Aragno, 2007), pp. 150–175 (159).

⁹ Amos Bertolacci, 'From Athens to Iṣfahān, to Cordoba, to Cologne: On the Vicissitudes of Aristotle's *Metaphysics* in the Arab and Latin Worlds during the Middle Ages', in *Sciences et philosophie: Circulation des savoirs autour de la Méditerranée (IXe–XVIIe siècles)*, Colloque International SIHSPAI, Florence, Italy, 16–18 February 2006; Id., 'The "Andalusian Revolt Against Avicenna's Metaphysics": Averroes' Criticism of Avicenna in the Long Commentary on the *Metaphysics*', in *Averroès, l'averroïsme, l'antiaverroïsme - XIV^e symposium annuel de la SIEPM*, Genève, Switzerland, 4–6 October 2006. The first communication is in print in the proceedings of the aforementioned conference (eds Graziella Federici Vescovini and Ahmed Hasnaoui), whereas the second will be published in the proceedings of the conference *From Cordoba to Cologne: Transformation and Translation, Transmission and Edition of Averroes's Works*, Cologne, Germany, 25–28 October 2011 (ed. David Wimer).

philosophy thinkers assumed three main positions towards this debate: some upheld Avicenna's position, defending him against Averroes's attack (see, for instance, Pietro Pomponazzi [d. 1525], and Pomponazzi's students Paolo Ricci and Tiberio Russiliano); others, on the contrary, basically adopted Averroes's standpoint, although superimposing on it a distinction between Peripatetic philosophy and Christian doctrine foreign to Averroes and taken from John Duns Scotus (Agostino Nifo [d. ca.1540]); a third group of thinkers, finally, followed the so-called *via media*, already traced by Thomas Aquinas, pointing at the possibility of a middle course between the extreme positions of Avicenna and Averroes (Antonio Trombetta [d. 1517] in Padua, and Pedro de Fonseca [d. 1599] in Lisbon).¹⁰ This variety of opinions shows not only the vivacity of the discussion triggered by Avicenna's and Averroes's confrontation, but also the importance of the philosophical options at stake behind the standpoints of the two Arab masters.

Elsewhere in the Long Commentary on *Metaphysica* Averroes attacks Avicenna's doctrine of spontaneous generation in general for implying the intervention of the Giver of Forms and for its Platonising character.¹¹ In the criticism considered here, the disagreement on human spontaneous generation is dictated by a more markedly ontological point of view, since Averroes detects in Avicenna's position a violation of the principle of the necessary inherence of complex forms, like the form of man, in specific and structured matters, to the exclusion of more generic and basic material. Averroes's objections against Avicenna are mainly two: the first, implicit, is that human spontaneous generation is impossible; the second, explicit, is that the form of man cannot inhere in a matter, like elemental earth, that is much simpler

¹⁰ For a historical overview, see Gad Freudenthal, '(Al-)Chemical Foundations for Cosmological Ideas: Ibn Sīnā's on the Geology of an Eternal World', in *Physics, Cosmology and Astronomy, 1300–1700: Tension and Accommodation*, ed. Sabetai Unguru (Dordrecht, Boston and London: Kluwer 1991); repr. in Id., *Science in the Medieval Hebrew and Arabic Traditions* (Aldershot: Ashgate, 2005), XII, pp. 47–73 (64–65); Dag Nikolaus Hasse, 'Arabic Philosophy and Averroism', in *Cambridge Companion to Renaissance Philosophy*, ed. James Hankins (Cambridge: Cambridge University Press, 2007), pp. 113–136 (esp. pp. 125–129); Hasse, 'Spontaneous Generation', pp. 155 ff. (on pp. 158–159, 161–162, Hasse touches upon Averroes's criticism of Avicenna in Text 1); Gad Freudenthal, 'Samuel Ibn Tibbon's Avicennian Theory of an Eternal World', *Aleph*, 8 (2008), pp. 41–129 (64–68).

¹¹ *Tafsīr mā ba'd al-ṭabī'a*, ed. Maurice Bouyges (Beirut: Imprimerie Catholique, 1938–1948; henceforth: *Tafsīr*), Z.31, p. 882, l. 17–19 (Lat. transl. in Aristotle, *Opera cum Averrois commentariis*, VIII, fol. 181^b); Z.31, p. 885, l. 18 – p. 886, l. 3 (fol. 181ⁱ); A.18, p. 1498, l. 12–15 (fol. 304^g). In the quotations of Averroes's commentaries, the Greek letter indicates the treatise of Aristotle's work commented upon, whereas the following cardinal number refers to the section of Averroes's exegesis (thus, Z.31 means: treatise Z [i.e., VII] of the *Metaphysica*, section 31 of Averroes's exegesis). On these criticisms, see Genequand, 'Introduction', pp. 24–32; Gad Freudenthal, 'The Medieval Astrologization of Aristotle's Biology: Averroes on the Role of the Celestial Bodies in the Generation of Animate Beings', *Arabic Science and Philosophy*, 12 (2002), pp. 111–137; repr. in Id., *Science in the Medieval Hebrew and Arabic Traditions*, XV; Dag Nikolaus Hasse, 'Plato Arabico-Latinus: Philosophy – Wisdom Literature – Occult Sciences', in *The Platonic Tradition in the Middle Ages: A Doxographic Approach*, eds Stephen Gersh, Maarten J. F. M. Hoenen and Pieter T. van Wingerden (Berlin and New York: De Gruyter, 2002), pp. 31–64 (42–45); Id., 'Spontaneous Generation', pp. 158–162.

than its usual material is. The criticism in question, besides offering an insightful vantage-point on Averroes's ontology, is interesting in another respect: it can be taken as representative of Averroes's overall anti-Avicennian polemic, since it displays some important recurrent features of Averroes's critical remarks concerning Avicenna.

Text 1: *Tafsīr* α.15, p. 46, l. 18 – p. 47, l. 4 (Lat. transl. *In Aristotelis librum II [α.] Metaphysicorum Commentarius*, ed. Gion Darms [Freiburg: Paulusverlag, 1966], p. 77, l. 25–30)

[a] Likewise, there are those who deny that specific forms are necessarily proper to their matters. Thus, we find that Avicenna, despite his famous rank in wisdom, says to be possible for a man to be generated from earth (*turāb*), as a mouse is generated [from it].

[b] This [view] – if he [indeed] held it and did not disparage it – is an [instance of] consensus with the people of his time.

[c] For this [mistake] – and many other similar things, whose enumeration would be too long – happened to him because of his familiarity with the science of the Ash'ariyya.

