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BATHING FOR HEALTH WITH CELSUS AND PLINY THE ELDER*

The connection between bathing and health in ancient Roman perceptions is a subject in need of fuller investigation. The connection makes repeated appearances in ancient literature of all sorts, from the blusterings of Seneca to casual asides in Pliny's letters.[1] In the currrent paper I offer a preliminary study of this important topic by examining the bathing references in two Latin authors, whose extant works have either a wholly medical focus (Celsus) or a strong medical component (Pliny). The chief goal of the paper is to assess not so much the medical efficacy of the recommendations themselves—a task beyond the professional competence of the current author—but their role in shaping behaviour in the Roman world.

OVERVIEW OF THE REFERENCES

A. Cornelius Celsus and C. Plinius Secundus were both encyclopedists and both lived and wrote in the first century A.D., perhaps fifty years apart. Celsus appears to have written a work, or a series of connected works, that covered in several dozen books the subjects of agriculture, medicine, warfare, rhetoric, philosophy, and jurisprudence.[2] Of these, only the eight books of the *De Medicina* survive extant. In all, Celsus refers to baths and bathing some eighty-one times throughout his work (see Appendix A).[3]

The riotous collection of facts and lore that constitutes Pliny the Elder's *Natural History* is daunting material to work with. In thirty-seven densely packed books, Pliny bludgeons the reader with data of varying quality on topics ranging from marble to marine biology, from forestry to pharmacology.[4] Medicinal matters dominate the last seventeen books (see Appendix B). In a global table of contents in book 1, Pliny claims to have documented in these seventeen books no less than 15,410 'drugs,

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[1] For an overview, see G.G. Fagan, *Bathing in Public in the Ancient World* (Ann Arbor, 1999), 85–103.

[2] See *RE* 4.1273–6, s.v. 'Cornelius 82' (Wellmann); P. Mudry, 'Le "De Medicina" de Celse: Rapport bibliographique', *ANRW* 37.1 (1993), 787–99; G. Sabbah and P. Mudry, *La médecine de Celse: Aspects historiques, scientifiques et littéraires* (Saint-Etienne, 1994); C. Schulze, *Celsus* (Hildesheim, 2001).

[3] The total omits ambiguous references to the use of hot water (*aqua calida*), which may or may not imply a bath setting; see e.g. Celsus 4.24.2, 4.25.2, 4.28.1, 5.26.30a.

[4] On Pliny's massive work, see R. French and F. Greenaway (edd.), *Science in the Early Roman Empire: Pliny the Elder, His Sources, and His Influence* (London, 1986); J. F. Healy, *Pliny the Elder on Science and Technology* (Oxford, 1999); T. Murphy, *Pliny the Elder's Natural History: The Empire in the Encyclopedia* (Oxford, 2004); V. Naas, *Le projet encyclopédique de Pline l'Ancien* (Rome, 2002).

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investigations, and observations' (*medicinae et historiae et observationes*). The phrase is notably vague, probably deliberately so.[5] On two occasions (books 34 and 36) Pliny gives a specific figure for drugs only; otherwise the drugs are folded into the broader category. A spot check on the table of contents for three randomly selected books (22, 27, 33) revealed the following proportions. In book 22 (on herbs) the total for all the drugs enumerated by Pliny constituted 822 out of 906 'drugs, investigations, and observations' (that is, 91 per cent); in book 27 (on plants) the total was 533/602 (88.5 per cent); and in book 33 (on metals) drugs accounted for 35/288 (12 per cent). Since thirteen of the seventeen health-related books are concerned with plants and animals, it seems probable that the vast majority of Pliny's 15,410 'drugs, investigations, and observations' are medicaments.[6] In all, Pliny refers to medicinal bathing forty-seven times in his last seventeen books, as listed in Appendix B—a total that excludes purely cosmetic recommendations, such as the use of rose petals as anti-perspirants (*HN* 21.125), of lees in washing (*HN* 23.65), of black willow seeds in depilation (*HN* 24.58), or of baths of asses' milk to improve complexion (*HN* 28.183).

ESTABLISHING THE SETTING: THE TYPE OF BATH DENOTED

A variety of Latin terms denote baths and bathing, but both authors overwhelmingly designate medicinal uses with the word *balineum* and its variants (*balineae*, *balneae*, *balneum*). Depending on context, *balineum* can denote a bathing facility, a bathing tub, or the act of bathing itself.[7] Less frequent are terms derived from *lavare* ('to wash') which, in Celsus, appear eleven times, mostly in association with *balineum*.[8] A typical example reads:

> If anyone has become overheated in the sun, he should go immediately to the bath (*in balneum*) and pour oil over his head and body; then go down into a well-heated pool; a lot of water should then be poured over his head, first hot, then cold. But for the man who has become very cold, he must first sit wrapped up in the bath (*in balineo*) until he sweats, then be anointed and washed (*lavari*) . . . (Celsus 1.3.10)

Here the *balineum* is the stated setting for the washing. In some cases, however, *lavari* could conceivably denote a dip in a stream, or a light wash at a basin or other portable vessel, as when we are advised that 'Washing in hot water is suitable for young boys and old men'; or 'reading aloud, then walking, then either anointing or washing are beneficial against slow digestion'; or '[for those being treated for *fistulae* in the anus] it's fine in the interim to go about one's daily business—walking, washing, eating food exactly as for one in excellent health (*sanissimo*)'.[9] In the final analysis, there is no compelling reason to suspect that Celsus saw such washing as

[5] The summary of every book, as given in book 1, ends with a *summa* of *res et historiae et observationes*, altered to *medicinae et historiae et observationes* in those that deal with remedies (from book 20 on). In these latter books, it is not inconceivable that *historiae* means something like 'case histories' or 'notes', but of what—illnesses? preparations? It might also mean 'discoveries' or 'developments, in reference to specific drugs and/or the means to administer them. In light of such uncertainty, I retain the vagueness of 'investigations' here. Note that in his preface (*HN praef*. 17) Pliny claims to have assembled 20,000 facts in 36 volumes.

[6] Note that all these figures are drawn from the indexes in book 1, which do not necessarily tally with the actual content of the books themselves; see Naas (n. 4), 192–3.

[7] For examples, see *loci* cited in e.g. nn. 8 (bathing facility), 13 (act of bathing), and 23 (tubs).

[8] Celsus 1.3.10, 1.3.24, 1.3.32, 1.3.36, 1.4.2, 1.8.3, 2.17.3, 4.27.1d, 6.6.8c, 6.6.29, 7.4.4a.

[9] Celsus 1.3.3, 1.8.3, 27.4.4a, respectively.

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extraneous to the *balineum*, its natural context. *Lavari* in these citations (especially the last) is best interpreted as shorthand for 'taking a bath'.

The common Latin term for a bath-building, *thermae*, does not appear at all in Celsus, and in Pliny it denotes only the large imperial establishment of Agrippa at Rome and carries no particular medicinal significance (Plin. *HN* 34.62, 35.26, 36.189). Pliny uses *lavare*-derived words sixty-one times, overwhelmingly in connection with the washing of animals (or animal products), textiles, plants, earth, metals, ores, or other objects.[10] When used by Pliny to designate medicinal human bathing, *lavare* is used mostly in association with the *balneum*.[11] In sum, then, both authors overwhelmingly denote medicinal human bathing with the simple term *balineum*.

