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Sympathy between Hippocrates and Galen:  
The Case of Galen's *Commentary on Hippocrates'*  
*Epidemics*, Book Two

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It is well known that Galen's commentaries on texts from the Hippocratic Corpus are organised by the methodological principle 'to make clear what is unclear'.<sup>2</sup> Galen is often content to blame obscurity on the limitations of the reader, a strategy that allows him to cast himself as an exemplary teacher. The *Commentary on Hippocrates' Epidemics*, Book Two, however, confronts a rather different species of obscurity, one due to the difficult nature of the treatise itself, which, as Galen regularly observes, is rife with enigmatic words and frustrating gaps. The difficulty can sometimes be attributed to problems with the state of the text (variant readings, possible omissions). In other cases, Galen blames the text's impenetrability on the interpolations of forgers who aim to create obscurity and ambiguity because, he alleges, they want to create puzzles that only they can solve, thereby inflating their own reputations.

But perhaps the most important reason for the difficulties posed by *Epidemics*, Book Two, in Galen's view, lies in the circumstances of its composition. Despite the fact that, at the outset of his commentary, he professes not to care whether the treatise was written by Hippocrates or by his son Thessalus,<sup>3</sup> he later agrees with those who believe that Hippocrates did not write the text for publication but prepared it, rather, as a notebook: 'for the mode of the expression used in the text is inadequate to convey the meaning he intends in a way

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<sup>2</sup> See, for example, Galen's *Commentary on Hippocrates' Aphorisms* 1, proe. (xvii/b. p. 561 K); *Commentary on Hippocrates' Fractures* 3, proe. (xviii/b. p. 318 K). Galen's commentaries on Hippocrates have been the subject of considerable research over the past thirty years. See especially Smith 1979, 61–176; Manetti and Roselli 1994. See also Manuli 1983b; Lloyd 1991; Debru 1994; Jouanna 2000b; Flemming 2002; von Staden 2002; Yeo 2005; Flemming 2008; Manetti 2009.

<sup>3</sup> Book ii.1.5 HV (cf. p. 155, lines 31–5 Pf).

that is entirely comprehensible'.<sup>4</sup> If such stylistic infelicities are inexcusable in those trying to communicate with a larger public, they are forgivable in those writing for their own private purposes. The style of *Epidemics*, Book Two, thus seems to prove that it was written as an *aide-mémoire*.<sup>5</sup> Given the origin of the text, we must be content, Galen concedes, 'with approximation and conjecture and not secure knowledge'.<sup>6</sup>

Yet the enigmatic nature of *Epidemics*, Book Two, also affords the commentator an opportunity. For it allows Galen to present himself as a riddle-solver and a code-cracker and, hence, the true heir of Hippocrates, the son who does not just transmit the father's private writings, as Thessalus does, but unpacks their latent truths. The terseness of *Epidemics*, Book Two, which exaggerates the brachylogy so characteristic of the *Epidemics* as a whole, also invites explanation and appropriation.<sup>7</sup> Galen's commentary is, accordingly, addressed not just to enigmas but also to silences. These silences, significantly, tend to crop up in places where Galen expects a cause. Much as modern readers, at least until fairly recently, have tended to see in the *Epidemics* a paradigm of pure clinical observation, devoid of theoretical commitments, the ancient Empiricists read these texts as validating their rejection of speculation about hidden things.<sup>8</sup> It is, in fact, partly to wrest control of the *Epidemics* from the Empiricists that Galen writes his commentaries in the first place, declaring in his study of *Epidemics*,

4 Book ii.1.90 HV (cf. p. 177, lines 12–20 Pf). See also ii.1.195 HV (cf. p. 205, lines 18–27 Pf), ii.2.115 HV (cf. p. 239, lines 42–3 Pf), ii.3.87 HV (cf. p. 283, lines 7–14 Pf). On Thessalus's role, see also ii.2.22 HV (cf. p. 213, lines 23–6 Pf), ii.3.64 (cf. p. 276, lines 1–3 Pf). Explaining the enigmatic style of *Epidemics*, Book Two, is all the more important in view of the fact that Galen frequently praises the clarity of Hippocrates' writing and the master's interest in communication: see Sluiter 1995.

5 On private memory, see also *Commentary on Hippocrates' Epidemics, Book Six* 2.29 (xvii/a. p. 955 K; p. 93, lines 3–8 W). The distinction between public and private as a generic marker was already in place in earlier Hippocratic commentaries (Manetti and Roselli 1994, 1568).

6 Book ii.2.49 HV (cf. p. 221, lines 9–11 Pf).

7 On stylistic differences between the various *Epidemics*, see Smith 1989. Galen's commentaries reflect these differences: those on *Epidemics*, Books One and Three, are less polemical vis-à-vis other commentators and hew more closely to the text, while those on *Epidemics*, Books Two and Six, are more upfront about the interpretive problems involved. (Galen thought *Epidemics*, Books Four, Five, and Seven, were not Hippocratic at all.) Some of the differences in Galen's treatment can also be explained by whether the commentary was produced in the first or second 'phase' of his commentary writing. On the chronology of the commentaries, see Smith 1979, 123–5, 147–55 on the composition of *Epidemics*, Book Two.

8 For the modern history of reading the *Epidemics* and a more nuanced approach to the texts' theoretical commitments, see Langholf 1990; King 1998, 54–74. For the Empiricists' refusal to see causes in the *Epidemics*, see, for example, i.1.13 V (xvii/a. p. 6 K; p. 6, lines 6–16 W). On Galen's battles against the Empiricists in his Hippocratic commentaries more generally, see Manetti and Roselli 1994, 1535–8, 1593–1600, and von Staden 2002, 119–21, who argues that Galen's rescue of Hippocrates from the Empiricists is a crucial feature of his exegetical 'plot'.

Book One, that 'Hippocrates already went to the trouble of explaining what he described. What remains to be done is to give the causes of [the phenomena] that he described'.<sup>9</sup> In the *Commentary on Hippocrates' Epidemics, Book Two*, Galen does not lose sight of this aim, claiming that Hippocrates advises us to search for the causes and to study them.<sup>10</sup> The commentary on causes that he supplies is thus presented as an expansion of something inherent in the original text and a locus for his claim to Hippocrates' legacy.

The causes that Galen supplies, however, both here and in other Hippocratic commentaries, are more often than not products of his own medical-philosophical system, a system heavily indebted to its more immediate predecessors and especially the Hellenistic anatomists. Indeed, the uneven and inscrutable nature of *Epidemics*, Book Two, makes it especially susceptible to what Heinrich von Staden has called Galen's mode of 'inflationary' reading.<sup>11</sup> That is, the text readily supplies gaps to be filled by Galen's own aetiological-theoretical apparatus in the guise of Hippocrates' (unexpressed) beliefs about hidden causes and structures.<sup>12</sup> But what makes Galen's exegetical practise in his reading of *Epidemics*, Book Two, particularly interesting is the way in which he articulates the causal apparatus along anatomical lines. The prevalence of anatomy in Galen's commentary is a response, in part, to the fact that the account in *Epidemics*, Book Two, of the blood vessels and 'nerves' was considered by Galen and others to be the only genuine Hippocratic account of these structures.<sup>13</sup> It reflects, too, Galen's interest in Hippocrates as not just the father of medicine but the father

9 Book i.2.202 V (xvii/a. p. 183 K; p. 92, lines 21–2 W).

10 Book ii.1.154 HV (cf. p. 195, lines 23–5 Pf).

11 Von Staden 2002, 112. By means of such a reading, von Staden argues, 'the two ancient canons—the earlier brachylogical and allusive, the later expansive and explicit—often are made to resemble each other, indeed to be identical in their scientific theories and in their medical practices. Text and commentary, as an ensemble, thus project a reassuring image of scientific systematicity and of a scientific truth that is not vulnerable to the vagaries of temporal context or cultural exigency' (ibid., 114). Rebecca Flemming offers a slightly different perspective: 'The most important thing [sc. in Galen's Hippocratic commentaries] was the multiplicity and thickness of the connections made, the ways in which points could be joined up and made sense of, not absolute purity or consistency' (2002, 112).

12 On Galen's attribution of his own ideas to Hippocrates, see De Lacy 1979, 363; Lloyd 1988; Debru 1994, 53–4; von Staden 2002, 114–16; Yeo 2005; Flemming 2008, 343–6.