The three sections in which this text can be divided present three *leitmotifs* of Averroes's criticisms of Avicenna. The first is the harsh tone and the *ad personam* character of the attack, witnessed by section [a], where Averroes expresses his amazement at an error that he regards as unworthy of Avicenna's alleged fame in philosophy. The second *topos* is Averroes's insistence in section [b] on Avicenna's agreement and consonance with contemporary thinkers, a fact that in Averroes's eyes evidences the profound gap separating Avicenna from the ancient masters, depositaries of authentic philosophy. Section [c], finally, is one of the many cases in which Averroes scolds Avicenna for being too conversant with, and receptive of, Islamic theology in general, and its Ash'arite version in particular, thus disregarding the requirements of true philosophy.¹²

In what follows, I will take all of these sections into account, showing how in each of them Averroes presents Avicenna's position in a peculiar and deforming way. In fact, ([a]) Avicenna does not uphold the specific version of human spontaneous generation that Averroes ascribes to him; ([b]) Avicenna's doctrine of human spontaneous generation is deeply rooted in ancient philosophy; and ([c]) his account of this doctrine evidences clear non-religious (and therefore non-theological) traits.

¹² Ash'arism was one of the major currents of Islamic theology, deriving its name from the tenth-century theologian Abū 'l-Ḥasan al-Ash'arī (d. 935). In reaction to the theological rationalism that characterised the first great Islamic theological movement (Mu'tazilism), the numerous exponents of this school underscored dogmatic aspects of Islam that were at odds with a strictly philosophical world-view (such as God's absolute omnipotence and free will, and His constant agency in the order of natural events), thus determining an occasionalist perspective in natural philosophy and a strict observance of divine commands in ethics. On Ash'arism, see Daniel Gimaret, *La doctrine d'al-Ash'arī* (Paris: Éditions du Cerf, 1990). Averroes's choice of connecting Avicenna with Ash'arism in particular, among the various schools of Muslim theology, seems an intentional move in his strategy of stressing the non-philosophical character of Avicenna's thought.

The Matter of Human Spontaneous Generation According to Avicenna

According to Averroes's report in section [a], Avicenna upholds that, in the case of human spontaneous generation, the specific form of man (the form of humanity present in the sperm of the male parent) does not inhere in its usual proper matter (supposedly the menstruum of the female parent), but supervenes on a different, more elementary, substrate (earth). Section [a] deals apparently with a precise passage of Avicenna's works ('we find that Avicenna ... says ...'). The *locus* in question is in all likelihood a pericope of the *Kitāb al-Shifā'* (*Book of the Cure*), Avicenna's most important philosophical *summa*; more precisely, it can be identified with chapter II, 6 of *Ma'ādīn wa-Āthār 'ulwiyya* (*Minerals and Upper Signs*), at the end of the fifth section of the *Shifā'* dealing with natural philosophy, in which Avicenna reworks a part of Aristotle's *Meteorologica* and endorses the doctrine of human spontaneous generation while explaining mankind's rebirth after a catastrophic event like a universal flood. In this chapter, Avicenna admits the possibility that animal species (including the human species) may undergo a process of asexual generation: in this process, the embryonic matter is provided by a mixture of elements determined by specific astral configurations, the protection that is usually guaranteed by the female uterus is superfluous due to the absence of environmental dangers, and the formative action of male sperm is replaced by a direct inflow of the form by the Active Intellect. This kind of spontaneous generation is for Avicenna an unusual, extraordinary phenomenon that prevents the total extinction of animal life on earth after the recurrent floods by which world history is allegedly marked.¹³ This doctrine is absent in Aristotle and, although it may have been cryptically alluded to also by al-Fārābī before Avicenna,¹⁴ it receives an extensive and coherent account only by the latter. Therefore, Averroes is substantially right in ascribing the doctrine of the spontaneous generation of human beings to Avicenna and in criticizing it as non-Aristotelian.

¹³ The precise way in which Avicenna conceives the spontaneous generation of man in this chapter deserves a precise analysis, in the footsteps of Remke Kruk's numerous studies on the accounts of the phenomenon of animal spontaneous generation in Avicenna's thought: see Remke Kruk, 'A Frothy Bubble: Spontaneous Generation in the Medieval Islamic Tradition', *Journal of Semitic Studies*, 35 (1990), pp. 265–282; Ead., 'Ibn Ṭufayl: A Medieval Scholar's Views on Nature', in *The World of Ibn Ṭufayl: Interdisciplinary Perspectives on Ḥayy Ibn Yaqzān*, ed. Lawrence I. Conrad (Leiden: Brill, 1996), pp. 69–89 (80–87); Ead., 'Ibn Sīnā on Animals: Between the First Teacher and the Physician', in *Avicenna and His Heritage*, ed. Jules Janssens and Daniel De Smet (Leuven: Leuven University Press, 2002), pp. 325–341 (334–338).

¹⁴ See *Al-Farabi on the Perfect State: Abū Naṣr al-Fārābī's Mabādī' Ārā' Ahl al-Madīna al-Fāḍila*, A Revised Text with Introduction, Translation and Commentary by Richard Walzer (Oxford: Clarendon Press, 1985; repr. 1988), ch. 16, §7, p. 270, l. 16 – p. 272, l. 3. In the commentary to this text (pp. 466–467), Walzer sees this brief passage as an expression of al-Fārābī's endorsement of the doctrine of human spontaneous generation, although he remarks that such a doctrine is not fully compatible with al-Fārābī's usual description of human generation and his belief in the eternity of the human species. Walzer assumes that this doctrine, rejected as such by Aristotle (see p. 467, n. 836), entered in the Aristotelian tradition on account of the inner tensions between Aristotle's theory of becoming, on the one hand, and his views on biological generation, on the other.

As to the specific doctrine of the spontaneous generation of human beings from earth, however, the evidence in Avicenna's works is more scarce. Indeed, if compared with the place of the *Shifā'* from which it is taken, Averroes's report of Avicenna's doctrine in section [a] is simplified in several respects. First, whereas in *Ma'ādin wa-Āthār 'ulwiyya* II, 6 Avicenna maintains that mice can be generated from earth, he does not uphold the view that men are generated from earth in the same way as mice are. Nowhere in this chapter does he draw a parallel between the spontaneous generations of mice and human beings; he rather equates the spontaneous generation of mice with that of other non-human animals, like snakes, scorpions and frogs.¹⁵ Second, in this chapter Avicenna points to the necessity of a particular predisposition (*isti'dād*) of matter, given by a certain composition (*ijtimā'*), mixture (*mizāj*), and blend (*imtizāj*) of all the elements (*'anāsir*, *arkān*), as one of the conditions of spontaneous generation in general, without connecting directly and explicitly the spontaneous generation of human beings only with one particular element (earth).¹⁶ Third, he does not portray the spontaneous generation of animals as a direct and immediate effect of the mixture of elements, but contends explicitly that at least one or two further mixtures are necessary in order for the process to be completed.¹⁷ Thus, earth and the other elements are only the *remote* material cause