From terminology to typology: What sort of *balineum* did these writers have in mind? Celsus comments:

> For the weak-headed . . . it is better to be anointed than washed . . . But if they go into the bath, they should begin to sweat, clothed, in the *tepidarium* and be anointed there, and then go into the *caldarium*. When a sweat has been worked up, they should not go down into the pool, but have much hot water poured over them from the head down, then tepid water, then cold. The head should have water poured over it for longer than the other parts. Then they should be rubbed for a while, and finally dried off and anointed. (1.4.2)

The specification of the variously heated rooms and the mention of the communal pool (*solium*) clinch the identification of the establishment as a 'normal' Roman-style bath, which was characterized by communal pools (termed *solia* or *alvei*) and variously heated rooms (*caldaria*, *tepidaria*).[12] Other details from both Celsus and Pliny corroborate this deduction.[13] In both authors, *balineum* is sufficient in itself to denote a hot bath, yet on two occasions Celsus specifies a *calidum balineum*, a phrase which appears tautological.[14] The explanation lies in the variety of bathing options on offer

[10] Animals and their products: *HN* 8.178, 15.254, 22.98, 28.109 (crocodile oil), 28.144 (suet), 29.35 (sheep fats), 31.131 (sponge ash), 32.98 (myax ash). Textiles: *HN* 19.48, 25.52, 28.80. Plants: *HN* 13.108, 15.21, 15.23, 24.110, 25.166, 26.67, 27.20, 27.109, 33.78. Earth, metals, and ores: *HN* 1.35, 31.52, 33.67, 33.69, 33.74, 33.75, 33.88, 33.114 (twice), 33.118, 33.162, 34.104, 34.106, 34.107, 34.109 (twice), 34.113, 34.130, 34.131 (twice), 34.157, 34.169, 34.171, 34.172, 34.174, 34.176, 35.191, 35.193, 36.137, 36.155. Pots and combs: *HN* 21.82.

[11] Medicinal *lavatio* expressly associated with *balineum*: *HN* 24.185, 25.77, 29.10. Pliny's observation (*HN* 31.59) that hot washing (*lavari calida*) is frequently mentioned in Homer undoubtedly refers to human bathing, though not necessarily of a medicinal nature or in an elaborate establishment; the same goes for a mention of the statue 'Venus Bathing', *Venerem lavantem*, at *HN* 36.35. Note also *HN* 23.65 (lichen 'useful for washing bodies and clothes'); *HN* 26.22 (jaundice patients 'are ordered to wash in salt water', presumably in the sea); *HN* 33.152–3 (women bathe in silver *solia*, and with men); and *HN* 36.122 (all the hills of Rome are 'washed' with water by the *Aqua Claudia*; *ut omnes urbis montes lavarentur*).

[12] For the characteristic elements of Roman baths, see G. G. Fagan, 'The genesis of the Roman public bath: recent approaches and future directions', *AJA* 105 (2001), 403–26, esp. 403–4. On the meaning of *solium*, see A. Maiuri, 'Significato e natura del *solium* nelle terme romane', *PP* 5 (1950), 223–7. It is interesting to note that this passage in Celsus indicates that 'bathing' could take place in the *caldarium* outside the pool, by means of sluicing carried out by specialist staff called *perfusores*; see *CIL* 4.840 = *ILS* 6404e; C. Bruun, 'Lotores: Roman bath-attendants', *ZPE* 98 (1993), 222–8.

[13] *Tepidarium*: Celsus 1.3.4–5. *Solium*: Celsus 1.3.4, 1.3.10, 3.6.14 and 16, 3.12.3, 3.22.6d, 5.28.15d; Plin. *HN* 26.8, 28.63, 31.122. Note Celsus 3.22.13 where a *solium* is mentioned without any explicit association with a *balneum*; and Celsus 4.31.3 where a hot location *locum calidum . . . sine balneo* is mentioned as a place where sweating, rubbing and the pouring of tepid water can take place. In the latter instance, *balneum* probably denotes not the building (one would expect *e* or *a balineo* in that instance) but its full and proper use, that is, the act of bathing.

[14] See e.g. Celsus 1.1.2 (*balineum* contrasted with the use of cold waters); Celsus 1.3.4, 3.22.7,

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in the regular Roman bath: hot, cold, and tepid water; humid and dry sweating; and anointing and rubbing.[15] *Calidum balineum* therefore directs the patient to the heated areas of such an establishment. That *balineum* does not denote use of swimming pools or medicinal springs is made explicit by Celsus:

> For this sort [of stomach complaint], the bath (*balineum*) is most ineffective (or 'harmful'): reading aloud and exercise of the upper body are essential, as are anointing and massage. It is healthful for these patients to be sluiced with cold water and to swim (*natare*) in it, as it is to submit the stomach to streams of cold water, more so the back opposite the stomach from the shoulders down. Healthful also is submersion in cold spas with medicinal properties (*in frigidis medicatisque fontibus*), such as those of Cutilia and Sumbruvium. (4.12.7)

Here the *balineum* (meaning 'hot bath') is clearly distinguished from both *natationes* (presumably in lakes, rivers, streams, the sea, or artificial pools in unspecified locations)[16] and *medicatae fontes*. The latter point is particularly significant, since such spas are known to have catered specifically to the sick, given the longstanding and widespread belief in the healing properties of spring waters.[17] Pliny, for instance, assesses the healing powers of various famous springs (*HN* 31.4–24, 31–5) and notes that Homer makes no mention of hot springs (*calidae fontes*), 'since medicine at that time did not have recourse to waters as it does today'.[18] Pliny, like Celsus, expressly differentiates between natural springs and 'hot bathing' (*lavari calida*).[19] In contrast, artificially heated Roman bathing facilities exclusively designated for the sick are all but unknown. Even if such places were common, they are not architecturally distinguishable from baths in general use.[20]

In the light of all this, the conclusion must be that when recommending medicinal baths with the word *balineum*, Pliny and Celsus had in mind regular, artificially heated, Roman-style baths, which offered under a single roof all of the bathing options they prescribe.

The final issue concerning the setting is whether these baths were private or public.[21] Since ancient readers would have been well-to-do Romans, references to a

3.27.3a, 4.15.4, 5.28.19d, 6.6.34b; Plin. *HN* 24.185 (*balineum* associated with sweating); Celsus 3.23.3 (*balineum* listed with the sun and fire among *omnia calificentia*); Celsus 4.27.1d (fr.2), 6.6.8c and e, 6.6.15d, 6.11.4; Plin. *HN* 25.88, 29.26 (*balineum* associated with heated waters). For *calidum balineum*, see Celsus 1.7.1, 5.27.12b.

[15] See previous note. Rubbing: Celsus 6.6.8b–c, 6.6.29, 6.6.38(?). Anointing: 1.3.10, 5.28.15d; Plin. *HN* 20.234, 28.132.

[16] See Celsus 3.27.1e: for patients with relaxing of the sinews, 'if there are swimming baths anywhere about, whether natural or even artificial, they should be used above all . . . if not, the bath is nevertheless beneficial' (*ac si quo loco vel naturales vel etiam manu factae tales natationes sunt, iis potissimum utendum est . . . si id non est, balneum tamen prodest*).

[17] The consul for 176 B.C., Cn. Cornelius Scipio Hispallus, perished after falling from his horse en route to take the *aquae Cumanae* for an illness (Livy 41.16.3–4). See also R. Jackson, 'Waters and spas in the classical world', in R. Porter (ed.), *The Medical History of Waters and Spas* (London, 1990), 1–13.

[18] Plin. *HN* 31.59; cf. Plin. *HN* 25.77 (hot-water bathing found in Homer).

[19] Plin. *HN* 31.60 (sulphur springs at Cutilia contrasted with the regular *balineum*).

[20] F. Yegül, *Baths and Bathing in Classical Antiquity* (Cambridge, MA, 1992), 355. Note, however, the Byzantine provision of baths specifically for lepers at Scythopolis in Palestine; see M. Avi-Yonah, 'The bath of the lepers at Scythopolis', *IEJ* 13 (1963), 325–6. Such a practice was not widespread, even in the Byzantine period; see H. J. Magoulias, 'Bathhouse, inn, tavern, prostitution, and the stage as seen in the lives of the saints of the sixth and seventh centuries', *EpetByz* 38 (1971), 233–52 (234–5 on medicinal uses of 'normal' baths). Lepers constituted an already excluded group, so special baths for them are improbable before the Christian era.

[21] By 'private' I mean facilities found attached to private houses and evidently for the use of invited guests only; 'public' I take to mark a facility open to the public, whether or not it was in private ownership.