13 Galen dismisses the accounts in *On Places in a Human Being*, *Mochlion*, and *On the Nature of a Human Being* as spurious (ii.4.4 HV [cf. p. 311, lines 14–22 Pf]). See also *Commentary on Hippocrates' Nature of Man* 1, proe. (xv. pp. 10–11 K; ed. Mewaldt 1914, 7, lines 21–8, line 18), where, having pronounced the first and third sections of *On the Nature of a Human Being* authentic, he dismisses chapters 9–15 as largely an interpolation, singling out the account of the blood vessels precisely because it does not accord with the account at *Epidemics* ii. 1.6; see also *On the Opinions of Hippocrates and Plato* 6.3.27–31 (v. pp. 527–9 K; ed. De Lacy 1978–84, 378, line 36–380, line 24). On Galen's difficulties in recuperating Hippocratic anatomy, see Lloyd 1991, 403–4.

of anatomy, an interest that he inherited from some of his teachers.<sup>14</sup> The significance of anatomy in the tradition of anti-Empiricist Hippocratic interpretation and the elliptical, sketchy nature of the original treatise create the conditions under which Galen folds his own, post-Hellenistic vision of the networked body into his interpretation of *Epidemics*, Book Two. The Galenic body, richly webbed with nerves, veins, and arteries, not only insinuates itself into the Hippocratic account of the blood vessels and nerves but becomes the subtext that Galen uncovers at other points in the treatise.

In this paper, I analyse the conflation of anatomy and causality in Galen's *Commentary on Hippocrates' Epidemics*, Book Two, by focusing on the phenomenon that seems to trigger it most often, that of sympathy (*sympátheia*), which Galen uses to describe cases where one part of the body suffers as a result of its relationship to another part.<sup>15</sup> The language of sympathy (*sympátheia*, *sympáskhein*, *sympathês*) does not appear in *Epidemics*, Book Two, nor, in fact, in any other classical-era Hippocratic text.<sup>16</sup> Yet Galen shows himself in other commentaries to be more than willing to put that language into the mouth of Hippocrates.<sup>17</sup> Indeed, he sees a commitment to sympathy within the body in a broad sense as one of the defining pillars of the master's system, adopting a line from the treatise *On Nutriment*—almost certainly dating from the Hellenistic or imperial period—as something of a Hippocratic slogan.<sup>18</sup> In the case of the

14 Garofalo 1992, 610. Galen wrote a whole treatise entitled *On the Anatomy of Hippocrates* in five or six books that is no longer extant (it is mentioned at *The Function of the Parts of the Body* 14.4 [iv. p. 154 K; ed. Helmreich 1907–9, ii. 293, lines 15–16]). The great anatomist Marinus is also said to have endorsed the account in *Epidemics*, Book Two, at *Commentary on Hippocrates' Epidemics*, ii.4.43 HV (cf. p. 331, lines 5–8 Pf).

15 Siegel 1968, 360–82 remains the standard discussion of sympathetic affections in Galen. See also De Lacy 1979, 361–3; Holmes, Forthcoming. Keyser 1997 discusses sympathy in Galen's pharmacology.

16 The word does appear several times in treatises widely believed to be post-classical: see *Letters* 13 (ix. p. 334 L; ed. Smith 1994, 64, line 4), 23 (ix. p. 394 L; ed. Smith 1994, 102, line 9); *Precepts* 14 (ix. p. 272 L; ed. Heiberg 1927, 35, lines 6–7).

17 See, for example, *Commentary on Hippocrates' Epidemics*, Book Six 1.2 (xvii/a. pp. 800–1 K; p. 7, lines 17–20 W), where Galen explains a lemma from *Epidemics*, Book Six, by supplying *katà sympátheian*. See also, for example, *Commentary on Hippocrates' Aphorisms* 5.1 (xvii/b. p. 783 K); *Commentary on Hippocrates' Joints* 3.96 (xviii/a. p. 623 K); *Commentary on Hippocrates' Epidemics*, Book Six 1.2 (xvii/a. p. 803 K; p. 8, line 26 W).

18 *Nutriment* 23 (ix. p. 106 L; ed. Deichgräber 1973, 36): 'κύρροια μία, κύμπνοια μία, πάντα συμπάθεα, κατὰ μὲν οὐλομελίην πάντα, κατὰ μέρος δὲ τὰ ἐν ἐκάστῳ μέρει μέρος πρὸς τὸ ἔργον' (There is one flowing together; there is one common breathing; all things are in sympathy, everything according to the whole and according to the part, all the parts in each part, with reference to its function). On the dating of *Nutriment*, see Diller 1936; Deichgräber 1973, 69–75; Joly 1975; Jouanna 1999, 401 (all dating it to the post-classical period in view of Stoic influence, despite differences of opinion regarding how late the treatise is). For Galen's citation of the *Nutriment* passage, see *Causes of Pulses* 1.12 (ix. p. 88 K); *Natural Capacities* 1.12 (ii. p. 29 K; ed. Helmreich 1893, 122, lines 6–10), 1.13 (ii. p. 38 K; ed. Helmreich 1893, 129,

*Commentary on Hippocrates' Epidemics*, Book Two, we lack the original Greek text. Nevertheless, it is possible to detect here, too, in Ḥunayn's use of the terms *šāraka* and *mušāraka*, traces of Galen's extension of the concept of sympathy (and related concepts) to Hippocrates.<sup>19</sup> On such occasions, Galen does not simply attribute a concept of sympathy to his classical predecessor. He also takes advantage of the opportunity to elucidate causal connections by introducing his own sophisticated model of an intricately and precisely networked body.

### Chest, Breasts, Genitals, Voice: The Vascular Network

The language of sympathy does not occur, as I have just observed, in the Hippocratic treatises dating to the fifth and fourth centuries BC. Yet we do find, on several occasions, a term that will become closely associated with the concept of sympathy in Galen—namely, *koinōnía* (or, rather, the Ionic *koinōniē*): 'association', 'community', 'partnership'. The plural (*koinōniāi*) appears twice, both times in contexts that suggest sympathetic affections triggered elsewhere in the body by a primary ill.<sup>20</sup> The singular is found, conveniently enough, in

lines 7–9), 3.13 (ii. p. 196 K; ed. Helmreich 1893, 243, lines 10–13); *The Method of Healing* 1.2 (x. p. 16 K); *Tremor, Palpitation, Spasm, and Shivering* 6 (vii. p. 616 K); *The Function of the Parts of the Body* 1.8 (iii. p. 17 K; ed. Helmreich 1907–9, i. 12, lines 16–18), 1.9 (iii. p. 24 K; ed. Helmreich 1907–9, i. 17, lines 13–15).

19 The Greek text in Kühn 1821–33 (xvii/a. pp. 303–479) is a forgery probably dating from the Renaissance. I have therefore relied largely on the Warwick translation, with attention to the Arabic original where relevant, through the generous help of Bink Hallum, Peter E. Pormann, and Uwe Vagelpohl. The use of *šāraka* to translate *sympáskhein* is seen at *Commentary on Hippocrates' Epidemics*, i.2.155 V (xvii/a. p. 158 K; p. 80, line 20 W), suggesting that *mušāraka* was used to translate *sympátheia*. See also below, n. 31. It is worth noting, however, that the verb and the noun, respectively, can also be used to translate *koinéō/koinōnéō* and *koinōnía/koinōniē*, as at *Commentary on Hippocrates' Epidemics*, i.2.110 V (xvii/a. p. 136 K; p. 70, line 11 W), 3.15 (xvii/a. p. 212 K; p. 106, line 31 W), 3.26 (xvii/a. p. 218 K; p. 110, lines 19–20 W). (I owe these references to Uwe Vagelpohl.) See also *Commentary on Hippocrates' Epidemics*, ii.1.73 HV (cf. p. 173, lines 8–11 Pf), where, as Bink Hallum has pointed out to me, the *koinōniē* of the Hippocratic text is translated by means of *mušāraka*. The context is usually sufficient to determine whether Galen is referring to *sympátheia* or *koinōniē*, concepts that are often—although not always—related (sympathetic affections occur when there is an 'association' between two parts). My method here has been to identify passages in the translation where Galen appears to be discussing sympathetic affections and relationships and then to check these passages against the instances of *šāraka* and *mušāraka* in the *Commentary on Hippocrates' Epidemics*, Book Two, provided to me by Bink Hallum. On Ḥunayn's translation more generally, see Pormann 2008a and the other papers in this volume.

20 *Epidemics* vi. 3.24 (v. p. 304 L; ed. Manetti/Roselli 1982, 76, lines 4–5); *Humours* 20 (v. p. 500 L). For other instances of sympathetic affection in the Hippocratic Corpus, see Holmes, Forthcoming.

*Epidemics*, Book Two, in a discussion of critical signs that closes with a brief summary of a particular type of sign:

πολλά δὲ καὶ τῶν τοιούτων, οἷον ἀποφθειρουσέων οἱ τιτθοὶ ποσισχναίνονται· οὐδὲ γὰρ ἐναντίον οὐδὲ βῆχες χρονία, ὅτι ὄρχις οἰδήσαντος παύονται· ὄρχις οἰδήσας ὑπὸ βηχῶδέων ὑπόμνημα κοινωνίης στηθέων, μαζῶν, γωνῆς, φωνῆς. (*Epidemics* ii. 1.6, v. p. 76 L)<sup>21</sup>

There are many phenomena of this kind, as when, in women who are about to abort, the breasts completely wither up. For there is no contradiction even in that chronic coughs subside following the swelling of a testicle. The testicle that has swollen because of the coughs is a reminder of the relationship between the chest, the breasts, the genitals, and the voice.