¹⁵ Ibn Sīnā, *Al-Shifā', al-Ṭabī'īyyāt, al-Ma'ādin wa'l-Āthār al-'ulwiyya*, ed. 'Abd al-Halīm Muntaṣir, Sa'īd Zāyid, 'Abdallāh Ismā'īl (Cairo: al-Hay'a al-'amma li-shu'ūn al-maṭābi' al-amīriyya, 1965; henceforth: *Ma'ādin wa-Āthār 'ulwiyya*) treatise II, chapter 6, p. 76, l. 18 – p. 77, l. 4 (Lat. trans. *De diluviis*, in Manuel Alonso Alonso, 'Homenaje a Avicena en su milenario. Las traducciones de Juan González de Burgos y Salomón', *Al-Andalus*, 14 [1949], pp. 291–319 [p. 307, l. 3–9]): 'It is not objectionable that the animals and the plants, or some of their genera, passed away and then took place [again] through [spontaneous] generation rather than reproduction. For no demonstration whatsoever prevents things from existing and taking place, after their extinction, by way of [spontaneous] generation rather than reproduction. Many animals take place through both [spontaneous] generation and reproduction, and likewise [many] plants. Snakes (*ḥayyāt*) can result from hairs, scorpions (*'aqārib*) from clay (*tīn*) and lemon balm (*bādharij*, *melissa officinalis*), mice (*fa'r*) can be [spontaneously] generated from mud (*madar*), frogs (*ḍafādi*) from rain. But of all these things there is also reproduction.'

¹⁶ *Ma'ādin wa-Āthār 'ulwiyya* II, 6, p. 77, l. 4–10 (cf. *De diluviis*, p. 307, l. 9–14): 'When this generation stops and is not attested for many years, it is not prevented from occurring seldom, when a rare heavenly configuration takes place without having been repeated until the present, as well as [when] a predisposition of the elements (*'anāsir*) [takes place] that comes about only at every edge of a long time. On the contrary, we say that everything that is generated from the elements in virtue of a certain mixture (*mizāj*) is brought to exist as a species by the occurrence of that mixture because of the composition (*ijtimā'*) of the elements according to fixed measures. As long as the elements continue to exist, and their division and composition according to these measures is possible, the mixture resulting from them is [also] possible.'

¹⁷ *Ma'ādin wa-Āthār 'ulwiyya* II, 6, p. 77, l. 10–12 (cf. *De diluviis*, p. 307, l. 14–18): 'If the first blend (*imtizāj*) is not sufficient, but [the thing in question] is generated only by a second or third blend, as the animal is generated from the blend of the humours after that of the elements, then it is not objectionable that the second composition and the second blend takes place after the occurrence of the first blend without semen and sperm.' A second and a third mixture (*mizāj*) are mentioned also at p. 78, l. 3–4 (a passage omitted in *De diluviis*).

of the spontaneous generation of animals, and in no way its only material factor; this general point applies *a fortiori* also to the case of the spontaneous generation of human beings.

Nowhere else in the *Shifā'* can an open endorsement of the doctrine that Averroes attributes to Avicenna in section [a] be found. The treatment of spontaneous generation in chapter XV, 1 of the zoological section (*Ḥayawān*) of the *Shifā'* contains only a generic allusion to the possibility that the human species becomes extinct (this time on account of events related to air, rather than water) and that it comes back to existence by means of spontaneous generation, without any mention of earth.¹⁸ The only case I am aware of in which Avicenna deals with the doctrine of human spontaneous generation from earth is the end of treatise 17 of the *Ḥayawān* of the *Shifā'*.¹⁹ This passage, however, does not corroborate Averroes's formulation of Avicenna's doctrine in Text 1 [a].

Text 2: Avicenna, *Ḥayawān* XVII, p. 419, l. 9–10:

He [sc. Aristotle] said: 'And indeed, even if²⁰ the generation of the forefather of human beings and of the four[–legged] beasts occurred in earth (*fī arḍ*), he was generated²¹ in this way [i.e. either by larvae or from eggs].'²²

First and foremost, in this text Avicenna is speaking of the spontaneous generation of human beings 'in earth' (*fī arḍ*) rather than 'from earth' (*min arḍ*), that it to say, he is apparently taking earth as the place where human spontaneous generation occurs, rather than as the matter from which human beings are spontaneously generated, if the wording of the edition is to be maintained.²³ Moreover, in Text 2 Avicenna

¹⁸ Ibn Sīnā, *Al-Shifā', al-Ṭabī'iyyāt, al-Ḥayawān*, eds 'Abd al-Ḥalīm Muntaṣir, Sa'īd Zāyid, 'Abdallāh Ismā'īl (Cairo: al-Hay'a al-miṣriyya al-'amma li'l-ta'līf wa'l-nashr, 1970; henceforth: *Ḥayawān*), XV, 1, p. 385, l. 17 – p. 386, l. 5; Lat. transl. in *Opera in lucem redacta* (Venice: Heirs of Ottaviano Scoto, 1508; repr. Frankfurt am Main: Minerva, 1961), fol. 59^{va}. See Kruk, 'Ibn Sīnā on Animals', p. 336; Hasse, 'Spontaneous Generation', p. 155, n. 24.

¹⁹ See Lutz Richter-Bernburg, 'Medicina Ancilla Philosophiae: Ibn Ṭufayl's *Ḥayy Ibn Yaqzān*', in *The World of Ibn Ṭufayl*, pp. 90–113 (98 and n. 21).

²⁰ Mss B and D of the edition report the variant *in* ('if'). The edited reading *wa-in* ('even if') is supported also by the manuscripts Leiden, University Library, ms. Or. 4, fol. 297^r and Leiden, University Library, ms. Or. 84, fol. 542^v.

²¹ Reading *fa-takawwana* = 'he was generated', as in manuscript Leiden, University Library, ms. Or. 4, fol. 297^r, instead of *fa-sa-yakūnu* = 'it will be', as in the edition (cf. *fa-yatakawwanu* = 'he is generated' in manuscript Leiden, University Library, ms. Or. 84, fol. 542^v).

²² Cf. Ibn Sīnā, *Opera in lucem redacta*, fol. 62^{vb}: 'Et dixit etiam si fuerit pater primus hominum et quadrupedum generatus in terra, erit etiam sicut diximus.' The sentence that follows Text 2 (*Ḥayawān*, p. 419, l. 10; Lat. transl. fol. 62^{vb}: 'sed affirmationem huius determinabimus alibi') seems to correspond to the reference to *Historia animalium* occurring at the end of *De generatione animalium*, III, 11, 763b15–16 (cf. Aristotle, *Generation of Animals: The Arabic Translation commonly ascribed to Yahyā ibn al-Bīṭrīq*, eds J. Brugmann and H. J. Drossaart Lulofs [Leiden: Brill, 1971], p. 133, l. 8–10).

