

PAUL OF AEGINA, PRAGMATEIA 6.88 AND THE EVIDENCE OF AVICENNA’S QĀNŪN*

In a recent textual note,¹ Aileen Das argues that the word printed by Heiberg at *Pragmateia* 6.88 as $\mu\omega\tau\acute{\alpha}$,² a name used in Egypt ($\kappa\alpha\tau'$ Αἴγυπτον) for a particular kind of small arrow, should be emended to $\mu\acute{\omega}\omega\alpha$ '(a) gadfly' on the basis of an Arabic version of the *Pragmateia* quoted by Avicenna in his *Canon of Medicine* (*al-Qānūn fī l-tibb*). Emending $\mu\omega\tau\acute{\alpha}$ to $\mu\acute{\omega}\omega\alpha$, Das concludes, would resolve a crux in the *Pragmateia* by replacing an obscure word (and apparent hapax legomenon) with a familiar one. What is more, such an emendation would both remove any grounds for thinking that Paul was "familiar with the local Egyptian language," as opposed to the varieties of Greek spoken in Egypt, and reveal that the *Pragmateia* "attests to an undocumented use of $\mu\acute{\omega}\omega\psi$ as an arrow type."³

Properly edited and analyzed, the medieval Arabic versions of Greek medical, scientific, and philosophical texts can serve as independent textual witnesses to the Greek, witnesses equal in weight to the (usually no longer extant) early manuscripts from which they, or their Syriac 'Vorlagen,' were translated. These versions deserve the close attention of classicists, and in particular classical textual critics. We should thus be grateful to Das for directing us to a quotation in Avicenna's *Qānūn* as a potentially valuable witness to the text of the *Pragmateia*.⁴

What does Avicenna's text say? As Das reports, the *Qānūn* in its most recent edition⁵ reads:

wa-yakūnu lahū ʔarafun qadra ṭhalāṭhati 'aṣābi'a wa-ba'ḏuhā qadra
'iṣba'in wa-yusammā dhanabāniyyatan [var. dhubābiyyatan]⁶

*) I would like to thank Prof. Aaron Butts (The Catholic University of America) and Prof. Dimitri Gutas (Yale University), as well as the anonymous reviewer of the *RhM*, for their suggestions and criticism.

1) A. Das, A Textual Note on Paul of Aegina, *Pragmateia* 6.88, CQ 64 (2014) 868–70.

2) J. L. Heiberg (ed.), *Paulus Aegineta*, Leipzig / Berlin 1924.

3) Das (see note 1 above) 870.

4) On the Arabic *Pragmateia*, extant in fragmentary form in the bilingual (Greek-Arabic) BnF MS 2293 (*fonds grec*) and in quotations by later Arabic medical writers, see P. Pormann, *The Oriental Tradition of Paul of Aegina's Pragmateia*, Leiden 2004, 48–60 (on the Paris MS), 305–9 (on Paul's influence on Avicenna), and *passim*. Pormann observes (308) that "[w]hat intermediate source Ibn Sinā may have used when he employed Pauline material is an open question." It is thus noteworthy that Avicenna attributes the passage under discussion not to Paul, but to an unnamed authority, "someone expert in this art" (*ba'd al-'ulamā' bi-bādhīhi l-san'ah*). Are we to infer that Avicenna read this particular passage in an acephalous manuscript (as the anonymous reviewer suggests), or in an intermediary that neglected to attribute it to its author?

5) Ibn Sinā (Avicenna), *al-Qānūn fī l-tibb*, New Delhi 1982–7.