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balineum could denote private bathing suites of the sort attached to élite houses.[22] Patients are advised to go 'into the bath' (*in balineum*) or to take drugs 'having left the bath' (*e* or *a balineis*).[23] At first glance, such advice might seem to indicate a public facility removed from the home, but it can just as easily signify a private bathing suite in a domestic setting.

Some key passages and general considerations, however, suggest that public baths offer the likeliest setting. Consider Celsus' recommendation for sight loss:

> In cases where someone's eyes are dimming, there will be need of much walking and exercise, and frequent bathing, when the entire body must be rubbed down—especially, however, the head—with iris ointment, until there is sweating. Afterwards the patient must be wrapped up and not uncovered until the sweating and heat have eased off at home. (6.6.34b)

Clearly the bathing is assumed to take place outside the home. Similarly, in cases of wet-nurses suckling children with ulcerous mouths, Celsus recommends the following:

> But the wet-nurse must be forced to exercise, by both taking walks and doing those chores which exercise the upper body. She must be sent to the bath and ordered there to pour hot water on her breasts; then she must be fed light foodstuffs . . . (6.11.4)

The mention of 'sending' (*mittenda*) and the contrast implicit in the locational adverb 'there' (*ibi*) demonstrate that Celsus had in mind a bath outside the *domus*, which was the natural habitat of the wet-nurse. Among the upper classes, many of whom had private facilities attached to their houses, attending public baths was standard behaviour, a social practice that expressed active membership in a community. A morning spent in the forum was followed by a visit to the public baths, where a dramatic arrival with a train of servants and dependants in tow was a primary means of displaying status.[24] So the medicinal use of public baths would hardly be a stretch, even for the élite. By extension, ailing denizens of urban apartment blocks seeking a healthy bath would have had no recourse other than to a public facility. If any doubt remains, there is positive evidence that public baths were used by sick people, including members of the élite, and that this situation was regarded as unremarkable.[25]

The inescapable conclusion from the foregoing is that in both Celsus and Pliny medicinal bathing is thought to take place in regular, Roman-style public baths. The likelihood that many visitors to such facilities were motivated by medicinal concerns, whether preventive or remedial, is a very real one. A steady stream of ailing bathers was unlikely to enhance an establishment's salubrity, a circumstance that casts a dark shadow over the likely hygienic conditions inside Roman baths.[26]

[22] Varro (*Ling*. 9.68, cf. 8.48) notes that the singular form *balneum* was held by some to denote a private bathing suite, whereas public facilities were termed by the plural form *balneae*. Varro himself (*Ling*. 9.68) argues against the validity of this fine distinction, and he was undoubtedly right: it does not hold up under scrutiny. In building inscriptions, for instance, public facilities are regularly denoted by *balneum, balnea*, or *balneae*; for examples, see Fagan (n. 1), 233–328.

[23] *In balineum*: Celsus 1.3.10, 1.4.2, 3.6.16, 3.7.1a, 3.12.3 (where *balineum* is used synonymously with *solium*; cf. e.g. 1.3.4, 1.4.2, 5.28.15d), 4.2.8, 5.27.2b, 6.11.4. *E* or *a balineis*: Plin. *HN* 20.161, 22.100, 22.137, 22.139, 23.62, 24.181, 25.40, 25.77, 30.87, 31.71, 32.115.

[24] See Fagan (n. 1), 192–6.

[25] Ibid. 184–6.

[26] For the gory details, see A. Scobie, 'Slums, sanitation and mortality in the Roman world', *Klio* 68 (1986), 399–433.

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THE DIVERGENT FOCUS OF CELSUS' AND PLINY'S RECOMMENDATIONS

Since all forty-seven of Pliny's references to medicinal baths appear in books dealing with drugs, his bathing recommendations appear in association with those drugs, whether deployed as decoctions, salves, or ointments: 'for jaundice ("the royal disease") cumin is given in white wine after a bath'; or 'lupin flour kneaded with vinegar and smeared on in the bath combats pimples and itching and by itself it dries out ulcers'; or 'some recommend [river crabs] against quartan fever, boiled down to a quarter in wine and drunk on leaving the bath; others, however, say the left eye should be swallowed'.[27] Naturally, there are some places where baths are recommended without the use of drugs: 'Against severe pain in the kidneys, loins or bladder, relief is supposedly gained by urinating in the pools of the baths while leaning forward'; or 'sponges provide a substitute for strigils and towels when the body is ailing'.[28]

In Celsus the situation is very different. Celsus rarely recommends medicinal baths in conjunction with drugs or ointments; he does so, in fact, on only 5/81 occasions, and all are external applications rather than decoctions to be ingested.[29] Most of his bathing prescriptions appear in concert with dietary regulation.[30] The contrast in styles is especially stark when the two authors recommend treatment for the same illness. For example, against epilepsy (*morbus comitialis*), Celsus prescribes a prolonged regimen of forced bowel movements, regulation of food intake, shaving the head, anointing, perfusions of vinegar, blood-letting, rubbing, exercise and/or rest, and avoidance of the bath and other heating agents. At specified junctures, ointments are to be applied or hellebore consumed (3.23). In Pliny, epilepsy is treated with a potion of wool-grease and myrrh consumed after a bath (*HN* 30.87). Similarly, in treating jaundice (*morbus regius*), Celsus recommends diet regulation, rubbing, exercise, the bath or cold swimming, and a variety of other pleasant activities which, he explains, have lent the illness its epithet 'royal' (3.24.5). Pliny prescribes cumin in white wine taken after a bath (*HN* 20.161). Fevers—to be sure, a broad category—are treated by Celsus with complex regimens, often with a significant bathing component; in Pliny we read such prescriptions as taking dolphins' livers and fish teeth, or applying salves of ground sea-horses or boiled frog grease. The bath is not prominent.[31] Celsus' first book, which concerns the regimen of the *sanus* ('the healthy man'), contains sixteen bathing recommendations. In contrast, Pliny alludes to, but nowhere expressly endorses, preventive bathing.[32]

[27] Plin. *HN* 20.161, 22.155, and 32.115, respectively.

[28] Plin. *HN* 28.63 and 31.131.

[29] Celsus 4.27.1d (fr. 2) (waxen ointment against urinary problems); 5.28.19d (powders against psoriasis); 5.28.15d (powder and nitrum ointment against pustules); 6.6.8e (unguent against inflamed eyes); 6.6.34b (unguent against dimming eyes). Note 5.27.12b where ointments are to be used as an alternative to the bath, rather than in conjunction with it. It is also unclear whether the poultice prescribed for jaundice patients at 3.24.5 is to be worn in the bath.

[30] See the list of references in Celsus in Appendix C. A typical sample includes: Celsus 1.1.2 (the bath and eating, used together, are beneficial); 1.7.1 (bathing and hot foods and drinks against intestinal pain); 6.11.4 (bathing and food for the *nutrix*). Note especially 4.27.1d (fr. 2) where an unguent is recommended along with bathing, but this as part of a more complex regimen involving food, drink and vomiting.

[31] See e.g. Celsus 2.17.2–8, 3.6.6, 3.6.14, 3.6.16–17, 3.7.1a, 3.12.1, 3.12.3–4, 3.13.1, 3.15.2 and 4; Plin. *HN* 20.156, 32.113–16.

[32] See Celsus 1.1.2, 1.2.7, 1.3.4–5, 1.3.7, 1.3.8, 1.3.9, 1.3.10, 1.3.12, 1.3.23, 1.3.32, 1.3.36, 1.4.2,

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The two authors therefore have very different ideas about how medicinal bathing is to be used: one (Pliny) combines it overwhelmingly with drugs, the other (Celsus) with dietary regulation and other lifestyle adjustments. The chief explanation for this divergence lies in the different nature of the works. Celsus' is an exclusively medical treatise, whereas Pliny's broader naturalistic inquiries lead him to speak first and foremost of plants and animals and ores, and secondarily of the drugs derived from these sources (see Appendix B). Medicinal bathing therefore features as an ancillary element associated with the proper use of drugs.