²³ The edited reading *fī arḍ* is attested also in manuscripts Leiden, University Library, ms. Or. 4, fol. 297^r and Leiden, University Library, ms. Or. 84, fol. 542^v. The confusion between *fī* ('in') and *min* ('from') is, however, not unusual in Arabic manuscripts.

simply paraphrases Aristotle's hypothetical statement in *De generatione animalium*, III, 11, 762b27-32, according to which, *if* human beings and quadrupeds were generated from earth once upon a time, as some say (a reference to such *loci* as Plato's *Politicus* 269b, 271a), *then* one might assume that their generation occurred either by larvae or from eggs.²⁴ Averroes was in all likelihood familiar with this Aristotelian passage, since he is credited with a commentary on Aristotle's zoological works.²⁵ Therefore, Averroes could not take Text 2 as evidence that Avicenna was endorsing the doctrine of the spontaneous generation of man from earth, without ascribing *ipso facto* the same doctrine to Aristotle as well (an ascription that Averroes would certainly reject).

Avicenna's Sources in Ancient Philosophy

Studies on the medieval doctrine of human spontaneous generation have cumulatively shown its profound underpinnings in ancient philosophy. In Avicenna's case in particular, the overall setting of *Ma'ādin wa-Āthār 'ulwiyya*, II, 6 is dependent upon Greek sources: the doctrine of floods is reminiscent of the reports of catastrophic events that one finds in Plato's dialogues (see *Timaeus*, 22c-23b; *Laws*, III 677a-b)²⁶; the spontaneous generation of lower animal species is taken from Aristotle's zoology (for mice, see *Historia animalium*, VI, 37, 580b30, cf. Pliny, *Naturalis historia*, X, 85; for scorpions, see Aristotle, fr. 367 Rose)²⁷; Avicenna was also in all likelihood familiar with the tales regarding human beings generated from earth, which are recurrent in Plato's works (*Protagoras*, 320d-e, *Politicus* 269b, 271a), as well as in other ancient historians (cf. the reference to Erechtheus 'born from earth' in Herodotus, *Historiae*, VIII, 55), if not in their original formulations, at least in the reports that one finds in Aristotle's zoological works, where such tales are discussed and substantially dismissed (*De generatione animalium*, III, 11, 762b27-32).

²⁴ Cf. Aristotle, *Generation of Animals: The Arabic Translation*, p. 131, l. 4-6: 'One might similarly believe about the generation of men and of the four-legged animals, if their generation was originally from earth, as some suppose, that its beginning occurred in one of two ways.'

²⁵ Prof. Gerrit Bos is preparing the critical edition of the Hebrew translation of this commentary, several passages of which are discussed in Freudenthal, 'The Medieval Astrologization of Aristotle's Biology'.

²⁶ The dependence on Plato's *Timaeus* has not escaped the Latin translator, who entitles *De diluviis in Thimaem Platonis* the Latin version of *Ma'ādin wa-Āthār 'ulwiyya* II, 6.

²⁷ Snakes and frogs are not taken into account by Aristotle in the context of spontaneous generation; about the former he explicitly says, on the contrary, that they are oviparous (*Historia animalium*, VI, 1, 558b1). On Aristotle's theory of spontaneous generation, see James G. Lennox, 'Teleology, Chance, and Aristotle's Theory of Spontaneous Generation', *Journal of the History of Philosophy*, 20 (1982), pp. 219-238; Lindsay Judson, 'Chance and "Always or For most Part" in Aristotle', in *Aristotle's Physics: A Collection of Essays*, ed. L. Judson (Oxford: Clarendon Press, 1991), pp. 73-74 and n. 2.

Moreover, Averroes is well aware that Avicenna was deeply involved in the fiery debate prompted among Peripatetics by Themistius's interpretation of spontaneous generation, which Averroes regards as anti-Aristotelian because of the recourse to Platonic forms²⁸: in commenting on a passage of *Metaphysica*, VII, 9 (1034b4-7), in which Aristotle explains this phenomenon only in terms of certain peculiarities of matter, Averroes criticises Avicenna twice for his agreement with Themistius and opposition to Aristotle and Alexander of Aphrodisias; Averroes reiterates this criticism of Avicenna in a similar vein in his commentary on *Metaphysica*, book 12.²⁹ In other words, Averroes did not ignore that chapter II, 6 of *Ma'ādīn wa-Āthār 'ulwiyya* is constitutively dependent upon, and dialectically related to, Greek sources.

In light of all this, stating – as Averroes does in section [b] of Text 1 – that Avicenna's endorsement of the doctrine of human spontaneous generation (with the further qualification 'from earth' added by Averroes) is evidence of his agreement with his contemporaries seems excessive. Quite on the contrary, Avicenna's stand derives primarily from his philosophical lineage and, in particular, from his harmonising attitude towards the two main exponents of Greek thought, Aristotle and Plato, and the two major interpreters of Aristotle within the Greek Peripatetic tradition, Alexander of Aphrodisias and Themistius; more specifically, Avicenna's position can be seen as a sort of synthesis between the Aristotelian tenet of the eternity of natural species, on the one hand, and the Platonic theory of the periodic extinctions of mankind due to natural catastrophes (which Avicenna takes as effectively universal), on the other; between the active role of the celestial realm in the worldly processes of generation and corruption, acknowledged by Alexander of Aphrodisias, and the theory of the emanation of forms from above in the sublunary world, suggested by Themistius. The consensus with the thinkers of his time that Averroes notices in Avicenna, if it really took place, is to be considered as a consequence of this wider and more fundamental theoretical option.

Thus, lacking any effective basis, Averroes's remark sounds like an ideological charge against Avicenna: in light of Averroes's project to restore the original thought of Aristotle in the commentaries on the latter's works, Avicenna's agreement with contemporaries is, for Averroes, tantamount to his distance from true philosophy. This accusation is complementary to another reproach that Averroes often raises against Avicenna, that of consciously distancing himself from, and therefore contaminating and corrupting, true Aristotelian doctrine.³⁰

²⁸ The reliability of Averroes's interpretation of Themistius's position is not unanimously accepted: see the doubts raised by Genequand, 'Introduction', pp. 27–29, in comparison with the more sympathetic attitude of Hasse, 'Spontaneous Generation', p. 154.

²⁹ See the passages quoted above, n. 11.

³⁰ See, for example, the criticisms in the Long Commentary on the *De anima* Γ.30 (Averroes, *Commentarium magnum in Aristotelis De Anima libros*, ed. F. Stuart Crawford [Cambridge, MA: The Medieval Academy of America, 1953], p. 470, l. 41–48), and in the *Tahāfut al-Tahāfut* (*Tahafot at-tahafot*, ed. Maurice Bouyges [Beirut: Imprimerie Catholique, 1930], p. 500, l. 12–13; Engl. trans. in *Averroes' Tahafut al-Tahafut [The Incoherence of the Incoherence]*, trans. Simon van den Bergh [Oxford: Oxford University Press; London: Luzac, 1954], p. 305).