6) As the anonymous reviewer points out, ṭhalāṭhi (m.) should perhaps be read for ṭhalāṭhati (f.) to preserve so-called 'chiastic concord' with the noun 'iṣba'

[Some arrows] have a tip that is three fingers long (lit. ‘the measure of three fingers’), and some of them are one finger long (lit. ‘the measure of a finger’) and are called *ḏhanabāniyya* [thus to be vocalized; var. in app. crit. *ḏhubābiyya*]. (4.4.2.10/230.15–16; translation mine)

Das is right to reject *ḏhanabāniyya* in favor of the attested variant *ḏhubābiyya*.⁷ But what exactly does the word *ḏhubābiyya* mean? Das glosses it inaccurately as ‘flies.’ Arabic *ḏhubāb* ‘fly’ has a number of plurals (and as a generic incount, or *nomen generis*, can itself serve as the equivalent of English ‘flies’), but none of these plurals is *ḏhubābiyya*. Rather, *ḏhubābiyya* is a regular adjectival formation (called *nisba* in Arabic) from the noun *ḏhubāb*,⁸ and means ‘of or relating to flies, fly-like.’ The passage in Avicenna, then, should be translated as follows: “some of them . . . are called ‘fly-like.’”

Given the translation *ḏhubābiyya* ‘fly-like,’ we should suspect that the translator’s Greek ‘Vorlage’ contained a corresponding adjective that meant, or at least was interpreted to mean, ‘fly-like,’ rather than a noun that meant ‘fly’ or ‘flies.’ μύωπα ‘gadfly’ (or even, to preserve congruence, the plural μύωπας)⁹ does not fit the bill. What does? Relying on Ullmann’s *WGAÜ*,¹⁰ Das notes that *ḏhubāb* sometimes

(pl. *ʾaṣābi*), which is usually feminine, but sometimes masculine (see Wright §292 [f], p. 182). Further, *yusammā* might be more naturally read as *tusammā*, in congruence with the non-human plural predicate adjective.

7) As Das notes, the meaning of the rejected reading is unclear. Das gives the unlikely, and to my knowledge unattested, vocalization *ḏhumbāniyya* (868 and n. 11), perhaps by analogy with *jasad* ‘body’ – *jusdāni* ‘bodily, corporeal,’ as well as the vocalization *ḏhanabāniyya* (868). Since *ḏhumbān* seems to be unattested in the dictionaries, it is more likely that the word should be vocalized *ḏhanabāniyya*, i. e. as a *nisba*-adjective derived either (a) from the plant name *ḏhanabān* (on which see ibn Manẓūr, *Lisān al-ʿArab*, Beirut 1955–6, s.r. *ḏh-n-b*, for *ḏhanabān* as a well-known type of grass, which some Bedouin also called *ḏhanab al-ṭhaʿlab*, lit. ‘fox-tail’) or (b) from *ḏhanab* ‘tail’ with the addition of *-ān-*, as *rūḥāni* ‘spiritual’ is derived from *rūḥ* ‘spirit’ and *bahrāni* ‘marine, of the sea’ from *bahr* ‘sea.’ But since neither meaning (a) nor meaning (b) makes sense in context, I (in agreement with Das) reject this reading in favor of *ḏhubābiyya*. It is worth noting, however, that *ḏhanabāniyya* seems to have been the variant read by the Latin translator Gerard of Cremona, who renders the phrase as “et nominatur caudata,” i. e. ‘tailed’: see Avicenna, *Canon Medicinæ* 4.4.2.10, Venice 1608.

8) Das (see n. 1 above) is clearly familiar with this adjectival formation and its semantics. She suggests that the rejected variant might mean ‘something relating to the tail’ (869 n. 11, emphasis mine), but strangely overlooks the *nisba* in glossing and analyzing the variant that means ‘something relating to a fly or flies.’

9) Das’s proposed emendation makes Paul say, somewhat oddly, that in Egypt “they call [the small arrows] (a) gadfly.” Whatever word Paul wrote is likely to have been in the plural, not the singular. The accusative plural of ‘gadfly,’ however, would be harder than the singular to explain paleographically on the basis of the attested variants.