The symptom—the withering breast, the swollen testicle—here acquires, beyond its diagnostic function, a mnemonic one: it recalls to the reader a schema of relationships within the sexed body with which he is apparently already familiar. The idea of such a ‘community’ of parts or places within the body is, in fact, suggested by other Hippocratic writers. For example, a number of treatises seem to assume—and, on at least one occasion, explicitly refer to—a vessel that, in the female body, joins the uterus to the breasts, allowing for the transmission of milk and, under pathological conditions, menstrual blood.<sup>22</sup> Many writers also imply the presence of a kind of tube or vessel connecting the vagina to the mouth or nostrils, perhaps building on popular concepts of the female body; there is further evidence, beyond the passage from *Epidemics*, Book Two, of a belief in a similar tube in the male body.<sup>23</sup> These may be the routes that the author has in mind here.

21 I print Robert Alessi’s unpublished text for the Budé series here and throughout; I am very grateful to him for making it available to me. I have also consulted Smith 1994, in addition to Littré 1839–61. Translations from *Epidemics*, Book Two, are my own.

22 For milk, see *On Seed/On the Nature of the Child* 21 (vii. pp. 510–14 L; ed. July 1970, 67, line 9–68, line 18); *On the Glands* 16 (viii. pp. 570–72 L; ed. July 1978, 121, lines 11–20). For menstrual blood, see *On the Diseases of Women* ii. 133 (viii. p. 282 L). On the sympathy of the breasts and the uterus in the Corpus (and Aristotle), see also Dean-Jones 1994, 215–22 and below, n. 27.

23 *Epidemics* ii. 5.1 (v. p. 128 L) also suggests a relationship between the testicle and the voice (Galen’s commentary on this passage, unfortunately, is lost). See further, with an emphasis on the female body, Manuli 1983a, 157; King 1998, 49–51, 68–9; Dean-Jones 1994, 72–3. For popular ideas about the relationship of a woman’s ‘two mouths’, see Armstrong and Hanson 1986. The mouth, of course, is not the same as the voice. Nevertheless, it seems likely that the ‘tube’ assumed by these authors would be sufficient to relate changes in the sexual organs to those of the voice. See Duminil 1983, 121, who posits Aristotle’s *On the Generation of Animals* 4.8, where Aristotle locates the principle of the voice close to the source of the spermatic

Nevertheless, the underlying web of connections is not described by the Hippocratic author, creating an opportunity for the commentator to step in and flesh out what the source text leaves unsaid. Galen intervenes in the text even before mentioning the *koinōnīē* between chest, breast, genitals, and voice. For if the symptoms of the withering breasts or the swollen testicle are imagined by the Hippocratic author to call up a correspondence between the breasts and the uterus or the chest and the genitals that is familiar to his reader, Galen fears that his reader will be baffled by such symptoms. He thus hastens to signal ‘the connection and association that exists between the genital organs and the chest’ as the underlying explanation of what is happening on the surface.<sup>24</sup> ‘Hippocrates’ himself, of course, goes on to identify this connection but, as we have just seen, he does so matter-of-factly and without explanation.

Following a brief interlude about the precise meaning of genitals in the passage, Galen returns to the connection between the genital region and the chest, which, he indicates, requires further elaboration: ‘I need to describe the reason for that connection’.<sup>25</sup> What follows is an extended description of the anatomical structures that Galen sees as the ground of the relationships drawn by the Hippocratic author. He traces the paths of two sets of veins—one deep, the other superficial—that create a bond between the upper body (chest, breasts) and the reproductive organs, on the one hand, and the upper body and the testicles or the vulva, on the other, concluding: ‘this shows how the connection and association between the chest and the breasts, the generative organs, and the voice takes place: it is an association due to these veins’.<sup>26</sup> Whereas the author of *Epidemics*, Book Two, is

vessels in the heart, as the missing link between the voice and the genitals in *Epidemics*, Book Two. I think it unlikely that the Aristotelian model underlies the passage here.

24 Book ii.1.72 HV (cf. p. 173, lines 4–7 Pf). The phrase ‘connection and association’ is Bink Hallum’s translation of *ittiṣāl* and *mušāraka*, the latter probably translating Galen’s *koinōnīa*. (Pfaff offers ‘Verbindung’ and ‘Gemeinschaft’.) For the phenomenon of shrunken breasts signaling an imminent miscarriage, see also *Aphorisms* 5.37–8 (iv. p. 544 L), with *Commentary on Hippocrates’ ‘Aphorisms’* 5.37–8 (xvii/b. pp. 828–9 K); *Aphorisms* 5.53 (iv. pp. 550–52 L), with *Commentary on Hippocrates’ ‘Aphorisms’* 5.53 (xvii/b. pp. 845–50 K). Galen himself cites his discussions in the *Aphorisms* commentary at *Commentary on Hippocrates’ ‘Epidemics’*, ii.1.70 HV (cf. p. 172, lines 28–9 Pf). See further *The Affected Parts* 6.5 (viii. pp. 436–7 K); *The Function of the Parts of the Body* 14.4 (iv. p. 153 K; ed. Helmreich 1907–9, ii. 292, line 19–293, line 4), 14.8 (iv. p. 179 K; ed. Helmreich 1907–9, ii. 312, line 16–313, line 21). On the vascular relationship between the uterus and the breasts, see especially the discussion at *The Function of the Parts of the Body* 14.4–5 (iv. pp. 150–58 K; ed. Helmreich 1907–9, ii. 290, line 21–296, line 7), 14.8 (v. pp. 176–9 K; ed. Helmreich 1907–9, ii. 310, line 8–313, line 7). See also, for example, *Commentary on Hippocrates’ ‘Aphorisms’* 5.50 (xvii/b. p. 843 K), 5.52 (xvii/b. p. 844 K), 5.53 (xvii/b. pp. 846–7 K); *Commentary on Hippocrates’ ‘Epidemics’*, ii.1.96 HV (cf. p. 179, lines 12–16 Pf), ii.3.166 HV (cf. p. 304, lines 17–24 Pf); *The Method of Healing* 13.19 (x. pp. 925–6 K); *The Anatomy of Veins and Arteries* 8 (ii. p. 813 K).

25 Book ii.1.75 HV (cf. p. 173, lines 27–8 Pf).

26 Book ii.1.76 HV (cf. p. 174, lines 16–19 Pf). Note that by Galen’s time, *phléps* had come to mean ‘vein’ as opposed to artery. The difference is not recognised in the classical-era

content to speak of the *koinōniē* of parts of the body, much as another Hippocratic author simply refers to the 'relatedness' (*homoethniē*) of the uterus and the breasts, Galen is compelled to map out in some detail the network that underwrites these affinities, which he presents as the subtext of Hippocrates' remarks.<sup>27</sup>

In articulating the paths of these veins, Galen is not, in principle, violating the spirit of the original text. The vessels that transport fluids and air were a fundamental part of Hippocratic medicine, and several authors, including the author of *Epidemics*, Book Two, attempted to chart systematically their routes through the body—an ambitious undertaking, given the apparent absence of formal dissection, at least of humans, in the classical period.<sup>28</sup> Moreover, the drive to identify the underlying causes of symptoms is a marked feature of a number of Hippocratic texts; the texts of the *Epidemics*, too, clearly draw on a developed etiological system.<sup>29</sup> Nevertheless, in supplementing the source text, Galen goes a step further, supplying the details that he believes are required to adequately account for the vague 'association' signaled at *Epidemics* ii. 1.6. The fact that these details are drawn from his own understanding of the vascular network, developed through his extensive experience with animal dissection and clinical practise and also undoubtedly coloured by his own theoretical expectations, is consistent with his practise elsewhere of grounding associations between parts of the body and the resulting sympathetic affections in an anatomical landscape drawn with the pretense of precision.<sup>30</sup> In the commentary on *Epidemics*, Book

Hippocratic texts: see Duminil 1983, 23–61. Galen shows that he is aware of the earlier, broader usage of *phléps* in *Epidemics*, Book Two, at *The Opinions of Hippocrates and Plato* 6.8.45 (v. p. 574 K; ed. De Lacy 1978–84, 416, lines 24–6), but he is not consistent in his historical sensitivity. I use the term 'vascular' in part as a way of acknowledging the lack of distinction in the Hippocratic text.

27 *Homoethniē*: *On the Diseases of Women* ii. 174 (viii. p. 354 L). The term also occurs at *On Places in a Human Being* 1 (vi. p. 278 L; ed. Craik 1998, 36, line 4), in a slightly different context, still involving sympathetic affection.