Al-Ghazālī's Point of View

Previous research on Avicenna's doctrine of human spontaneous generation has rightly noticed its anti-religious vein.³¹ In Avicenna's account, the extinction of human life caused by disruptive floods is really universal and, differently from the Biblical story of Noah and his family (as well as the Greek myth of Deucalion and Pyrrha), spares no member of mankind. In this way, Avicenna seems to exclude both the notion of a providential God who preserves his dearest creatures from total disappearance and the idea of a divine justice that punishes evil persons on account of their deeds, so that sinful behaviour is extinguished in the world, while good persons are preserved to become the subject of a righteous covenant. If therefore Averroes affirms in section [c] that Avicenna's doctrine is a proof of his familiarity with Islamic theology, thus ascribing to Avicenna intentions that are totally alien to the latter's point of view, it is because he sees in the Avicennian doctrine expounded in section [a] an intimate link with religious and theological thought. No doubt, Averroes is alluding to the cursory references to God's creating mankind from earth in the Quran, whose scriptural model is the Biblical tale of the creation of Adam. But even this third contention, as we are going to see, is more problematic than it can appear.

Averroes states explicitly that the theologians hold the creation of man from earth in a passage of the *Tahāfut al-Tahāfut* (*Incoherence of the Incoherence*), in which he comments on a specific pericope of the *Tahāfut al-falāsifa* (*The Incoherence of the Philosophers*) of al-Ghazālī, a theologian whom Averroes frequently classifies as Ash'arite.³² In the first section ('discussion') of the second part of this work (the part devoted to natural philosophy, following the first part dealing with metaphysics), al-Ghazālī confronts the philosophers' dismissal of those occasional 'ruptures' of the regular connection of causes and effects that constitute the divine miracles.³³ In order to guarantee the possibility of miracles, in the second half of this first section he shows that certain miracles denied by the philosophers, such as the transformation of a staff into a serpent (with reference to Moses, Quran XX:17–21; cf. VII:107, XXVI:45) or the resurrection of dead persons (in the Day of Judgement), can be justified even on philosophical grounds, i.e., assuming the philosophical setting of causality. Two passages of this section are relevant. In them, al-Ghazālī resumes certain aspects of Avicenna's doctrine of

³¹ See Freudenthal, 'Samuel Ibn Tibbon's Avicennian Theory of an Eternal World', pp. 66–67.

³² Michael E. Marmura, 'Al-Ghazālī's Second Causal Theory in the 17th Discussion of his *Tahāfut*', *Islamic Philosophy and Mysticism*, ed. Parviz Morewedge (Delmar [New York]: Caravan Books, 1981), pp. 85–112 (99), aptly notices 'Averroes' repeated references in his own *Tahāfut* to al-Ghazālī's arguments as Ash'arite.'

³³ This section is often referred to as the seventeenth discussion of the *Tahāfut al-falāsifa* (see the article by Marmura mentioned in the previous footnote). On its overall doctrine, see Frank Griffel, *Al-Ghazālī's Philosophical Theology*, Oxford University Press, Oxford 2009, pp. 147–179, and the further bibliography quoted therein.

human generation and of animal spontaneous generation. However, contrary to the expectation elicited by Text 1 [c], he seems to exclude that human generation can take place directly from earth, neither does he appear to subscribe to Avicenna's doctrine of the spontaneous generation of human beings.

Text 3: Al-Ghazālī, *Tahāfut al-falāsifa* (*The Incoherence of the Philosophers*, A Parallel English-Arabic text translated, introduced, and annotated by Michael E. Marmura [Provo: Brigham Young University Press, 2000], p. 172, l. 4–10; p. 173, l. 11–14)

[a] Similarly, the raising of the dead and the changing of the staff into a snake are possible in this way – namely that matter is receptive of all things. Thus, earth (*turāb*) and the rest of the elements (*sā'ir al-'anāšir*) change into plants, plants – when eaten by animals – into blood, blood then changes into sperm. Sperm is then poured into the womb and develops in stages as an animal; this, in accordance with habit, takes places in a lengthy period of time. Why, then, should the opponent deem it impossible that it lies within God's power to cycle matter through these stages in a time shorter than has been known? And if this is possible within a shorter time, there is no restriction to its being [yet] shorter ...

[b] Moreover, we have seen genera of animals that are [spontaneously] generated from earth (*turāb*) and are never procreated – as, for example, worms – and others like the mouse (*fa'r*), the snake (*ḥayya*) and the scorpion (*'aqrab*) that are both [spontaneously] generated and procreated, their generation being from the earth (*turāb*). Their dispositions to receive forms differ due to things unknown to us, it being beyond human power to know them.

Without entering into details, al-Ghazālī's main point in this text is that a possible explanation of the miracle of resurrection is congruent with the philosophical account of human generation, according to which elemental matter becomes, successively, vegetal life, nourishment, blood, sperm and – finally – a living being: the same sequence of distinct stages posited by the philosophers in human generation can be maintained also in the case of resurrection, with the only proviso of restricting the chronological span of their succession, i.e., positing the overall process as being – by God's power – much faster than usual and, in the last instance, instantaneous (section [a]).³⁴ The fact that some animals (like mice, snakes and scorpions), for reasons unknown to us, are generated in two different ways, both through procreation and spontaneously (section [b]), confirms that two types of human generation, differing in their temporal durations, are possible: the first, the one which we are accustomed to and which philosophers explain, takes place in a certain time; the second, performed by God on the day of resurrection, on the contrary, occurs instantaneously. In section [a], al-Ghazālī resumes some points of the standard philosophical theory of sexual human generation, shared by Avicenna and surfacing *mutatis mutandis* also in chapter II, 6 of Avicenna's *Ma'ādin wa-Āthār 'ulwiyya*. Like Avicenna, al-Ghazālī maintains that all the elements, not only earth, are involved in the process of human generation, and that this latter occurs through different successive stages. The overall view expounded in section [b], the examples chosen (three of the four animal species mentioned by Avicenna), and the terminology

³⁴ Although in section [a] al-Ghazālī does not mention explicitly human generation and refers simply to the 'animal', the reference to the 'raising of the dead' at the very beginning indicates that man in particular is envisaged when animal generation in general is discussed.

employed, leave no doubt that al-Ghazālī is rephrasing here Avicenna's doctrine of animal spontaneous generation as presented in *Ma'ādīn wa-Āthār 'ulwiyya* II, 6.³⁵