10) M. Ullmann, *Wörterbuch zu den griechisch-arabischen Übersetzungen des 9. Jahrhunderts (WGAÜ): Supplement, Band 1: A–O*, Wiesbaden 2006, 713.12–14.

translates μύωψ ‘gadfly,’ but does not mention that it seems at least as often, even within the Arabic *Pragmateia* itself,¹¹ to translate μυῖα ‘fly.’ On the basis of these lexical correspondences, we have good reason to suppose, even before examining attested (or conjectured) readings in the Greek, that the translator’s Greek ‘Vorlage’ contained an adjective composed of either μύωψ or, even more likely, μυῖα (*dhubāb-*), and a Greek adjectival suffix taken to correspond to the Arabic adjectival suffix *-iyy* (the *nisba*).

One good rule of thumb in Graeco-Arabic philology is the following: in attempting to understand even the most bewildering or obscure aspects of an Arabic version, one should begin by surveying the entire Greek tradition, and considering its potential interpretations (and misinterpretations, and paraphrastic expansions and compressions, and so forth) in Arabic. For it is only when nothing in the Greek tradition can reasonably (the precise bounds of this ‘reasonably,’ of course, remain open to debate) be understood as the content of the ‘Vorlage’ that we should hypothesize a new, otherwise unattested reading in the Greek. So let us survey the attested variants.

At *Pragmateia* 6.88.2, ἄ δὴ καὶ μυῖατὰ καλοῦσιν κατ’ Αἴγυπτον, Heiberg prints the following apparatus entry:

μυῖατὰ] D F : μυιατὰ A B C M S : μυιτὰ E K O

The apparatus indicates that one widely attested variant at this crux is μυιατὰ. Modern scholars, of course, do not know what any of the three attested variants means (perhaps this is to be expected, whether the word is a regional, Egyptian Greek term or a non-Greek, e. g. Coptic, term),¹² and even the finest medieval Arabic translator would have been in no better a position. But when translators were unfamiliar with a word, they often made do by producing an ‘etymological translation’ or calque, that is, a translation that mirrors in the target language the word’s (real or apparent) derivation in its source language. Faced with the unfamiliar word μυιατὰ, for instance, a resourceful translator would have analyzed it as follows: μυῖα ‘fly’ (= *dhubāb*) + an adjective-forming suffix *-τός* in the neuter plural, which might have seemed roughly analogous to the Arabic adjective-forming *nisba* suffix (= *iyya*, in

11) On *dhubāb* as a translation of μυῖα, cf. Ullmann (see n. 10 above) Band I, 706.1–5, citing *Pragmateia* 3.22.22 and Pormann (see n. 4 above) 175. More broadly, of the five attestations of *dhubāb* yielded by a search of the online *Glossarium Graeco-Arabicum*, accessible at <http://telota.bbaw.de/glossga/>, four translate μυῖα. The remaining attestation, in Aristotle’s *Historia Animalium*, translates μύωψ, but with a genitival modifier: *dhubāb al-dawābb* lit. ‘beast-flies,’ drawing a distinction akin to the one English speakers might make between ‘flies’ (generic) and ‘gadflies’ (specific).

12) What exactly κατ’ Αἴγυπτον implies is less than clear. Is Paul referring to a feature of the Greek spoken in Egypt? The absence of an ethnonym (i. e. ‘the Egyptians’) as the subject of the verb καλοῦσιν at *Pragmateia* 6.88.2 may suggest so: at *Pragmateia* 5.30, in introducing a word from a foreign language (here, Latin) Paul makes explicit the ethno-linguistic identity of the non-Greek speakers who use the term: σμίλαξ, ἣν ἔνιοι θύμιον, Ῥωμαῖοι δὲ τάξον [i. e. *taxus* ‘yew’] καλοῦσιν (cf. Dioscorides, *Mat. med.* 4.79).

the non-human plural).¹³ Hence, one natural and etymologically acceptable rendering of the vexed and vexing $\mu\upsilon\iota\alpha\acute{\tau}\alpha$ would be *ḏhubābiyya*. On this analysis, the evidence in Avicenna's *Qānūn*, rather than licensing any emendation, indicates that the Arabic translator's 'Vorlage' of the *Pragmateia* most likely contained the reading $\mu\upsilon\iota\alpha\acute{\tau}\alpha$ (or, if conjecture we must, an almost identical word composed of $\mu\upsilon\iota\alpha$ 'fly' + another adjectival suffix in the neuter plural, on which see n. 13) in common with the majority of Greek MSS listed in the relevant entry of Heiberg's critical apparatus.¹⁴