A useful comparison, however, is provided by the nearly contemporaneous medical author Scribonius Largus, who composed a collection of pharmaceutical recipes, titled the *Compositiones*, under Claudius. This work lists some 271 prescriptions, which represents a mere fraction of Pliny's massive catalogue. Nevertheless, Largus includes bathing only twice in his remedies: once in connection with ingesting a potion (Scrib. Larg. 134; for dropsy), and once as part of a regimen of ointment application, bathing, and wine drinking (Scrib. Larg. 20; for eye complaints). Thus Largus' methods stand somewhere between Celsus' dietetics and Pliny's herbalism, though closer to the latter in their therapeutic style.[33] Despite treating many of the same ailments for which Pliny recommends bathing, and despite being well aware that contemporaries appreciated the medicinal value of baths, the relative rarity of bathing in Largus' herbal prescriptions serves to highlight its greater prominence in Pliny's.[34] So a related influence on the cast of Pliny's recommendations for medicinal bathing may have been his repudiation of Greek-style 'rational' medicine in favour of ancient Italic traditions, particularly those focused on herbalism.[35] If Pliny valued Italic herbalism above the Greek theories that undergird Celsus' medical outlook (as well as Largus'), the divergence in their bathing prescriptions may stem in no small measure from the sources they consulted in compiling their works and the medicinal traditions to which they adhered.

Celsus does not provide detailed information about his sources. He sometimes alludes to authorities he has consulted, but there is no book-by-book list of authorities on the model of Pliny's table of contents. In his *prooemium*, however, Celsus

1.6.1, 1.7.1, 1.8.3, 1.10.2–3 (the total excludes three further bathing references in this book—1.3.27, 1.3.28, 1.3.15–16—which merely note the effects of bathing on the body). Note also 7.4.4a where *lavari* is included among the daily activities of the 'person in excellent health' (*sanissimus*). For Pliny's view, see below, pp. 199–200.

[33] On the one hand, the *epistula dedicatoria* that opens the *Compositiones* cites only Greek authorities, though Roman writers appear also in the main text. This locates Largus closer to Celsus than to Pliny. On the other, Largus' emphasis on ingested, herbal remedies is closer to Pliny's preferred mode of healing than to Celsus', though he lacks the magical elements found so often in Pliny's prescriptions. See B. Baldwin, 'The career and work of Scribonius Largus', *Rh. Mus*. 135 (1992), 74–82, where Largus' divergences from Celsus are noted (74, 78–9).

[34] For instance: headaches (Scrib. Larg. 1–11), epilepsy (12–18, 97), *ignis sacer* (63, 106, 135, 244–6), tuberculosis (89), gout (101, 107, 158–62, 264, 266–7), jaundice (110), or itching (251–4). Pliny's remedies for these illnesses can be located in Appendix C. At one point, Largus (214) recommends a plaster of indistinct colour, in part because 'it will not fall off in the bath' ('or the pool', as further noted in the index entry for this *emplastrum coloris incerti*). The assumption is that wounded/ill people would naturally seek to bathe. Baths are mentioned in one other place in the work, but not as a remedeial agent *per se*: Scrib. Larg. 60 (a recipe for a toothpowder requires cooking in a bath's furnace).

[35] Note especially Plin. *HN* 29.11 and 29.24. On Pliny's attitude toward the medical arts, see V. Nutton, 'The perils of patriotism: Pliny and Roman medicine', in French and Greenaway (n. 4), 30–58. On Rome's assimilation of Greek medical practices, see V. Nutton, *Ancient Medicine* (London, 2004), 157–70.

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discusses and cites only Greek authors and medical theories. Throughout his work, only one Roman author (writing in Greek) is referred to at all—a Cassius.[36] Celsus' healthful baths therefore stem from theoretical Greek traditions and, in particular, from dietetics, which advocated the maintenance of health and the treatment of illness through the regulation of diet, exercise, and bathing.[37]

Pliny, in contrast, shuns Greek medicine as staffed by money-grubbing know-it-alls and follows Cato the Elder in preferring traditional Italic practices. He expressly rejects dietetics:

> [15] He [Cato] reveals the medical treatment that preserved him and his wife to a ripe old age—using these very remedies, in fact, that I am now discussing—and declares that he had a notebook of them, with which he treated his son, slaves and household. I will organize it by types of treatment . . . [23] I will not even criticize the rubbish and ignorance of that lot [i.e., Greek doctors], their lack of restraint with their streams of hot water in cases of illness, their tyrannical imposition of fasting and, when they make no progress, food given numerous times a day by the same practitioners; and moreover, their thousand changes of mind, their orders to the kitchen, their admixtures of ointments—for they leave out none of life's seductions.
>
> (*HN* 29.15, 23)

Elsewhere, Pliny waxes lyrical about the medicinal powers of plants, on which the *maiores* from Cato the Censor onwards relied and which, says Pliny, largely remain the preserve of illiterate country folk (*HN* 25.1–16). Given his uncompromising stance on dietetics, and the possibility that natural springs had long been used as healing spas in ancient Italy, the combination of drug-use and bathing found in Pliny may seem to stem from native Italic practice.

Yet as Pliny himself was well aware, the Greek medical tradition was no stranger to pharmaceutics,[38] which suggests that we are dealing more with a matter of style than substance. Pliny strikes the popular Roman pose of the Hellenophobe, while Celsus unashamedly documents his indebtedness to Greek medical theory. Having roundly rejected, even castigated, dietetics (which must have been prominent in the 'doctors' Pliny says he consulted as sources),[39] Pliny preferred to emphasize herbalism and, in so doing, to present a conservative, traditional face to his readers. Such a rhetorical posture is by no means restricted to Pliny and is quite common among Roman writers

[36] Celsus 1. *proem*. 69, 4.21.2, 5.25.12. On Celsus' sources, see W. Deuse, 'Celsus im Proemium von "De Medicina": Römische Aneignung griechischer Wissenschaft', *ANRW* 37.1 (1993), 819–41.

[37] Celsus himself (1. *proem*.9) differentiates three branches of medicine: dietetics, pharmaceutics and chirurgics. On dietetics, see L. Edelstein, 'The dietetics of antiquity', in O. Temkin and C. L. Temkin (edd.), *Ancient Medicine: Selected Papers of Ludwig Edelstein* (Baltimore, 1967), 303–16; R. Jackson, *Doctors and Diseases in the Roman Empire* (Norman, OK, 1988), 32–55. On the centrality of dietetics in Celsus' medical system, see Schulze (n. 2), 37–50. Note also P. Mudry, 'L'orientation doctrinale du "De Medicina" de Celse', *ANRW* 37.1 (1993), 800–18.

[38] Pliny (*HN* 25.8, 25.42) documents the general Greek interest in pharmaceutics. Specifically, Heraclides is cited as prescribing pharmaceutical remedies (*HN* 20.35, 20.193, 22.193), and Chrysermus likewise (*HN* 22.71). Crateuas is reported to have named plants (*HN* 19.165), prescribed pharmaceutical remedies (*HN* 20.63, 22.75, 24.167, 25.62) and is credited with a treatise on the subject of medicinal plants (*HN* 25.8). See C. Schulze, *Die pharmazeutische Fachliteratur in der Antike: Eine Einführung* (Göttingen, 2002), 47–51 (on Heraclides and Crateuas).

[39] Pliny says he consulted 55 *medici* ('doctors') as sources for books 20–30—the very books in which the majority of his health-related bathing recommendations are to be found. All are Greek or non-Italic and stem from the Hellenistic period. In addition to the *medici*, Pliny cites some 473 authors in his work, 146 *auctores* ('authors') and 327 *externi* ('foreigners'); see V. Ferraro, 'Il numero delle fonti, dei volumi e dei fatti della N.H. di Plinio', *ASNP* 5 (1975), 519–33.