28 *Epidemics*, Book Two, not only offers an important early account of vascular anatomy but also, as Wesley Smith has observed, 'give[s] evidence of a systematic interest in getting control of the body's means of communication, defining them, mapping the channels, and learning to manipulate them' (1989, 151). See also Harris 1973, 62 on the interconnecting veins in the anatomical account at 4.1, which he believes is based on animal dissection (he is followed here by Langholf 1990, 145, 147). On vascular connectivity elsewhere in the *Corpus*, see *On Joints* 45 (iii. p. 556 L; ii. p. 107, line 10–p. 108, line 5 Kw); *On Places in a Human Being* 3 (vi. p. 282 L; ed. Craik 1998, 40, lines 30–31). In the surgical treatises, the verbs *koinēō* and *koinōnēō* are often used to describe the interconnection of parts of the body (primarily skeletal): see *On Joints* 13 (iv. p. 118 L; ii. p. 134, line 8 Kw), 45 (iv. p. 190 L; ii. p. 172, line 3 Kw), 86 (iv. p. 324 L; ii. p. 243, line 8 Kw); *On Fractures* 9 (iii. p. 450 L; ii. p. 62, line 4 Kw), 10 (iii. p. 450 L; ii. p. 62, line 15 Kw), 11 (iii. p. 452 L; ii. p. 63, line 15 Kw).

29 On the interpretation of symptoms in early medical writing, see Holmes 2010, 121–91. On the etiological basis of the various *Epidemics* texts, see especially Langholf 1990.

30 Especially in the late work *The Affected Parts*, Galen emphasises the need for a strong grounding in anatomy to understand sympathetic affections, especially those involving the

Two, Galen's own vision of the inside of the body emerges in the gap that the Hippocratic text leaves between two apparently isolated events: the disappearance of a cough and the swelling of the testicles; the withering of the breasts and the abortion shortly after. In his commentary, then, Galen does not simply respond to the need for a cause or explanation of the phenomenon noted in the source text but threads his explanation along the pathways of the body that he (but not necessarily 'Hippocrates') understands to lie beneath the skin.

Galen's anatomical knowledge is, in fact, one of the criteria against which he judges others' attempts to make sense of the roughly juxtaposed details so characteristic of the *Epidemics*. In his *Commentary on Hippocrates' Epidemics*, Book Three, for example, he cites the interpretation of one of the case histories by the followers of Sabinus: Pythion was suffering in his stomach and from this, these exegetes say, his hands were trembling through sympathy (καὶ ἐκείνου κατὰ συμπάθειαν αἱ χεῖρες ἔτρεμον).<sup>31</sup> Galen has no problem with his rivals' recourse to sympathy as a way of explicating a Hippocratic lemma. What he contests is their allegation that sympathy exists at all between the stomach and the hands. For, he says, they cannot demonstrate an 'association' (*koinōniā*) between the body parts in question and, as a result, they cannot account for how an affection is trafficked from one part to the other. It is not just their diagnosis that falls short without such proof. Their interpretation of the Hippocratic text fails as well.<sup>32</sup>

The work of the commentator is hemmed in not only by anatomical fact, however, but also by the constraints of the text. Galen's detour into vascular anatomy at *Epidemics* ii. 1.6 is facilitated by the silence of the Hippocratic original. For the absence of any elaboration of the alleged *koinōniē* in the lemma

nerves: see *The Affected Parts* 1.6 (viii. pp. 57, 60–63 K), 3.14 (viii. p. 208 K), 4.7 (viii. p. 257 K). For his understanding of vascular anatomy, see Harris 1973, 267–306. At the same time, Galen's strong commitment to a venous relationship between the breasts and the uterus seems to be due as much to his expectations as to empirical research. Goss makes a rare intervention in his translation of *The Anatomy of Veins and Arteries* when Galen mentions the 'association' (*koinōniā*) between the breasts and the uterus (ii. p. 813 K; ed. Goss 1961, 363), stating: 'this is a rather wishful observation'. Galen's interest in this association is probably due not just to existing ideas about the sympathy of the breasts and the uterus in the medical tradition but also to his teleological understanding of the female body: see *The Function of the Parts of the Body* 4.8 (v. pp. 176–9 K; ed. Helmreich 1907–9, ii. 310, line 8–313, line 7).

31 *Commentary on Hippocrates' Epidemics*, Book Three 1.4 (xvii/a. p. 520 K; p. 24, lines 6–7 W). Interestingly, in the Arabic version, we find the word *šāraka* to render Greek *sympátheia*. The phrase is translated as (MS E1, fol. 139a, lines 17–18):

«وقد نجدهم يقولون إنه «عرضت لذلك الرجل في معدته علة. ثم شاركت المعدة في تلك العلة اليدان، فارتعشتا.»

We have found them saying: 'A stomach disease occurred to that man. Then the hands shared that disease [*šāarakat ... fi tilka l-illati*] with the stomach, so that they trembled'.

32 See also ii.4.41–2 HV (cf. p. 329, line 11–p. 330, line 32 Pf), where commentators go astray because they lack the anatomical knowledge gained through autopsy.

means that he is free to draw his own connections between, say, the breasts and the uterus without having to recuperate anything from the parent text. The situation is more delicate in Galen's extended commentary on the account of the vessels and 'nerves' at the beginning of the fourth section of *Epidemics*, Book Two, where he is forced to accommodate a more detailed original text, a text whose omissions and errors are more glaring.<sup>33</sup> The stakes, moreover, are high. Galen believes the passage represents the only genuine Hippocratic account of vascular anatomy available. The anatomical description ostensibly proves that Hippocrates engaged in systematic dissection, allowing Galen to put him first in an anatomical tradition that continues through Herophilus and Marinus to Galen himself.

Despite the stress Galen places on the genuine provenance of the vascular anatomy in the text, the authenticity of the passage is complicated by the fact that the very style of the description proves in his mind that *Epidemics*, Book Two, was not written by Hippocrates as a book for public circulation but, rather, compiled by his son, Thessalus, 'from things he found recorded by Hippocrates on pages, sheets, and scattered fragments'.<sup>34</sup> The lacunose, scattershot nature of the text is temporarily kept hidden, as Galen offers a generous and polished 'paraphrase' of the Hippocratic account that strategically shifts attention from exegesis to an impromptu, stand-alone anatomy lesson for the sake of the reader. But once he has concluded the educational digression, Galen is compelled to return to the text and the nature of its origins. In revisiting the question of origins, he implicitly acknowledges the difficulties that his own presentation of the material has worked to fill: you cannot help but think here, he says, that Hippocrates was writing only for himself, 'to remind him[self] of what he had seen'. For, if he had meant for the passage under consideration to be read by others, 'he would certainly have explained and clarified it as he had done in the books he wrote for people to read'.<sup>35</sup> However authentic the text, then, it was not intended for our eyes, nor, for that matter, for anyone else's.

33 *Epidemics* ii. 4.1 (v. pp. 120–26 L); ii. 4.2–57 HV (cf. p. 310, line 22–p. 338, line 31 Pf). Alessi's version of the Hippocratic text, which I have followed, was first presented as Alessi 2007. The passage from *Epidemics*, Book Two, also appears at *On the Nature of Bones* 10 (ix. pp. 178–80 L; ed. Duminil 1998, 147, line 1–149, line 10). The anatomical account is rather opaque: for discussion, see Harris 1973, 60–62; Duminil 1983, 34–47, 101–8; Langholf 1990, 145–9. The situation is complicated by discrepancies between the passage as it has been transmitted by the direct manuscript tradition (where it has almost certainly been subject to corruption) and the lemma in Galen's commentary. On these discrepancies and the difficulties they raise, see Duminil 1983, 109–13; Garofalo 1992. The textual problems do not, however, bear on my discussion here. Alessi 1996 discusses more generally the usefulness of Galen for establishing the text of *Epidemics*, Book Two.

34 Book ii.4.3 HV (cf. p. 310, lines 23–6 Pf).

35 Book ii.4.11 HV (cf. p. 314, lines 34–40 Pf).

From one perspective, the inward-turning nature of the text under these circumstances makes the task of the interpreter more complex. Yet it also creates opportunities; more specifically, it opens up a means for Galen to salvage a more unwieldy source text, a text in which 'Hippocrates' confronts anatomy head-on. Insofar as, from Galen's perspective, that confrontation can occur only through dissection—'whoever wants to see for himself what is beneath the skin must cut through the skin'<sup>36</sup>—the text presumably represents Hippocrates' notes resulting from his observation of the vascular system.<sup>37</sup> We might imagine, then, that there is little room for Galen's own vision.

But while the original text does have a tendency to get in the way, the larger problem turns out to be not what Hippocrates puts in but what he leaves out. The reason for these omissions, Galen claims, is the very origin of the text as a private document, designed only to trigger the memory of its author—hence, its many gaps and points of obscurity. These gaps are what Galen exploits in order to slip in his own model of vascular anatomy, this time under the guise of shared memories of dissection: indeed, he goes so far as to imaginatively retrace the path of Hippocrates' scalpel.<sup>38</sup> The two great physicians thus together form a closed community of experts gathered around the open body. Galen's commentary purportedly translates this 'shared' but esoteric memory into exoteric instruction by mediating between Hippocrates' notes, meant only for his own eyes and those of his sons, and the readers who, lacking the requisite knowledge, would otherwise be shut out of the text (the commentary on *Epidemics*, Book Two, being one of the commentaries that Galen intended for a wider audience).