The extent to which al-Ghazālī personally endorses the philosophical doctrines that he expounds in Text 3 – and, more in general, in the section of the *Tahāfut al-falāsifa* in which this text occurs – is debatable.³⁶ The following sections of the *Tahāfut al-falāsifa* attest that al-Ghazālī accepts the philosophical account of sexual human generation provided in section [a], which he qualifies as necessary.³⁷ Apparently, he does not reject the Avicennian doctrine of animal spontaneous generation at stake in section [b]: the *incipit* of this section ('we have seen') might even suggest a personal involvement in the thesis expounded. As to the Avicennian doctrine of the asexual spontaneous generation of human beings, by contrast, the remainder of the *Tahāfut al-falāsifa* certifies quite clearly that al-Ghazālī deems it contrary to religious law and, therefore, not acceptable, since, by positing several occurrences of this same event in the course of world history, it rules out the uniqueness of human resurrection expected for the Day of Judgement.³⁸ Significantly, the kind of human generation involved in resurrection in section [a] is not envisaged by al-Ghazālī as spontaneous, i.e. asexual, but as sexual.³⁹

Significantly, while commenting on the pericope of al-Ghazālī's *Tahāfut al-falāsifa* corresponding to Text 3 in his own *Tahāfut al-Tahāfut*, Averroes brings to the fore the ontological issue that characterises Text 1, namely, the question of whether a form can inhere in a matter that is simpler than its usual one. He contends that on this topic an unbridgeable divide separates theologians and philosophers: the theologians allegedly hold that a man can be generated from earth without intermediaries, whereas the philosophers deny this possibility. What Averroes says has important consequences for the problem of human spontaneous generation:

³⁵ See the passage of *Ma'ādīn wa-Āthār 'ulwiyya*, p. 76, l. 18 – p. 77, l. 4 (cf. *De diluviis*, p. 307, l. 3–9), referred to above, n. 15. Text 2 is only incidentally taken into account by Marmura, 'Al-Ghazālī's Second Causal Theory', p. 95.

³⁶ See, for the specific points, the thorough discussion in Marmura, 'Al-Ghazālī's Second Causal Theory'. More in general, the caveat about the *Tahāfut al-falāsifa* expressed by Richard Frank, *Creation and the Cosmic System: Al-Ghazālī and Avicenna* (Heidelberg: Winter, 1992), p. 11, n. 3 ('the work is craftily composed and one has to be careful in making any appeal to it as witness for what he [= al-Ghazālī] denies or for what he asserts') should always be kept in mind.

³⁷ Al-Ghazālī, *The Incoherence of the Philosophers*, ed. Michael E. Marmura (Provo, UT: Brigham Young University Press, 2000), p. 222, l. 1–2: 'We admit that ascending through these stages is necessary for [the earth] to become a human body.'

³⁸ Al-Ghazālī, *The Incoherence of the Philosophers*, p. 224, l. 5–9: 'If you allow the continuous generation and procreation in the manner now observed or the return of this pattern, even after a long time, by way of repetition and cyclical change, you have removed the resurrection, the end of the world, and what the apparent [meanings] of the religious law indicate, since it would follow that our existence would have been preceded by this resurrection several times and will return several times and so on, according to this order.'

³⁹ For al-Ghazālī's mention of factors akin to sexuality in final resurrection, see *The Incoherence of the Philosophers*, p. 223, l. 8–14.

Text 4: Averroes, *Tahāfut al-Tahāfut* (*Tahafot at-tahafot*, p. 540, l. 4 – p. 541, l. 3; *Averroes' Tahafut al-Tahafut*, p. 332 [slightly modified])

[a] Only in regard to the things which have no common matter or which have different matters do they [i.e., theologians and philosophers] disagree whether some of them can accept the forms of others – for instance, whether something which is not known by experience to accept a certain form except through many intermediaries can also accept this ultimate form without intermediaries.

[b] For instance, the plant comes into existence through composition out of the elements (*al-uṣṭuquṣṣāt*); it becomes blood and sperm through being eaten by an animal and from sperm and blood comes the animal, as is said in the Divine Words: 'We created man from an extract of clay (*tīn*), then We made him a clot in a sure depository' and so on till His words 'and blessed be God, the best of creators' (Quran XXIII:12–14).

[c] The theologians affirm that the soul of man can inhere in earth (*turāb*) without the intermediaries known by experience, whereas the philosophers deny this and say that, if this were possible, wisdom would consist in the creation of man without such intermediaries, and the creator who created man in such a way would be 'the best of creators' (Quran XXIII:14) and the most powerful.

[d] Both parties claim that what they say is self-evident, and neither has any proof (*dalīl*) for its theory. And you, reader, consult your heart; it is your duty to believe what it announces, and this is what God... has ordained for you.

This text is puzzling in many respects.⁴⁰ For the present discussion, the main problems it raises are three. First of all, the sharp contrast between theologians and philosophers in sections [a] and [c] does not seem to grasp the peculiarity of Avicenna's position on human spontaneous generation, as Averroes sees it. The thesis that 'the soul of man can inhere in earth without the intermediaries known by experience' in section [c] is substantially equivalent to the doctrine that Averroes ascribes to Avicenna in Text 1 [a] ('to be possible for a man to be generated from earth, as a mouse is generated [from it]', i.e., without intermediate transformations of earth into more complex matter). Here, however, this thesis is attributed to the theologians, in distinction from the philosophers. Does Averroes silently equate Avicenna to a theologian on this issue, and transfer him consequently into the theologians' camp? This would be contrary to Averroes's habit in the *Tahāfut al-Tahāfut*, where the 'philosophers' often include, and sometimes designate exclusively, Avicenna.⁴¹ But if Avicenna is one of the philosophers mentioned in Text 4, then Averroes, by stressing the philosophers' rejection of the theological doctrine of the generation of man directly from earth, contradicts his own report of Avicenna's position in Text 1 [a], where he ascribes to Avicenna exactly this doctrine. The philosophers' position in Text 4 is incompatible with Avicenna's position in Text 1 since these two formulations come from different sources: the former

⁴⁰ It is surprising, for example, that in sections [b] and [c] the philosophers are eager to quote Quranic verses in support of their view, and that the theologians' arguments are regarded by Averroes as equally unconvincing as those of the philosophers, since Averroes writes the *Tahāfut al-Tahāfut* in order to defend philosophy against its theological dismissal (section [d]).

⁴¹ See, for example, the explicit inclusion of Avicenna among the Muslim philosophers in the ninth discussion of the *Tahāfut al-Tahāfut* (*Tahafot at-tahafot*, p. 407, l. 10–11; *Averroes' Tahafut al-Tahafut*, p. 245), and the reference to the 'philosophers' advocating the Giver of Forms in the seventeenth discussion (*Tahafot at-tahafot*, p. 524, l. 9–11; *Averroes' Tahafut al-Tahafut*, p. 320).

is al-Ghazālī's substantially faithful account of Avicenna's doctrine of human generation in Text 3,⁴² whereas the latter is Averroes's deforming report of Avicenna's doctrine of human spontaneous generation.