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from Cato the Elder onwards; it often involved the denigration of Greek culture, at least in public.[40] Pliny's adoption of this stance carries a further consequence for his bathing references. In rejecting Greek-style medicine, Pliny also eschews the systematic theoretical physiologies that informed much Greek medical practice. Pliny's remedies, lacking any unifying theoretical scaffold, therefore display an *ad hoc* pragmatism that treats each illness on its own terms. His bathing prescriptions read like a litany of folksy quick fixes. This divergence between the two authors can be seen as corresponding rather neatly with the 'high medicine' (of a theoretical variety) and the 'low medicine' (of a pragmatic variety) that generally characterize Roman healing practices.[41]

So alongside the divergent subject matter of the two works, Pliny's conservative rhetorical pose goes a long way to explaining why his medicinal bathing recommendations differ so markedly in their focus from those in Celsus. The suspicion is confirmed when we find Pliny mocking the complexities of Greek pharmacology in general terms while citing Greek pharmacological recommendations in specific instances.[42] A comparable discontinuity between a stated general stance and specific cases will be seen again in Pliny's attitude toward the role of baths in maintaining health.

THE NATURE OF THE BATHING RECOMMENDATIONS

By their nature, health-related bathing recommendations are either preventive or remedial. It will come as no surprise to discover that preventive bathing features far more noticeably in Celsus' work than it does in Pliny's. In all, Celsus' first book, on the regimen for the healthy person, contains sixteen prescriptions for preventive medicinal bathing.[43] Bathing is included among the elements of 'daily business' (*negotia*) for the 'the man in excellent health' (*sanissimus*).[44] Some general observations on the effects of the bath follow: bathing after lunch fattens, while bathing on an empty stomach is thinning (1.3.15–16); bathing after eating heats up the body, bathing on an empty stomach cools it (1.3.27); the body is rendered humid by frequent bathing (1.3.28); bathing in cold water is recommended for summertime (1.3.36); and so on. Hot bathing is recommended for children and the elderly (1.3.32). All of this is paradigmatically dietetic.

Aside from generalities, Celsus includes specific scenarios where bathing helps

[40] The term of contempt 'Greekling', often used in conjunction with generalized critiques of Greek culture, is not uncommon in the public pronouncements of Romans as steeped in Hellenic culture as Cicero (*Sest*. 110, *Red. Sen*. 14, *Pis*. 70, *Scaur*. 4, *Mil*. 55, *Phil*. 5.14). On Cato the Elder's knowledge of things Greek, see A. E. Astin, *Cato the Censor* (Oxford, 1978), 157–81. The very terms Pliny uses to denote his sources—*auctores* and *externi* and, at one point (*HN* 12.112) *nostri* and *externi*—reveals much about his patriotic mindset. On the moral and ideological agenda pervading Pliny's encyclopedia (namely, praise of old ways and of Rome, Italy and the empire), see Murphy (n. 4); Naas (n. 4), esp. 137–70 (on the sources) and 171–234 (on the index in book 1).

[41] J. M. Riddle, 'High medicine and low medicine in the Roman empire', *ANRW* 2.37.1 (1993), 102–20. On the great variety of Roman curative techniques and their practitioners, see Nutton (n. 35), 248–71.

[42] Generalized mockery: *HN* 29.24–5. Two of Pliny's bath-and-drug recommendations are expressly credited to Greek authors: *HN* 24.185 (Diocles, who is listed among the *medici* used in composing this book) and 25.87–8 (the Athenian Servilius Democrates, who does not appear in the table of contents; on this figure, see *RE* 4.2069–70, s.v. 'Damokrates 8' [Wellmann])

[43] See n. 32.

[44] See nn. 30 (healthy baths) and 32 (*sanissimus*).

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ward off illness in threatening situations. The fatigued person was evidently thought vulnerable, since Celsus notes:

> [4] The common practices for all overworked persons who are about to eat are: when they've walked about a little, if there is no *balneum* available, they ought to be anointed and sweat in a hot place, either in the sun or at a fire; if the bath is available, they ought to sit first and foremost in the *tepidarium* and then, after taking a little rest, proceed down into the pool; then be anointed profusely with oil and rubbed lightly, and back again down into the pool. After these procedures, the face is to be dowsed first with hot water, then with cold. [5] A very hot bath is not suitable for such cases. Thus, if an exhausted person is bordering on a fever, it is sufficient for them to immerse themselves in a medium-hot place up to the loins in warm water, to which a little oil has been added, and then gently rub the whole body—especially, however, the parts that had been immersed—with oil, to which wine and ground salt have been added. [6] After this, the fatigued are ready for the consumption of food . . . (1.3.4–6)

The passage is a good illustration of Celsus' dietetic prescriptions—a mixture of bathing, anointing, massage, drinking, and eating—all geared in this case to preventing a deterioration of health in circumstances that are judged to invite it. The bath is prescribed in a very specific manner, with particular procedures envisioned for different contingencies. The complexity of the system is striking. Comparably detailed are the prescriptions for the overheated or chilled individual (Celsus 1.3.10). Aside from fatigue and overheating, prolonged sitting is considered to endanger health. So for those who have spent the day sitting at the games or in a carriage, the bath plays a key role in restoring their optimal condition (Celsus 1.3.12).

These recommendations pertain to otherwise healthy people who find themselves in circumstances that may lead to serious illness. For sufferers of congenital vulnerabilities, such as those prone to fainting fits (1.4.2), lax intestines (1.4.2), or slow digestion (1.8.3), baths are recommended in varying degrees. In fact, baths are abjured only twice. People with weak bowels should (thankfully) avoid *continua balnea* and should be anointed even without sweating (1.6.1). It is noteworthy that these weak-bowelled unfortunates are not advised to avoid bathing *per se*, but only *continua balnea*.[45] In situations of pestilence, Celsus recommends that those with a fuller body avoid the bath altogether, but the average person is cautioned to avoid walking barefoot after eating or after a bath (1.10.1–3). Thus Celsus does not abjure baths even in the face of epidemics.[46] The 'normal' use of the baths, which entailed anointing, sweating, and immersion, was seen as an inherently health-promoting procedure.

Pliny considers dietetics not only useless and lethal, but morally corrupting at both

[45] Two meanings for the phrase seem the most likely: (i) bathing on regular basis, perhaps on successive days (hence *continuus*); or (ii) a complete, uninterrupted bath, in the sense of using all of the facilities on offer (which would be used in order during a single visit, hence *continuus*).

[46] The ancients, of course, were unaware of microbes or their role in transmission, so they do not seem to have made a causative connection between bathing and acquiring illness (quite the opposite, in fact). They may, however, have conceptualized the health risks of communal bathing in superstitious terms; see K. M. D. Dunbabin, '*Baiarum grata voluptas*: pleasures and dangers of the baths', *PBSR* 57 (1989), 6–46, esp. 33–46, where the dark side of bathing, both physical and metaphysical, is discussed, along with the apotropaic symbols deployed to ward them off. Demons were thought to prefer damp and dark places, particularly dirty water, so they naturally flourished in baths (ibid. 35–7). Do some of the stories about people harmed or killed by bath-demons conceal actual illnesses contracted while bathing? While it cannot be proven, it is a reasonable possibility. Comparable is the ancient interpretation of a seasonal pattern of susceptibility to illness and death as a product of climate combined with personal predisposition rather than as infection spreading to more and more people; see B. D. Shaw, 'Seasons of death: aspects of mortality in imperial Rome', *JRS* 86 (1996), 100–38, esp. 113.