Yet it is not simply that the text leaves things out. The very *significance* of what it leaves out confirms, for Galen, its personal mnemonic function. Early in his exegesis of the lemma, he remarks that it is strange that Hippocrates would neglect to offer a full account of the major veins in the body, that is, those that are 'clearly visible' and known to all who practise dissection—the first mention of a lacuna in the original text—and that he would instead focus on the veins that had eluded other physicians because of their fineness.<sup>39</sup> The absence of such an account, he concludes, can only prove that Hippocrates wrote the text to remind himself of the most elusive phenomena that he had seen while dis-

36 Book ii.4.4 HV (cf. p. 311, lines 30–31 Pf).

37 This, in fact, is the conclusion of Langholf 1990, 148–9, arguing that the imperfect and pluperfect tenses of the passage indicate these are minutes written down after observation (of a dissected animal).

38 'If, first of all, he cut the lower belly along the membrane that is stretched over the belly known as the peritoneum, then he observed what was beneath it. He saw the intestines and bowels. On the right side of the abdomen he saw the liver, and on the left he saw the spleen. After them he saw the kidneys, and after that the stomach and intestines. He saw the stomach touching the diaphragm, bound by the liver on the right side and the spleen on the left...' (*Commentary on Hippocrates' Epidemics*, ii.4.5 HV [cf. p. 311, line 40–p. 312, line 5 Pf]).

39 Book ii.4.11 HV (cf. p. 314, lines 40–43 Pf).

secting and for the benefit of his sons—not for a general public. By describing the anatomical account as a sketch oriented toward what escapes the untrained or inattentive eye, Galen grants himself considerable leeway to locate what the text does give him within his own more precise understanding of the vascular system while also accounting for its more obvious omissions. The reading he offers is presented as addressing a shortcoming that is due not to the limits of Hippocrates' knowledge but to the circumstances and aims of the text's composition.

Galen does at times suggest that Hippocrates' knowledge has its limits. These are mentioned casually and in passing, as when Galen disputes Hippocrates' description of a vein lying below an artery by pointing out that it only appears to lie below the artery, in reality being stretched to its side, or when he remarks that Hippocrates is 'not speaking correctly'.<sup>40</sup> He also acknowledges the moment when the Hippocratic author recognises his own limits and admits that he does not yet know what happens to the vessels after they descend to the lower belly (ὅπη δ' ἐντεῦθεν, οὐπω οἶδα).<sup>41</sup>

Galen's response in this last case is also interesting, however, for the competing scenarios it suggests for understanding Hippocrates' confession of ignorance. He lends some weight to the 'not yet' (οὐπω) of the text by observing that Hippocrates did not know about these veins 'at the time he wrote what he did about this'.<sup>42</sup> He leaves open the possibility, then, that the anomalous gap in Hippocrates' understanding was eventually closed through further research. But he also takes the statement as confirmation of the fact that Hippocrates intended his notes to be read by his sons. The statement of ignorance, from this perspective, is perhaps addressed to the sons who will extend the father's research program. The self-conscious lacuna within the source text is thus overdetermined. It either marks the space which Hippocrates' vast learning eventually came to fill, so that exegesis remains the process of restoring to the reader the aspects of this learning that remained private (cryptic or unsaid); or it carves out the space for the master's sons to supplement their paternal inheritance with their own learning, so that exegesis shades into the communication of new knowledge, the son having surpassed the father. For us, of course, the tension between what Hippocrates leaves unsaid and what Hippocrates does not (yet)

40 Book ii.4.22 HV (cf. p. 320, lines 26–7 Pf), ii.4.34 HV (cf. p. 326, lines 32–4 Pf). Galen has the greatest difficulty in accounting for the brachylogy of the account of the nerves (ii.4.40–57 HV [cf. p. 328, line 43–p. 338, line 31 Pf]), but he vents most of his frustration on other commentators for failing to recognise the difficulty of the original account (while continuing to exonerate Hippocrates, for the most part, by restating his hypothesis that the master was simply writing notes to himself: see, for example, ii.4.49 HV [cf. p. 333, line 44–p. 334, line 4 Pf]).

41 *Epidemics* ii. 4.1 (v. p. 124 L).

42 Book ii.4.28 HV (cf. p. 324, lines 5–6 Pf).

know is more frequent in Galen's exegesis than Galen himself would like to admit.

One of the most intriguing cases where Hippocrates fails to note the obvious in the anatomy at 4.1 is his silence regarding the veins that come from the breasts; more intriguing still, he observes instead the veins that run to the shoulders, which are harder to see on account of the fact that they lie deep inside the body.<sup>43</sup> Galen's explanation of the silence is that, by making note of the veins running to the shoulders, Hippocrates was, in a sense, also making note of those running to the breasts, which share the same origin: in keeping with the inverted logic of 'private writing', it was simply more important to mention the less visible branch rather than the veins that 'everyone can see'. Yet the omission becomes particularly interesting in light of our earlier discussion of the 'community' or 'association' (*koinōniē*) between the chest and the reproductive organs, including the breast and the uterus. For it was precisely by means of the vein joining these parts that Galen had explained in that passage the transfer of affections between them, without, of course, saying anything about the absence of such a vein in the one genuinely Hippocratic account of the vascular system.<sup>44</sup>

Hippocrates' refusal to spell out the underlying relationship between the breast and the uterus becomes increasingly stubborn as we move into the sixth section of *Epidemics*, Book Two, where we find a series of remarks implying the association of the two parts of the (female) body: in each case, the text falls tantalizingly short of spelling out the venous connection that Galen believes must lie beneath the affections. Hippocrates says, 'to hold back the menses in women, apply a very large cupping instrument to her breast'; Galen steps in with the reason for the prescription—namely, 'the shared blood vessels between the breasts and the womb'.<sup>45</sup> Hippocrates says that if the milk flows in abundance, the fetus will be weak; conversely, if the breasts are hard, the fetus will be strong. Galen again supplies the cause: 'this happens because of the connection between the blood vessels from which the foetus and the breasts are nourished'.<sup>46</sup>

43 Book ii.4.16 HV (cf. p. 317, lines 22–9 Pf).

44 When the anatomy at *Epidemics* ii. 4.1 can be used to underwrite what Galen identifies as sympathetic affections, he does not hesitate to use it: see *Commentary on Hippocrates' Aphorisms* 7.17 (xviii/a. p. 117 K), where he explains a lemma declaring that hiccups are bad in the case of inflammation of the liver by referencing a sympathetic affection of the stomach, noting that the sympathy relies on common nerves (*neûra*) that are very short, 'as Hippocrates himself taught in the second book of the *Epidemics*'.

45 *Epidemics* ii. 6.16 (v. p. 136 L); *Commentary on Hippocrates' Epidemics*, ii.6.94–5 HV (cf. p. 386, lines 23–33 Pf). See also *Aphorisms* 5.50 (iv. p. 550 L), with *Commentary on Hippocrates' Aphorisms* 5.50 (xvii/b. pp. 842–3 K).

46 *Epidemics* ii. 6.18 (v. p. 136 L); *Commentary on Hippocrates' Epidemics*, ii.6.98–9 HV (cf. p. 387, lines 6–20 Pf). See also *Aphorisms* 5.52 (iv. p. 550 L), with *Commentary on Hippocrates' Aphorisms* 5.52 (xvii/b. p. 844 K); *The Function of the Parts of the Body* 14.8 (v. p. 178 K; ed. Helmreich 1907–9, ii. 312, lines 7–13).



In the next line, Hippocrates finally seems to acknowledge the anatomical substructure underlying his remarks, stating bluntly that 'a thick vessel goes to each of the breasts' (the text transmitted by the direct manuscript tradition and printed by Littré, Smith, and Alessi reads 'φλῆψ ἔχει παχέα ἐν ἑκατέρῳ τιτθῶ' [there is a thick vessel in each breast]).<sup>47</sup> Galen, in any case, thinks Hippocrates has finally got around to doing etiology for himself, offering 'a statement by which he indicated the cause of these two things that he described and also added to this the connection and joining of the veins'.<sup>48</sup> Galen's own remarks about the connection between the breast and the uterus would thus seem only to have anticipated what Hippocrates himself eventually observes.

The difficulty that Galen has to face is that Hippocrates' vessels do not go anywhere *besides* the breasts: indeed, in the version transmitted by the manuscripts for *Epidemics*, Book Two, they do not go anywhere at all, at least technically (the expression ἐν ἑκατέρῳ τιτθῶ is locative). In short, these vessels do not join up with the vascular system described at 4.1, nor do they find a pathway to the uterus. If connectivity implies causality, the Hippocratic 'explanation' is abortive.