Conversely, the dichotomy between theologians and philosophers in Text 4 involves a strongly interpretative account of al-Ghazālī's position by Averroes. If, as it seems obvious, Averroes includes al-Ghazālī among the theologians,⁴³ the thesis that 'the soul of man can inhere in earth without the intermediaries known by experience' does not reflect the text of the passage of the *Tahāfut al-falāsifa* on which Averroes is commenting: although the various stages of the generation process are taken by al-Ghazālī to be simultaneous in the miracle of resurrection, as we have seen, the human re-generation implied in resurrection remains for him a multi-levelled process (Text 3 [a]). The reason of the incongruence is that Averroes does not take the section of the *Tahāfut al-falāsifa* in which Text 3 occurs as an expression of al-Ghazālī's genuine thought, but as a dialectical 'concession' on his part to the philosophers' perspective⁴⁴: thus, by stating that the theologians admit the possibility of humans being generated from earth without intermediaries, Averroes is formulating what he regards as al-Ghazālī's authentic position, i.e. the position that this latter would sustain if he were expressing his own point of view. However, this thesis remains Averroes's speculative reconstruction of al-Ghazālī's unexpressed thought: nowhere in the *Tahāfut al-falāsifa* does the latter assert the thesis that Averroes ascribes to him and the other theologians in Text 4 [c].⁴⁵

Finally, by quoting a passage of the Quran (XXIII:12–14) that allegedly supports the philosophers' position, rather than the theologians', Averroes indicates that the Islamic canonical text, and by extension Muslim religion, does not constantly uphold the doctrine of the creation of man directly from earth, but also provides an account of human creation that is at variance with the position that Averroes ascribes to the theologians in Text 4 and to Avicenna and the theologians in Text 1.

In other words, the contrast between theologians and philosophers on the issue of human generation in Text 4 results in a view too rigid in several respects: on the one hand, it cannot capture the essence of Avicenna's position, as Averroes sees it in Text 1, namely the 'middle' position of a philosopher influenced by theological motives, who thus escapes univocal classification; on the other hand, it rests on a subjective interpretation of what true Ash'arite doctrine on human generation is likely to be, rather than on an objective pronouncement by al-Ghazālī in the *Tahāfut al-falāsifa*; finally, it is shaken and blurred by Quranic textual evidence that, instead

⁴² The Ghazalian background helps to explain why the philosophers in Text 4 are so eager to rely on the Quran.

⁴³ The fact that Averroes's use the term *turāb*, so often employed by al-Ghazālī (see above, Text 3), rather than *tīn*, as in the quoted passage of Quran XXII:12, to signify the 'earth' in the description of the theologians' position, is an indication of al-Ghazālī's inclusion among the latter.

⁴⁴ See *Tahafot at-tahafot*, p. 537, l. 9–16; Averroes' *Tahafut al-Tahafut*, p. 326; Marmura, 'Al-Ghazālī's Second Causal Theory', pp. 86 and 92.

⁴⁵ Al-Ghazālī's contention in Text 3 [a] that 'matter is receptive of all things' cannot be extrapolated from its context: the rest of the text clarifies its meaning.

of corroborating the doctrine that Averroes ascribes to the theologians, is invoked by the philosophers in their anti-theological opposition.

In sum: the theological tendency that Averroes detects in Avicenna's doctrine of human spontaneous generation finds no support in Avicenna's original texts,⁴⁶ no *a posteriori* validation by al-Ghazālī, no firm basis in the sacred text and no constant and coherent acknowledgement by Averroes himself. We can therefore suppose that Averroes himself might have added the remark concerning the agreement between Avicenna and the theologians in Text 1 [c] in order to charge Avicenna with a further accusation: to have mixed demonstrative philosophy with dialectical theology – the latter being, in Averroes's eyes, a discipline of a lower level on methodological grounds – according to a recurrent motive of his criticisms of Avicenna.⁴⁷ A confirmation of this hypothesis can be found in the terminology of Text 1, more precisely in Averroes's use of the term *turāb* to designate the earth in section [a]. This term does not appear in the relevant texts of Avicenna.⁴⁸ It comes rather from the Quran, where it occasionally appears in the account of human generation, bearing the meaning of 'dust' or 'soil' rather than 'earth' (see Quran XXX:20). Significantly, *turāb* is the term that al-Ghazālī uses to refer to the earth in both sections of Text 3, and that Averroes adopts to describe the theologians' position in Text 4 [c]. In using this term to characterise Avicenna's doctrine in Text 1, Averroes thus transfers on Avicenna – either consciously or inadvertently – Quranic terminology and theological jargon, thus 'theologising', not only in content, but also in vocabulary, Avicenna's original formulation.

Conclusion

Averroes's attempt to colour with theological traits Avicenna's doctrine of the spontaneous generation of man produces paradoxical effects: he ascribes to both Avicenna and to al-Ghazālī among the Ash'arite theologians a doctrine of human generation *directly and exclusively from earth* that neither formally and explicitly endorses. On the one hand, the asserted resemblance between Avicenna's position and the occasionalism of the Ash'arites is obtained by means of a substantial

⁴⁶ Richter-Bernburg, '*Medicina ancilla philosophiae*', p. 98, n. 21, sees an allusion to Adam's creation in Avicenna's expression 'the men's forefather' (*al-ab al-awwal li'l-nās*) in Text 2, which replaces the more vague reference to the primordial men (in the plural) in the corresponding passage of Aristotle's *De generatione animalium* (see above, n. 24). Adam's implication is, however, quite vague, and Text 2, on account of its hypothetical tenor, cannot be invoked to justify Averroes's thesis.

⁴⁷ See, for example, *Tafsīr* Γ.3, p. 313, l. 7–12 (Aristotle, *Opera cum Averrois commentariis*, VIII, fol. 67B-C); Z.31, p. 886, l. 2–4 (f. 181I-K); Λ.18, p. 1503, l. 9–12 (fol. 305 F).

⁴⁸ Avicenna's terminology resembles Quranic language in the occurrence of the term 'clay' (*tīn*) in the text of Avicenna quoted above, n. 15 (cf. Quran XXIII:12). But the use of this term in the context of the spontaneous generation of scorpions suggests that the resemblance is fortuitous.

simplification of Avicenna's position, and hides the clearly anti-providential tone of Avicenna's account of human spontaneous generation (in fact rejected by al-Ghazālī himself). On the other hand, the alleged admission by the Islamic theologians of a simplified type of human generation effaces al-Ghazālī's positive evaluation and personal endorsement of a more articulated and properly philosophical view on the issue, which surfaces as he explains the way in which human generation will take place in the final resurrection. In other words, both on the philosophers' and the theologians' side, the situation is less clear-cut than Averroes's account might lead to suppose: the straightforwardness of his report is more the result of intentional ideological simplification than of objective interpretative reordering.