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the individual and societal levels (*HN* 29.10, 26). We cannot therefore expect Pliny to be a champion of preventive bathing. Despite this, the notion finds expression in a few passages. As he rails against Greek doctors and their corrupt practices, he comments that they have persuaded healthy people, among other things, to take 'boiling baths . . . so that everyone comes out weaker, and the most observant indeed are carried off to be buried' (*HN* 29.26). Despite the critical tone, the point to note is that 'boiling baths' feature among 'the things we endure when healthy'. Pliny may take a dim view, but he acknowledges that baths are a part of the healthy man's regimen. Elsewhere (*HN* 31.60), he condemns people for boasting how long they can endure the heat of the sulphur springs when, really, they ought to stay immersed only as long as they would in a (normal) *balineum*—a warning that implies a widespread connection between the *balineum* and health (since sulphur springs were conisdered health-inducing). Pliny also comments that bathing the head in hot water, then hot steam, then cold water—all operations presented as taking place in *balneae*—is generally judged healthful (*HN* 28.55). He notes that travellers are sometimes fearful of unknown water and recommends the precaution of drinking some of the suspect stuff cold, immediately upon coming out of a bath (*HN* 31.71).

So rather like his contemporary Seneca, Pliny can rail in general against the baths on moral grounds, and then assume their health-maintaining properties in specific instances. But at no point does he expressly recommend bathing for the maintenance of health. His comments about preventive baths are descriptive rather than prescriptive. The notion of health-promoting bathing extended well beyond the dietetically inclined and is attested in the works of many ancient authors, medical and 'lay' alike. The bath-promoting doctrines of the prominent doctor Asclepiades of Bithynia, which gained currency in the late second and early first centuries B.C., may help explain the widespread assumption among the Romans that bathing was inherently healthy.[47] By Celsus' day it was a given that bathing helped fend off illness. Hence the shadow that preventive bathing cast even over the austere moral landscape of Pliny's encyclopedia.

Both Celsus and Pliny include remedial bathing in the treatmeant of an impressive spectrum of ailments (see Appendix C). Assessing the efficacy of specific recommendations is beyond the competence of the current author,[48] but a passage in Pliny does not instill confidence:

> *Ignis sacer* [a type of erysipelas] is treated with wool grease and pompholyx and rose-oil; by tick's blood; by smearing on earthworms preserved in vinegar; by a cricket ground down in the hands (the person who does this, before the illness presents, will not suffer it for that year, but the cricket must be extracted with iron, along with the earth of its burrow); by goose fat; by the preserved desiccated head of a viper, heated and then applied after reconstitution in vinegar; by a shedded snakeskin applied in water after a bath, along with bitumen and lamb grease.
>
> (*HN* 30.106)

[47] See Celsus' testimony about Asclepiades (2.17.3): 'The ancients used the bath more timidly, Asclepiades' more boldly' (*antiqui timidius* [sc. *balineo*] *utebantur, Asclepiades audacius*). Note also Plin. *HN* 26.14–16 for Asclepiades and his promotion of bathing. For more on Asclepiades and his potential impact, see the discussion in Fagan (n. 1), 93–103, and now also R. Polito, 'On the life of Asclepiades of Bithynia', *JHS* 119 (1999), 48–66 (who dates him—erroneously in my opinion—to the early and middle, rather than late second century B.C.).

[48] See the comments of W. Heinz, 'Antike Balneologie in späthellenisticher und römischer Zeit: Zur medizinischen Wirkung römischer Bäder', *ANRW* 2.37.3 (1996), 2411–32.

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The prescription exemplifies the mixture of folk medicine and magic that characterize Pliny's cures. Celsus' dietetic recommendations appear less extreme in comparison, though it is not immediately obvious how inflamed eyes benefited from anointing the head with iris ointment or the thighs and shins with light oil (Celsus 6.6.8a–e).

Celsus' remedial bathing recommendations include all four possible types: the patient is advised to continue with the normal bathing routine (e.g. 3.24.5, 5.28.19d); to increase the frequency or duration of the bath (e.g. 3.7.1a, 3.22.7); to decrease that frequency or duration (e.g. 4.5.7, 4.12.3); or, in a handful of instances, to avoid the bath altogether (e.g. 3.23.3, 4.5.3). Celsus' recommendations for the remedial use of baths fall within the usual range of dietetic prescriptions.[49] In contrast, Pliny's remedies are *ad hoc* and pragmatic, lacking as they do any theoretical foundation. Most of his remedial bath-and-drug recommendations are therefore prosaic injunctions to take decoctions and potions, overwhelmingly upon leaving the bath.[50] Sometimes consumption is to take place in the bath itself (*HN* 20.178, 35.196). On only two occasions does Pliny recommend taking drugs before the bath: to stimulate milk production, women are to drink a potion and then go the baths (*HN* 27.82); and difficult childbirth is alleviated by taking a partial dose of a potion before a bath, with the rest consumed in the bath and outside afterwards (*HN* 24.185).[51] Unguents to treat a variety of skin complaints are to be applied in the bath;[52] occasionally, such applications are deemed beneficial before a bath (*HN* 20.156, 28.233), more rarely afterward (*HN* 29.47, 30.106).

Although dominated by drugs and applications, not all of Pliny's remedial bathing recommendations feature them. For the person poisoned by hellebore, Pliny advises scrutiny of bowel movements and vomit, and the regulation of the bath (*HN* 25.57). The person with pains in the bladder, kidney, or loins is advised to urinate while leaning forward in the *solium* of a bath (*HN* 28.63). (One hopes that this advice was not implemented in public facilities.) Pliny recommends the bath indirectly when he notes that the products of the bathing routine—scrapings of oil and sweat generated by strigiling (termed *strigmenta*)—are useful for treating joint or sinew pain and in ointments for suppuration (*HN* 28.50–2). He also reports that leprosy in the Egyptian royal house was treated by bathing in warm human blood (*HN* 26.8).

What strikes the reader about the remedial recommendations in both authors is not only the great variety of illnesses for which bathing in varying degrees is recommended, but the detailed specifications as to how the bath is to be used in each case. After centuries of theorizing, practice, and testing, the role of baths in ancient medicine had reached a high level of sophistication and straddled both wings of ancient healing practice: on the one hand, the folk-based, pragmatic remedies exemplified by Pliny and, on the other, the theoretically informed dietetic system favoured by Celsus.

Finally, it is noticeable how infrequently baths are stated to be physically harmful. This is especially striking in Celsus. On a number of occasions, Celsus comments that

[49] See e.g. the Celsus citations in Appendix C, s.v. 'eye complaints' and 'fevers'.

[50] Plin. *HN* 20.161, 22.100, 22.137, 22.139, 24.181, 25.40, 30.87, 32.115.

[51] Note that the Greek doctor Diocles is the stated source of the latter prescription,

[52] *HN* 22.155 (lupins ground in vinegar for pimples, itching and ulcers), 25.88 (hellebore and axel grease for sciatica or joint complaints), 25.134 (a poultice for headaches), 28.132 (spots removed by applying sour cheese and oxymel), 28.140 (pig fat soothes itching and pimples), 31.116 (soda, burnt and ground, for stings, pimples and blisters), 31.122 (soda baths good for gout and tuberculosis), 35.185 (liquid alum and honey for pimples, itching and ulcers). Note also *HN* 31.l31, where sponges rather than strigils or towels are recommended for the ailing bather.