In fact, it is worth noting that despite the apparent assumption of a connecting vessel relating the breasts to the uterus in a number of Hippocratic texts, no systematic Hippocratic account of the vascular system supplies anatomical support for this assumption, as Marie-Paule Duminil has observed;<sup>49</sup> the sole exception is a passage from the probably post-classical compilation *On the Nature of Bones* that is also quoted in Aristotle's *History of Animals*, where Aristotle attributes the account to the otherwise unknown Syennesis of Cyprus.<sup>50</sup> Duminil tries to account for the silence of the Hippocratic texts on this point by suggesting that the vascular bond between the breasts and the uterus was not considered part of the principal network of vessels.<sup>51</sup> Reflecting on Hippocrates' reticence in the sixth section of *Epidemics*, Book Two, Galen takes the opposite approach, falling back on the reasoning that Hippocrates is just making a note for himself of what he would otherwise forget, with the result that he leaves out what is *most* important. Galen, in any event, is left once again to fill in the gaps, which he eventually does with great decisiveness:<sup>52</sup>

47 *Epidemics* ii. 6.19 (v. p. 136 L); *Commentary on Hippocrates' Epidemics*, ii. 6.100 HV (p. 387, lines 21–2 Pf). The shift from the locative to the directional preposition may have been introduced in the translation into Arabic; Galen, in any event, clearly believes that the veins extend to the breasts from elsewhere in the body.

48 Book ii.6.101 HV (cf. p. 387, lines 26–9 Pf).

49 Duminil 1983, 120–22.

50 See Aristotle *History of Animals* 3.2, 511b24–30 and *On the Nature of Bones* 8 (v. p. 174 L; ed. Duminil 1998, 144, lines 7–17), with Harris 1973, 20–21; Duminil 1983, 68–71. The system is neatly diagrammed in Harris 1973, fig. 1.

51 Duminil 1983, 122.

52 Book ii. 6.101 HV (cf. p. 387, lines 32–41 Pf).

وذلك أن العروق التي تأتي من فوق إلى أسفل إلى جانب العظم<sup>53</sup> الأوسط من القص تتصل بعروق آخر يرتقي من أسفل من المواضع التي تتبع منها العروق التي تأتي إلى الرحم ومن تلك العروق التي تأتي من ناحية القص إلى أسفل<sup>54</sup> قد<sup>55</sup> تبعث طائفة ليست باليسيرة في الثديين ولهذه<sup>56</sup> العروق<sup>57</sup> صارت المشاركة والاتصال بين أعضاء التوليد وبين الثديين وسائر نواحي الصدر وهي مشاركة عظيمة جداً ويسببها تكون المشاركة في الحوادث في هذه المواضع.

That is to say that the veins that run downwards next to the middle bone of the sternum join other blood vessels ascending from below from the places from which the blood vessels that run to the uterus branch out. From these blood vessels that descend from the region of the sternum, not a small number branch out into the breasts, and these blood vessels constitute the coaffection and connection between the genitals and the breasts and other areas of the chest. This is a very strong coaffection and the cause of the shared phenomena [*mušāraka fī al-ḥawādīf*] in these places.

So *that* is what Hippocrates meant to say. Yet because we need Galen to supply the details, we end up with his own understanding of the bond between the breast and the uterus.

We have seen that the repeated references in *Epidemics*, Book Two, to the coaffection between the reproductive organs (and the genitals) and the chest and especially between the uterus and the breasts, references that lack any indication of the anatomical substructure of these sympathetic affections, create a series of opportunities for Galen to supplement the Hippocratic text.<sup>58</sup> In fact,

53 scripsit Vagelpohl: الأعظم E1, M.

54 Post أسفل add. المواضع M.

55 قد E1: قد M.

56 إلى ثديين بهذه E1: في الثديين ولهذا.

57 dittoqr., del. M.

58 See also ii.2.77–8 HV (cf. p. 229, lines 28–32 Pf), another case where Galen invokes the vessel between the uterus and the chest as part of his project of discovering the 'acceptable and convincing cause' in a mysterious case where a woman gives birth to a child that is entirely fleshy and about four digits large. There are a handful of other instances in the *Commentary on Hippocrates' Epidemics*, Book Two, where it is likely that the word *mušāraka* translates *sympátheia* or *koinōnía*. Two of these involve the association between the uterus and the limbs or hips that results in sympathetic affections. At ii.3.15 HV (cf. p. 262, lines 38–9 Pf), the Warwick translation refers to 'coaffection [*mušāraka*] between the limb and the womb'. (Garofalo 2009, 136 modifies Pfaff's 'infolge der Verbindung der Nerven mit der erkrankten Gebärmutter' with 'per simpatia della parte coll'utero'.) At ii.4.72 HV (cf. p. 344, lines 16–18 Pf), Galen refers to a discussion of the coaffection (*mušāraka*) of the hip or leg and the uterus in his commentary on Hippocrates' *On the Diseases of Women*. For other cases of sympathetic affection, see ii.2.130 HV (cf. p. 244, lines 19–27 Pf) and 2.141 (cf. p. 246, lines 24–5 Pf). At ii.1.119 HV (cf. p. 184, line 34 Pf), Galen speaks of an 'association' (*mušāraka*) between parts of the body; at ii.1.128 HV (cf. p. 187, line 14 Pf), of an 'association' (*mušāraka*)

Galen himself suggests that such 'communities' and the sympathetic affections to which they give rise within the body should occupy a privileged place in the mind of the physician.

On the heels of the remark about the thick vein that goes to (or is in) the breast, we encounter the following: 'these things have the largest part in understanding' (ταῦτα μέγιστον ἔχει μόριον συνέσιος).<sup>59</sup> The statement is cryptic, largely because it is unclear what the referent of 'these things' (ταῦτα) should be. Some commentators, Galen reports, believe that Hippocrates means that the parts of the body he has just mentioned—either the veins or the breasts, presumably—contribute greatly to the power of the mind.<sup>60</sup> Such a reading, Galen thinks, is pure madness. On his interpretation, the line functions as the capstone to the preceding remarks on the breast-uterus association, confirming the deeper resonance of that association and, ultimately, its anatomical basis. Reading the passage as an echo of the earlier discussion of the *koinōniē* between chest, breast, genitals, and voice, he recounts a series of sympathetic affections that restate the evidence for the community between these parts of the body in both men and women, stressing the connecting veins that he himself has repeatedly identified as the (unspoken) ground of sympathy. In the end, it is just these veins that Galen thinks Hippocrates is talking about when he refers to that which contributes most to 'understanding': 'It is best, as I have said, to understand him to mean that what he described about the connection between the veins is useful for many medical concepts'.<sup>61</sup> That which has gone persistently unsaid—namely, the venous relationship between the chest and the genitals—thus becomes foundational for medicine in yet another instance of the principle governing the treatise's composition: what is most important is taken for granted by the text, since it is not possible that Hippocrates could ever forget it, let alone not know it to begin with.

between the arteries and an association (*mušāraka*) between the arteries and the bowel; at ii.1.129 HV (cf. p. 187, line 36 Pf), of an 'association' (*mušāraka*) between certain body parts and blood vessels.

<sup>59</sup> *Epidemics* ii. 6.19 (v. p. 136 L); ii.6.102 HV (cf. p. 388, lines 1–2 Pf).

<sup>60</sup> The reading has some support from *Epidemics* ii. 6.32 (v. p. 138 L), where blood gathering in the breasts foretells the onset of madness (the same material also appears at *Aphorisms* 5.40 [iv. p. 544 L]; see also *Commentary on Hippocrates' Aphorisms* 5.40 [xvii/b. pp. 832–3 K], where Galen claims to have never seen the phenomenon). Galen does not dispute the sign here but struggles to explain it and thus focuses on attacking the interpretation of Sabinus (*Commentary on Hippocrates' Epidemics*, ii.6.162 HV [cf. p. 408, line 40–p. 409, line 11 Pf]).

<sup>61</sup> Book ii.6.103 HV (cf. p. 388, lines 26–8 Pf).

Why is it that Galen is so invested in vascular connectivity in his exegesis of *Epidemics*, Book Two? To try to answer this question, it is worth taking a short detour through another instance of sympathy, one that establishes a different nexus within the body. The case sets the stage for further reflection on whether Galen's response to the phenomenon of sympathetic affections can tell us something about his larger exegetical project in the *Commentary on Hippocrates' Epidemics*, Book Two.