In summary, the word *ḏhubābiyya* in Avicenna's *Qānūn* is not a noun that means 'fly' or 'flies,' but rather a regularly derived adjective that means 'of or relating to flies, fly-like.' This form, I argue, is exactly what one would expect from a translator who, faced with the (otherwise) unintelligible word $\mu\upsilon\iota\alpha\acute{\tau}\alpha$ in his Greek 'Vorlage,' analyzed it as a neuter plural adjective composed of 'fly' + adjectival suffix and produced an 'etymological translation,' or calque, on the basis of this interpretation. The text of Avicenna's quotation thus furnishes no evidence, pace Das, that any manuscript of the *Pragmateia* available to a medieval translator contained the reading $\mu\acute{\upsilon}\omega\pi\alpha(\zeta)$ at 6.88.2. It likewise gives us no reason to emend the Greek text of *Pragmateia* 6.88.2 or to conclude that the *Pragmateia* there bears witness to an otherwise unattested use of the Greek word $\mu\acute{\upsilon}\omega\psi$.

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13) I say 'roughly analogous' advisedly, since $-\tau\acute{o}\varsigma$ is regularly suffixed to verb stems, rather than nouns, in the formation of verbal adjectives (cf. the cognate suffix *-tus* of the Lat. perfect passive participle, and on the suffix $-\tau\acute{o}\varsigma$ see E. Schwyzler, *Griechische Grammatik*, Munich 1939, Band I, 501 ff.). Any Arabic translator worth his salt would, of course, have known that $-\tau\acute{o}\varsigma$ was a deverbal suffix, but might nonetheless have had recourse to the *nisba* suffix 'faute de mieux.' On the other hand, if one still considered the $\mu\upsilon\iota\alpha\acute{\tau}\alpha$ – *ḏhubābiyya* correspondence implausible, one could conjecture that the translator read (or interpreted, under the influence of his knowledge of Greek morphology) the word as $\mu\upsilon\iota\alpha(\iota)\acute{\kappa}\acute{\alpha}$, that is, as $\mu\upsilon\iota\alpha$ 'fly' + $-(\iota)\acute{\kappa}\acute{o}\varsigma$, the common denominal adjectival suffix, rather than the graphically similar $-\tau\acute{o}\varsigma$. This conjecture has its merits: it remains relatively close to the Greek tradition as Heiberg presents it, can be explained paleographically and, unlike $\mu\acute{\upsilon}\omega\pi\alpha(\zeta)$, could reasonably have been translated as *ḏhubābiyya* 'fly-like.' I thank Prof. Gutas for the suggestion.

14) In the preface to the first volume of his edition of the *Pragmateia*, Heiberg explains that out of the over sixty extant manuscripts of the work ("Ex codicibus plus quam sexaginta . . . quibus traditum est opus", V [praefatio]), he saw fit to base his edition on seventeen, MSS A–Q and X ("hi ad verba eius [sc. Pauli Aeginetae operis] constituenda et facere et sufficere mihi visi sunt", V [praefatio]); in the second volume, he draws on four additional MSS, to which he gives the sigla R–V. In this entry, however, Heiberg lists only the readings of MSS ABCDEFK MOS, presumably because he regarded the remaining eleven MSS, namely GHJL NPQXRTV, as of no value for the establishment of the passage, whether because they did not contain book VI or for other, e. g. stemmatic, reasons. (About MS J, for instance, Heiberg says: "descriptus est ex E nondum mutilato" (VI [praefatio]), i. e. it is entirely derivative of MS E, yet of independent value as a witness to those passages which MS E, in its current condition, is unfortunately missing.)