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the bath is to be used less frequently than normal or avoided for particular periods.[53] Only in seven instances of Celsus' eighty-one bathing recommendations is the bath deemed deleterious to the patient's health:

1. for chronically ill people without fever (3.21.6: *balineum atque omnis umor alienus est*);
2. in cases of *phthisis* (that is, tuberculosis; 3.22.10: *balineum alienum est*);
3. for patients convalescing from gangrene (5.26.34d: *balineum . . . alienum est*);
4. for patients with paralysis of the stomach who cannot digest food (although note the latter are encouraged to resort to cold swimming and cold healing spas; 4.12.7: *inutilissimum balineum est*);
5. for people with tremorous sinews (3.27.3a: *inimica etiam habet balinea assasque sudationes*);
6. for patients spitting blood (4.11.8: *at inimica sunt vinum, balneum, venus,* etc.).
7. for an insufficiently cleaned wound (5.26.28d: *balneum quoque, dum parum vulnus purum est, inter res infestissimas est*)

The terminology is illuminating. In the first three instances, the bath is said to be *alienum*, which can be read as 'inappropriate' or 'unsuitable' rather than necessarily 'harmful'. Likewise, *inutilissimum* (in no. 4 above), while it can certainly denote harmfulness, also elicits inefficacy rather than active hazard.[54] Only in three instances in his entire work (nos. 5–7 above)—or four, if we include the *inutilissimum balineum*—does Celsus unambiguously regard the bath as a definite evil (*inimicus* or *inter res infestissimas*), and even then it is usually part of a list of harmful activities (drinking wine, sweating, sex, and so on). What is more, the injunctions are usually couched in the negative, as warnings to avoid the bath. Only once does Celsus say that going to the bath will make matters worse, when an insufficiently cleaned wound is rendered both damp and dirty in the bath (no. 7 above). Pliny warns against bathing in cases of spleen complaints (*HN* 20.166) and after birth (*HN* 28.248), but overall he adopts a more moral perspective, castigating the luxury of bathing excesses. On two occasions, potentially fatal baths are presented more baldly than in Celsus' recommendations for mere avoidance: 'If drunk rapidly after a bath and without taking a breath, must kills' and 'Fabianus reports that sapa, if taken on an empty stomach after a bath, is poisonous.'[55] Nevertheless, in both cases the bath is only a contributing cause of death and not in itself lethal.[56] The generally perceived beneficial role of bathing is highlighted by the rarity in both authors of strong warnings against the practice on medical grounds.

[53] Timing of bath to be monitored: Celsus 3.12.1. Less frequent use: Celsus 4.12.3, 8.4.22. Infrequent use in treatment: Celsus 3.21.17, 3.25.3, 3.27.2b, 4.27.2, 5.26.30b. Avoidance at specific junctures in an illness: Celsus 3.15.4, 3.22.14, 4.5.3, 4.20.4. Avoidance in specific circumstances: Celsus 4.5.7.

[54] See *TLL* 7.2.274–9, s.v. 'inutilis', where 'qui usui non est, utilitate caret' is the primary and predominant meaning (ibid. 274–8) but 'noxius, perniciosus' also applies (ibid. 278–9), particularly in medical texts. The two meanings are not mutually exclusive, of course.

[55] Plin. *HN* 23.29 and 23.62 respectively.

[56] The notice (*HN* 7.183) that Appius Saufeius expired after a bath while sucking on an egg after drinking mead is irrelevant, since it is a sudden death while eating or drinking; the bath only provides the context and not the cause of Saufeius' death.

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CONCLUSION

It remains an open question to what degree the prescriptions of writers like Pliny and Celsus reached the faceless masses of the Roman world and shaped their daily behaviour, if at all. While other technical treatises—on such topics as farm management, military stratagems, land surveying or the aqueducts of Rome—may have been written primarily to instruct or impress peers, medical tracts surely had a wider appeal founded in their immediate relevance.[57] In the life-threatening environment of the ancient city, any means to cure illness or, better yet, to prevent it before it started would have attractred the interest of all classes.[58] It is not likely that the general public in Rome hungered for information on the proper way to measure out a field or thirsted to know the precise carrying capacity of the Aqua Marcia, but they would most certainly have had a keen interest in learning ways to stay healthy or treat illness. In this way, it is reasonable to envision the prescriptions of the medical treatises actually finding a wide popular audience, if even by word-of-mouth transmission and in garbled form.[59]

There are indications that this was the case among the upper echelons of Roman society and, harder to discern, among commoners also.[60] The Baths of the Seven Sages at Ostia features a room adorned with images of Greek scholars dispensing wisdom about bowel movements. Underneath the scholars are smaller figures, apparently sitting on a latrine (their lower bodies are lost), deep in conversation.[61] One of them says to a neighbour, AMICE FUGIT TE PROVERBIUM | CACA ET IRRUMA MEDICOS ('Friend, you've forgotten the proverb: "Take a shit and bugger the doctors"').[62] Concern for the proper functioning of the bowels and the use of purgatives was widespread in 'professional' (or 'high') medical works, so this vulgar injunction may

[57] On technical literature in antiquity, see recently: M. Formisano, *Tecnica e scrittura: Le letterature tecnico-scientifiche nello spazio letterario tardolatino* (Rome, 2001); B. Meißner, *Die technologische Fachliteratur der Antike: Struktur, Überlieferung und Wirkung technischen Wissens in der Antike (ca. 400 v. Chr.–ca. 500 n. Chr.)* (Berlin, 1999); C. Santini (ed.), *Letteratura scientifica e tecnica di Grecia e Roma* (Rome, 2002).

[58] Recent work has stressed, perhaps too strongly, how toxic to human life was the Roman urban environment; see e.g. V. M. Hope and E. Marshall (edd.), *Death and Disease in the Ancient City* (Cambridge, 2000); R. Sallares, *Malaria and Rome: A History of Malaria in Ancient Italy* (Oxford, 2002), esp. 201–34; Shaw (n. 46); W. Scheidel, 'Germs for Rome', in C. Edwards and G. Woolf (edd.), *Rome the Cosmopolis* (Cambridge, 2003), 158–76. See also Scobie (n. 26).

[59] In recent decades, illiterate peasants in Syria–Jordan were found to be practising classical Islamic medicine with only the remotest notions of its published philosophical underpinnings; see G. Karmi, 'The colonisation of traditional Arabic medicine', in R. Porter (ed.), *Patients and Practitioners: Lay Perceptions of Medicine in Pre-industrial Society* (Cambridge, 1985), 315–39. On the influence of medical treatises on ancient behaviour, see also R. Neudecker, *Die Pracht der Latrine: Zum Wandel öffentlicher Bedürfnisanstalten in der kaiserzeitlichen Stadt* (Munich, 1994), 33–4.

[60] See Fagan (n. 1), 85–8, where the literary evidence for the upper classes is surveyed.

[61] One of these figures comments (*AE* 1941.5): VERBOSE TIBI | NEMO | DICIT DUM PRISCIANUS | [U?]TARIS XYLOSPHONGIO NOS(TRO?) | . . . (A?)QUAS ('No one talks to you much, Priscianus, until you use our (?) sponge stick . . . waters(?)') Mention of the *xylosphongium* (see also *PMich.* 471.29) secures the latrine as the likely context for these exchanges, echoed by the focus on excreta in the bowel-related didascalia of the sages sitting above.

[62] See *AE* 1941.4–8 for all of the texts. The images and inscriptions are in room 5 of this facility. For fuller discussion, see G. Calza, 'Die Taverne der Sieben Weisen in Ostia Antica', *Die Antike* 15 (1939), 99–115; S. T. A. M. Mols, 'I «Sette Sapienti» ad Ostia antica', in D. S. Corlàita (ed.), *I temi figurativi nella pittura parietale antica (IV sec. a.C.–IV sec. d.C.)* (Bologna, 1997), 89–96 (my gratitude to Dr G. Jansen for this reference).

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be read as evidence for the dissemination of such prescriptions into the wider society (by whatever means), if only there to be parodied and rejected—unless we assume that the room was used exclusively by professional doctors.[63] While apparently crude, there is actually a sophistication in the humour.[64] But this does not preclude reading the sentiments expressed as reflective of viewpoints among common Romans,[65] and those viewpoints include an awareness of the sort of prescriptions we read in highbrow medical treatises.

The health-related bathing recommendations of Celsus and Pliny the Elder document the uses to which the ubiquitous Roman bathhouse could be put by real people.[66] It is clear that most of their injunctions refer to 'normal' Roman public baths, of the sort found in all manner of settlement across the length and breadth of the empire. On even the most minimalist perspective, the references are therefore of great value in revealing what the Romans considered practical and conceivable in the use of public baths for medicinal purposes. A further inference is that the enormous popularity of public bathing was grounded in the perceived health benefits that accrued to it. To be sure, the baths were pleasurable and relaxing. All the better, then, if they were also health-promoting.