### Seeing and Believing: The Truth in Magnets

The case of Lycies—or Lycie: it is unclear, as Galen points out, whether the patient is a man or a woman<sup>62</sup>—is recounted in *Epidemics*, Book Two, in a predictably spare manner:

Λυκίη τὰ ὕστατα σπλὴν μέγας, καὶ ὀδύνη καὶ πυρετὸς καὶ ἐκ ὤμων ὀδύνη· καὶ ἡ φλέψ ἢ κατὰ σπλήνα ἐπ' ἀγκῶνι ἐτέτατο· καὶ ἔσφουζε μὲν πολλάκις· ἔστι δ' ὅτε καὶ (οὐ·) οὐκ ἐτμήθη, ἀλλ' ἅμα ἰδρωτὶ διήλθεν τι αὐτόματος, ἔξω διόντων· ὁ σπλὴν τὰ δεξιὰ ἐνετείνετο, πνεῦμα ἐνεδιπλασιάζετο, οὐ μὴν μέγα· παρεφέρετο, περιεστέλλετο· φῦσα ἐνεοῦσα· οὐ διήει κάτω οὐδέν, οὐδὲ οὔρει· ἀπέθανε. (*Epidemics* ii. 2.22, v. p. 94 L)

Towards the end Lycies had an enlarged spleen, as well as pains, fever, pains towards the shoulder. The blood vessel on the side of the spleen<sup>63</sup> was tense at his elbow. It often throbbed; but sometimes it did not. There was no phlebotomy, but something passed on its own together with the sweat,

<sup>62</sup> Book ii.2.100 HV (cf. p. 235, lines 17–31 Pf), ii.2.110 HV (cf. p. 239, lines 9–19 Pf). Galen reads the account as if the patient were male but remains agnostic. Modern editors have been split on the sex of the patient. Smith prints the female name Lycie, but Alessi makes a good case for printing Lycies. One decisive factor determining whether the patient is male or female is the phrase πρὸ τοῦ τόκου ('before childbirth'), which appears right after ἀπέθανε ('she died'). Littré prints πρὸ τοῦ τόκου at the end of 2.22 (and casts the patient, accordingly, as the female Lycie). Smith, however, despite printing Lycie, assigns the phrase to the beginning of the next chapter (2.23), as does Alessi (who prints Lycies). Note as well that both Littré and Smith print the phrase ἰήθη ἠλλεβόρου πόσει Λυκίη as the first line of the chapter. But in Galen, the subject of ἰήθη is a patient from the previous chapter, Demaenete, and the lemma in question (ii.2.99 [cf. p. 235, lines 1–16 Pf]) begins 'during the last days of Lycies' illness...' Alessi follows Galen in assigning ἰήθη ἠλλεβόρου πόσει to 2.21 and converts the nominative Λυκίη to a dative governed by the next phrase (τὰ ὕστατα σπλὴν μέγας).

<sup>63</sup> Smith has 'from the spleen' for κατὰ σπλήνα. I find 'on the side of the spleen' preferable, following not only Galen's interpretation ('on the side of the spleen', in the Warwick translation; 'auf der Seite der Milz', in Pfaff) but also the analysis of Duminil 1983, 95. Alessi translates 'du côté de la rate'.

when the excretions [?] were taking place.<sup>64</sup> The spleen was stretched tight along its right side; the breath doubled its pace, but without being very deep. He became delirious, was wrapped up.<sup>65</sup> Flatulence. Nothing passed below, not even urine. He died.<sup>66</sup>

To the novice reader, the text is a staccato series of symptoms, whose relationship to one another is opaque. From Galen's perspective, however, we have a case awash in sympathetic affection.<sup>67</sup> For the shared suffering of the spleen and the shoulder implied in the second line of the Hippocratic account, Galen, as we have come to expect, supplies the underlying rationale. In this instance, the affection travels not along a vein but via a kind of domino effect. The suffering of the spleen triggers suffering in the peritoneum, which, in turn, causes suffering in the diaphragm, which causes suffering in the inner membrane of the ribs, which causes suffering in the clavicle, which makes the shoulder hurt: the shoulder is thus joined to the spleen at fifth remove. The predominant principle of sympathy appears to be that of proximity, and indeed, Galen a little later expatiates on the phenomenon by which the spleen and the diaphragm affect one another through contact.<sup>68</sup>

The veins remain critical, however, to grasping the symptoms described, albeit in a slightly different capacity than we have seen thus far. The Hippocratic cue is the reference to the tenseness of the blood vessel 'on the side of the spleen'. Galen takes this to mean, reasonably enough, that Hippocrates is referring to a sympathetic affection of a blood vessel on the left side, where the spleen is located, a phenomenon that he describes as sympathy 'on the same side'. Not only does such sympathy affect the blood vessel. It also means that any nosebleeds—often a crucial form of crisis—during illnesses of the spleen occur through the left nostril; conversely, during illnesses of the liver (located on the right side of the body), these symptoms occur on the right.<sup>69</sup> What is crucial for our purposes is how other physicians, according to Galen, account for the sympathetic connectivity in play: they posit a vein that runs from the left side of the spleen upwards in complementary fashion to that running from the right side of the

64 I follow Alessi's translation here ('alors que les excréments avaient lieu'), with the sense that the event described earlier in the sentence occurred at a time in the illness before the patient was constipated (as signaled by οὐ διήκει κόπρω οὐδέν, οὐδὲ οὔρει).

65 In the Warwick translation: 'he suffered insomnia and was constipated'. Galen discusses different interpretations of the original at ii.2.109 HV (cf. p. 238, line 42–p. 239, line 9 Pf).

66 Galen's lemma continues with what in modern editors is printed as 2.23 and 2.23b.

67 The word *mušāraka* occurs fourteen times from 2.101–8.

68 Book ii.2.106 HV (cf. p. 238, lines 6–8 Pf), ii.2.108 HV (cf. p. 238, lines 39–40 Pf). On sympathy by contact elsewhere in Galen, see Siegel 1968, 369–70.

69 Book ii.2.102 HV (cf. p. 236, lines 12–19 Pf). On nosebleeds that occur in connection with affections of the spleen, see also ii.1.183 HV (cf. p. 203, lines 19–29 Pf), ii.2.117 HV (cf. p. 240, lines 17–19 Pf), ii.3.77 HV (cf. p. 279, lines 29–33 Pf).

liver (that is, the 'hollow' blood vessel). In other words, they identify a vascular connection underlying the coordinated symptoms.<sup>70</sup> And yet, here, for once, it is precisely such a connection that Galen rejects, for the simple reason that 'in dissections we do not see this blood vessel that they saw in their dreams'.<sup>71</sup> The dreamt-up vein is no innocent error. The problem is that when people—presumably laypersons, but perhaps also less experienced physicians—learn that it does not exist, they stop believing in the phenomenon of sympathy 'on the same side' altogether. And this, for Galen, is to fail to believe in something that is obvious to anyone who has seen it.

By way of explaining the nature of the doubt about sympathy here, Galen starts by observing that it is one thing to describe what happens, another to give the cause. Much as in the discussion of the association between the breast and the uterus, sympathetic affections here open onto larger questions about the relationship between seeing and understanding—but with a twist. For it is not just the relationship of seeing and understanding that is at stake but the relationship of seeing and believing: in the absence of an adequate explanation, we believe only what we can see.

To illustrate the point, Galen offers a brief digression on the magnet, one of the great marvels of antiquity.<sup>72</sup> Given that the attraction exercised by magnets could be described in terms of sympathy in the first centuries AD—as it is, appropriately enough, by Galen himself in *Natural Capacities*—it is perhaps not surprising that he introduces the magnet at this particular moment as something whose power is easy to see but difficult to explain.<sup>73</sup> No one who has witnessed its power with their own eyes, he says, doubts the phenomenon. But those who hear of it only secondhand often do disbelieve the report because no adequate *reason* for magnetic attraction is given. It is the same with sympathetic affections 'on the same side': seeing is believing, since the phenomenon 'manifestly occurs', but doubt creeps in when autopsy is absent and no credible explanation emerges to fill the void.

Remarkably, though, Galen is at a loss himself to explain such sympathetic affections without a vein to ground the connection: all he can do is promise to

70 The hypothesis of a vessel relating affections of the spleen to the shoulder and the arm (on the left) and those of the liver (on the right) already appears at *On Diseases* i. 26 (vi. p. 194 L; ed. Wittern 1974, 78, lines 7–14), although it seems to be rejected by the author of *Epidemics*, Book Two, as Duminil 1983, 95–8 argues. See also *On Affections* 28 (vii. p. 242 L), 32 (vii. p. 250 L), where phlebotomy on the right and left sides is recommended for affections of the liver and spleen, respectively.

71 Book ii.2.102 HV (cf. p. 236, lines 22–3 Pf).

72 Book ii.2.103 HV (cf. p. 236, lines 32–44 Pf).

73 For explanations of the magnet in terms of sympathy, see, for example, Clement of Alexandria *Stromateis* 2.370; Galen *Natural Capacities* 1.14 (ii. pp. 44–51 K; Helmreich 1893, 133, line 11–138, line 21); Pliny *Natural History* 34.42. On the magnet as a stock marvel in antiquity more generally, see Wallace 1996, especially 181–2.

devote a future treatise to the question. For the moment, we are left with only a scattering of symptoms that refuse to resolve into a constellation along the lines offered by anatomical investigation. By Galen's own reckoning, then, we have little reason to believe the account of the case of Lycies unless we have had firsthand experience of sympathy 'on the same side'.