Elsewhere I have documented that Averroes's intent to reject Avicenna's philosophy by stressing its distance from Aristotle conveys oscillations in Averroes's own standpoint on certain fundamental issues, since, while criticizing Avicenna, Averroes tends to portray his own positions as more different from Avicenna's than they actually are.⁴⁹ The present contribution shows, in a complementary way, that the same polemical intent – performed this time by shortening the distance between Avicenna and the Islamic theologians, rather than widening the gap between Avicenna and Aristotle – involves serious distortions in Averroes's description of Avicenna's stance, accompanied by a very interpretative account of the theologians' position. In light of all this, the parenthetical remark 'if he [indeed] held it and did not disparage it' that occurs in the middle of Text 1 (section [b]) might be revealing. Does Averroes with this statement want simply to show surprise in front of the enormity of Avicenna's error? Or does he rather manifest a certain perplexity in ascribing the doctrine in question to Avicenna? Answering this question is difficult, and not much help comes from the parallel place in Averroes's Long Commentary on *Physica* (chronologically anterior and preserved only in Latin translation), where, in the context of a similar criticism of Avicenna, no remark of this kind can be found.⁵⁰ The former alternative seems to be supported by the general tone of the text

⁴⁹ Amos Bertolacci, 'Avicenna and Averroes on the Proof of God's Existence and the Subject-Matter of Metaphysics', *Medioevo*, 32 (2007), pp. 61–97.

⁵⁰ Averroes, Long Commentary on *Physica* Θ.46 (in Aristotle, *Opera cum Averrois commentariis*, IV, fol. 387^vH): 'Sed diximus ista contra negantes hoc esse manifestum per se [sc. quod illa quae inveniuntur casu sunt monstruosa, non naturalia]: sicut Avicenna qui dicit possibile esse hominem generari a terra, sed convenientius in matrice. Et iste sermo ab homine qui dat se scientiae est valde fatuus.' The Avicennian doctrine quoted here by Averroes comes again from *Ma'ādin wa-Āthār 'ulwiyya*, II, 6, p. 78, l. 5–6 (= *De diluviis*, p. 307, l. 25–26): 'Certainly, if an uterus, for example, is [involved], this [process] is more continuous and effective; but if no [uterus] is [involved], it is not impossible for the intellect [to conceive this process] as occurring in virtue of other movements and causes.' Also in this passage of the Long Commentary on *Physica*, Averroes modifies Avicenna's original text, adding the mention of the 'earth' (*terra*) as the elemental matter of man's spontaneous generation. Since the Arabic original text of Averroes's Long Commentary on *Physica* is lost, we cannot exclude that the original version of this passage contained a remark analogous to the one in the Long Commentary on *Metaphysica*. For the doctrinal issues underlying this passage of the Long Commentary on *Physica*, see Catarina Belo, *Chance and Determinism in Avicenna and Averroes* (Leiden: Brill, 2007), pp. 154–156.

which remains highly critical throughout.⁵¹ The latter alternative, on the other hand, would help to explain the very presence of the remark, which might otherwise appear superfluous: thus, by saying ‘if he [indeed] held it and did not disparage it’, Averroes would raise the doubt that the textual evidence of Avicenna’s works may not fully support the doctrine ascribed to him in section [a], as we have ascertained.⁵² Unfortunately, at the present stage of research this hypothesis cannot be corroborated and remains a matter of speculation. What is certain is that Averroes’s deforming report of Avicenna’s position – all possible provisos apart – seems to have been influential on subsequent authors,⁵³ until at least Pietro Pomponazzi in the sixteenth century.⁵⁴

⁵¹ Elsewhere Averroes does not hesitate to reject the attribution to Avicenna of doctrines that he regards as spurious (see *Tafsīr* α.15, p. 47, l. 10–12; *In Aristotelis librum II [α] Metaphysicorum Commentarius*, p. 78, l. 37–38).

⁵² In this case, Averroes would add some caveats on an account of Avicenna’s doctrine of human spontaneous generation that he regards as too simplistic and incorrect, as it happens, with regard to a different doctrine, in the passage of *Tafsīr* α.15 quoted in the previous footnote. The doctrine of the generation of human beings from earth is present in a wide array of Arab thinkers, including the Ikhwān al-ṣafā’ and Isma’īli circles – where it is associated with God’s generation of Adam – Ibn Ṭufayl and Ibn al-Nafīs. See Kruk, ‘Ibn Ṭufayl: A Medieval Scholar’s Views on Nature’, pp. 83–84; Daniel De Smet, ‘Scarabées, Scorpions, Cloportes et Corps Camphrés: Métamorphose, Réincarnation et Génération Spontanée dans l’Hétérodoxie Chiite’, in *O ye Gentlemen: Arabic Studies on Science and Literary Culture in Honour of Remke Kruk*, eds Arnoud Vrolijk and Jan P. Hogendijk (Leiden: Brill, 2007), pp. 39–54 (53–54); for the doctrine of spontaneous generation in the writings ascribed to Jābir ibn Ḥayyān, see Kruk, ‘Ibn Ṭufayl: A Medieval Scholar’s Views on Nature’, p. 84 and n. 80. Noteworthy among them is Ibn Ṭufayl in Andalusia, since he might be regarded as the initiator of what I have called elsewhere ‘Andalusian Avicennism’, i.e., a vulgate version of Avicenna’s philosophy in which some traits of the Master’s thought are distorted and heterogeneous doctrines are added (see Bertolacci, ‘The “Andalusian Revolt Against Avicennian Metaphysics”’).

⁵³ Samuel ibn Tibbon (c. 1165–1232), for example, in the philosophical-exegetical treatise *Ma’amar Yiqqawu ha-mayim* (‘Treatise on [the Verse]: Let the waters be gathered [= Gen. 1, 9]’), ended in 1231, reports Avicenna’s doctrine as if it implied the spontaneous generation of human beings from earth (‘the generation of man from earth is possible, according to his [sc. Avicenna’s] opinion’; ‘according to him [sc. Avicenna], it is not impossible that, say, the species of man be annihilated and that subsequently, during the eternal time ... a mixis will come to be in the earth, which is suitable to receive the human form’, Engl. trans. in Freudenthal, ‘(Al-)Chemical Foundations for Cosmological Ideas’, p. 65, emphasis added). Significantly, in the second quoted passage the phrase ‘in the earth’ is added to an otherwise substantially faithful report of Avicenna’s standpoint. In this regard, Samuel ibn Tibbon might have been influenced by Averroes, whom he quotes on the same subject in the same text.

⁵⁴ On Pomponazzi’s ascription to Avicenna of the doctrine of the spontaneous generation of man ‘from putrescent matter’ (*ex putredine*), see Hasse, ‘Spontaneous Generation’, pp. 171–172.

Renaissance Averroism and Its Aftermath: Arabic
Philosophy in Early Modern Europe

Akasoy, A.; Giglioni, G. (Eds.)

2013, VIII, 408 p., Hardcover

ISBN: 978-94-007-5239-9