The problem posed by the case of Lycies exposes something of what is at stake in an exegesis of *Epidemics*, Book Two. To the extent that Hippocrates is writing to and for himself, he does not need to persuade anyone else about the truth of what he has seen. The text exists, rather, to help him recall his earlier observations. It thus lacks, for the most part, explanations of why things happen the way they do. The risk, one might imagine, is that the reader who has not witnessed everything described in the text will not necessarily believe what it describes, unless, of course, causes are supplied. Herein lies the need for the ideal exegete who can verify the account given by introducing an explanation. The exegete bridges the gap between the Hippocratic text and its later readers, not just to explain the source material but also, at another level, to guarantee its credibility for an audience that Hippocrates never intended. If the case of Lycies reflects something of a failure in this regard, it also sheds some light on the nature of Galen's ambitions elsewhere in the commentary.

The ideal exegete can be understood as occupying the position of the text's other addressee—namely, the son.<sup>74</sup> The role of the exegete is defined in part by knowing what Hippocrates meant: one aspect of the interpreter's task is to clarify the language and terminology of the text.<sup>75</sup> But it is defined, too, by being able to stand in the shoes of the father and to see what he saw—after all, that is the only way that a text represented as mnemonic can trigger a glimpse of reality. What sort of presence does this position imply? On the one hand, it is just a question of seeing clinical events for oneself. On the other hand, if the son is to offer an explanation of these events, he needs, in Galen's view, to be able to call upon another eyewitness experience—namely, that of dissection. For dissection is crucial to understanding and vouching for the causes that lie beneath the surface of the body and, in parallel fashion, the surface of the text.<sup>76</sup>

74 The triangulated relationship between the son, the father's books, and the father's legacy also appears at *Anatomical Procedures* 14.1 (ed. Duckworth 1962, 183–4), where Galen recounts how the son of the great anatomist Numisianus, Heraclianus, hoarded his father's books and, despite Galen's many attempts to ingratiate himself, never once allowed Galen to see them. Heraclianus's aim in not showing the books, Galen says explicitly, was 'to secure himself in the sole possession of all that his father left'. See also *Commentary on Hippocrates' Epidemics*, ii.6.141 HV (cf. p. 400, lines 16–26 Pf), where the paternity of the text is in play.

75 See, for example, Manetti 2009, on Galen's display of his grasp of Hippocratic linguistic usage.

76 See ii.4.5 HV (cf. p. 312, lines 10–19 Pf), where Herophilus is not content to learn from Hippocrates but desires to see inside the body for himself. Galen rails against those who follow Hippocrates blindly, without direct empirical knowledge, at 6.61 (cf. p. 375, lines 22–5 Pf); see further Lloyd 1991, 402.

Yet the experience of dissection is not just about offering explanations to secure the truth of what the text reports: it, too, represents a 'being present', and it is an experience that is crucial to proving something about Hippocrates himself. For Galen does not simply want to demonstrate that what Hippocrates described happened, that is, that Hippocrates reported events correctly: he wants to show that Hippocrates had already seen for himself the causes underlying the events that he described. What this entails for Galen, as for Hippocratizing anatomists before him, is ascribing to Hippocrates the experience of dissection.<sup>77</sup>

But what about the truth of *Epidemics*, Book Two, as a text, that is, as a crucial supporting document for the image of Hippocrates championed by Galen? What does it mean for Galen to be present before *this* truth? That is, what does it mean for the son to believe not just in what the father saw but in the fact *that* he saw, and where what is seen is not just scatterings of symptoms but the logic behind them? Under these circumstances, the two paths to belief that we saw in the context of the magnet—one simply seeing something happen, the other having it explained—converge, insofar as what Galen wants to see in the text is a causal web. By turning the anatomical body into the subtext of the original treatise, Galen does just that: he creates the conditions under which he can 'see' the causal understanding that he believes is latent in the text. For if Galen sees beneath the surface of the text a fuller vision of the body, and especially the vascular body, that he attributes to Hippocrates, he is also 'seeing' the connections that Hippocrates ostensibly drew between symptoms, for the reason that the veins function as the very *materialisation of causality*.

More than once we have seen that, in the cases of sympathetic affection in the *Commentary on Hippocrates' Epidemics*, Book Two, Galen seems to believe that to supply the cause means to articulate the path of a vein relating one part of the body to another while, in the last case, that of Lycies, to deny the presence of a vein is, conversely, to eliminate the ground of explanation. That is, in these cases, giving the causes of the affections becomes indistinguishable from exposing the underlying anatomical connections.

What the instances of sympathetic affection make especially clear is, first, that the more Galen can map the flotsam of the Hippocratic text onto his own model of the body, the more coherent and, indeed, the more believable that text becomes, not just for the reader but for Galen himself. But these instances con-

77 'For the true and the false of what becomes manifest from dissection are differentiated by something by which we examine other perceptible things, namely differentiation by means of the senses. So, just as one who has not seen the city known as Athens has not seen the Propylaeum in it, the Kerameikos, or the other places in it, likewise one who has not performed a dissection has not seen the arteries, veins, or other body parts or vessels. For just as a wall surrounds a city, and walls surround houses, so, too, the skin surrounds the body of a living being. So, whoever wants to see for himself what is beneath the skin must cut through the skin' (ii.4.4 HV [cf. p. 311, lines 22–31 Pf]). On the text of the passage, see Garofalo 2009, 142.

firm, too, that the very act of mapping the text along the lines of the anatomical body validates an interpretation in which Galen is deeply invested—namely, an interpretation that cements Hippocrates' proper place at the origin of a tradition of medicine organised around the enquiry into causes and anatomical expertise. Here, Galen's own experience with dissection and, more specifically, his memory of dissection, becomes a pivotal part of his work as a commentator, insofar as it allows him to imagine himself when he reads as present not only before the anatomical body but, in fact, before the logic of causes ostensibly already witnessed by the father. That logic and, accordingly, Hippocrates' grasp of that logic thus acquire something of the manifest truth that characterises the veins. The transition from seeing to believing can be seen, accordingly, as extending beyond believing in the events described in the text to believing in the very presence of explanation at the origins of the text, which is nothing less than believing in Hippocrates as the father of dogmatic medicine.

The *Commentary on Hippocrates' Epidemics, Book Two*, must be seen as part of the larger exegetical project of Galen's Hippocratic commentaries, through which he not only lays claim to the authority that the name Hippocrates had come to stand for but grounds it in his own understanding of the body. Yet the nature of the original Hippocratic text creates exceptional challenges and opportunities for this project. On the one hand, it offers what Galen thought was the only genuine Hippocratic anatomy, especially rich in its account of the vascular system. On the other hand, *Epidemics, Book Two*, is riddled with gaping silences and glaring omissions, with the result that Galen himself must establish, at several critical points, connections between the anatomy offered and the cases and phenomena described or, more accurately, between the anatomy Hippocrates 'really' had in mind and the rest of the text. He does so by introducing his own vision of the networked body, albeit in the guise of the text's concealed substructure and the concrete enactment of its causal logic. He enlists this vision most vigorously in instances of sympathetic affections, whose surface appearance—symptoms scattered across the body—exaggerates the disjointed, seemingly random quality of the text itself. By making manifest the connections underneath these affections, Galen does not simply lend the Hippocratic text coherence and credibility but also helps shape a father figure for medicine whose memory Galen honours as if it were his own.

## The Arabic Version of Galen's *Commentary on Hippocrates' Epidemics, Book Two*, as a source for the Hippocratic Text: First Remarks

ROBERT ALESSI

At first sight, the second book of the *Epidemics* startles the modern reader as it consists of diverse statements that are at different stages of elaboration. Some of these statements are quite difficult to understand because they are not explicit. For example, roughly in the middle of Book Two, one finds a particular *katástasis*, that is a description of the season, weather and diseases during one period at a particular geographic place. One also finds several elaborate nosological descriptions, many remarks on sick people and on the weather, numerous clinical observations, some general statements seemingly inferred from experiment, and a few remarks that are barely understandable except to the author.

The *Epidemics* require a particular scholarly approach: in one respect, considering the nature of the topics which the author examines, the questions he formulates have to be situated in the larger framework of fifth and fourth-century discussions. But in another respect, considering that the *Epidemics* were based essentially on concrete inquiries and medical experiments, the statements made in the book have to be scrutinised. As the text is on the whole very difficult, Galen's *Commentary* is extremely helpful for establishing and interpreting the Hippocratic text, although its Greek original is lost. This commentary allows us to compare the Hippocratic text not only with the lemmas that form part of the commentary but also with the commentary itself and the numerous variants or discussions it contains that date back to Galen's predecessors.

The following example allows us to assess the usefulness of Galen's work for the interpretation of the Hippocratic text. In the introduction to his commentary of *Epidemics, Book Six*, Galen recounts the corruptions that he finds in the Hippocratic text, which are due to earlier scholars' false conjectures. Because his text contained many such corruptions, Galen thought that it was better to retrieve, to record and to explain the most ancient readings which he could find in the works of past commentators<sup>1</sup>:

<sup>1</sup> p. 3, lines 4–10 W; xvii/a.793 K.