Penn State University GARRETT G. FAGAN
ggf2@psu.edu

[63] See e.g. Celsus 1.*proem*.55 and 67–8; 1.3.15, 1.3.25–6, 1.3.30–31, 1.6–8; 2.1.8 and 11, 1.3.5, 2.4.9, 2.8.6, 2.8.19–21, 2.8.30–33, 2.8.42–3, 2.12, 2.29–30; 3.18.20, 3.23.3. Trimalchio (Petron. *Sat*. 47) discusses his bowel problems at table—and his consultations with doctors about them. Note also a toilet graffito from the so-called Casa della Gemma (at Ins. Or. I.1) at Herculaneum (*CIL* 4.10619 = *AE* 1937.175): APOLLINARIS MEDICUS TITI IMP(ERATORIS) | HIC CACAVIT BENE ('Apollinaris, doctor of the emperor Titus, had a good shit here'). I see no reason to think that Titus' doctor actually scribbled this report on the toilet wall, as is often assumed; see M. Della Corte, 'Le iscrizioni di Ercolano', *RendNap* 33 (1958), 239–308 (274 on this graffito); A. Maiuri, *Ercolano: I nuovi scavi 1927–1958* (Rome, 1958), 1.475 n. 136; id., *Herculaneum* (Rome, 1964[3]), 63; Neudecker (n. 59), 34. That this graffito juxtaposes an important person with bowel-related crudity, and so closely echoes the form of the vulgarity in the Baths of the Seven Sages, suggests to me it was designed, like the Sages' didascalia, to be a joke (see next note). If this is the case, the text constitutes another reflection of popular reception of 'high' medical precepts.

[64] On the subtlety of the humour, see Mols (n. 62), 91–2. Mols interprets the whole scheme as a burlesque parody of elite pretensions of *humanitas*, evocative of the comedic stage. For the date of the paintings, see ibid. 90–1.

[65] This is especially so if the room, in its original manifestation, served as a tavern or a club meeting room of some sort; see Calza (n. 62), 113–14; R. Meiggs, *Roman Ostia* (Oxford, 1973[2]), 429. Taverns were cornerstones in the 'popular' culture of the Roman commons; see J. DeFelice, *Roman Hospitality: The Professional Women of Pompeii* (Warren Center, 2001), 129–56; R. Laurence, *Roman Pompeii: Space and Society* (London, 1994), 75–87; J. P. Toner, *Leisure and Ancient Rome* (Cambridge, 1995), 65–88. See now also N. Horsfall, *The Culture of the Roman Plebs* (London, 2003). The harsh parody of élite culture evident in the decorative scheme strongly suggests a popular (and populist) orientation in the intended audience. However, the function of the room as a tavern is not uncontested; see G. Hermansen, *Ostia: Aspects of Roman City Life* (Edmonton, 1982), 158–9; T. Kleberg, *Hôtels, restaurants et cabarets dans l'antiquité romaine: Études historiques et philologiques* (Uppsala, 1957), 45–7; Neudecker (n. 59), 36–7; Mols (n. 62), 92.

[66] Pliny (*HN* 29.10) records an extreme case: 'we used to see old men, ex-consuls, frozen stiff to show off, and the writings of Annaeus Seneca confirm this'. (The old men were blindly following the cold-water bathing recommendations of Charmis of Massilia.)

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APPENDIX A: OVERVIEW OF BATHING REFERENCES IN CELSUS

Book	Subject	No. of bathing refs
1	the healthy man	19
2	diseases in general	1
3	diseases affecting the whole body	22
4	diseases affecting parts of the body	17
5.1–25	medicaments and prescriptions	0
5.26–28	lesions affecting the whole body	9
6	lesions affecting parts of the body	9
7	surgery	3
8	bones	1
	Total	81

APPENDIX B: OVERVIEW OF BATHING REFERENCES AND DRUG TOPICS IN PLINY'S *HN*

Book	Subject	No. of drugs, investigations, and observations [running total][a]		No. of bathing refs
20	drugs from garden plants	1606	[1606]	5
21	flowers and drugs therefrom	730	[2336]	0
22	herbs and drugs therefrom	906	[3242]	4
23	drugs from cultivated trees	1418	[4660]	2
24	drugs from forest trees	1176	[5836]	3
25	self-grown plants and drugs therefrom	1292	[7128]	5
26	remaining drugs by class	1019	[8147]	4
27	remaining plants and drugs therefrom	602	[8749]	1
28	drugs from animals	1682	[10,431]	8
29	drugs from animals cont'd	621	[11,052]	3
30	drugs from animals cont'd	854	[11,906]	2
31	drugs from aquatic animals	924	[12,830]	7
32	drugs from aquatic animals cont'd	990	[13,820]	1
33	metals and drugs therefrom	288	[14,108]	0
34	metals and drugs therefrom	257[b]	[14,365]	0
35	painting; earths and drugs therefrom	956	[15,321]	2
36	stones and drugs therefrom	89[b]	[15,410]	0
	Total			47

[a]As calculated from the tables of contents in *HN* 1.
[b]These figures are for drugs only.

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APPENDIX C: RANGE OF ILLNESSES IN THE TREATMENT OF WHICH BATHING PLAYS A ROLE IN CELSUS AND PLINY THE ELDER[a]

After taking *glaux*	Pliny *HN* 27.82
After taking hellebore	Pliny *HN* 25.57
Bites from rabid animals	Celsus 5.27.2b
Cholera	Celsus 4.18.5
Clean wound	Celsus 5.36.30b
Common cold (*gravedo*)	Celsus **4.5.3**–4, 4.5.6, 4.5.7, 4.5.9
Complaints of the male organs	Pliny *HN* 29.47
Convalescing from head surgery	Celsus 8.4.22
Convalescing from intestinal complaints or gangrene	Celsus **4.20.4, 5.26.34b, d**
Convalescing from surgery	Celsus 7.3.4a
Diarrhoea	Celsus 4.26.2
Difficult childbirth	Pliny *HN* 24.185
Diseased bodies	Pliny *HN* 31.131
Epilepsy (*morbus comitialis*)	Celsus **3.23.3**; Pliny *HN* 30.87
Eye complaints	Celsus 6.6.1e, 6.6.8b–e, 6.6.17, 6.6.27b, 6.6.29, 6.6.34b, 6.6.38
Fertility for male or female babies	Pliny *HN* 25.40
Fevers and shivering	Celsus 2.17.2–8, 3.6.14, 3.6.16–17, 3.7.1a, 3.12.1, 3.12.3–4, 3.13.1, 3.15.2, **3.15.4**; Pliny *HN* 20.156, 32.115
Flatulence	Celsus 4.12.3
Gangrene	Celsus **5.26.28d**, 5.26.30b
Gout (*podagra*)	Pliny *HN* 28.140, 31.122
Headaches	Celsus 4.2.8 (from malaria); Pliny *HN* 25.134
Illness, general or chronic	Celsus **3.2.6, 3.21.6**
Instant passage of food (*leienteria*)	Celsus 4.23.3
Itching	Pliny *HN* 20.178, 20.234, 22.155
Jaundice (*morbus regius*)	Celsus 3.24.5; Pliny *HN* 20.161
Joint problems/sciatica	Celsus 4.31.3; Pliny *HN* 25.87–88
Leprosy (*elephantiasis*)	Celsus 3.25.3; Pliny *HN* 26.8 (!)
Lice in the eyelashes (*phthiriasis*)	Celsus 6.6.15b
Liver abcesses	Celsus 4.15.4
Loose/painful sinews	Celsus 3.27.1e, 3.27.2b
Palsy	Pliny *HN* 22.139
Paralysis of the stomach	Celsus **4.12.7**
Pimples, spots and other skin blemishes (*maculae*, *papulae*)	Celsus 5.28.15d; Pliny *HN* 20.178, 22.155, 28.132, 28.233, 31.116, 35.185, 35.196
Poisoning by hemlock	Celsus 5.27.12b
Psoriasis (*vitiligo*)	Celsus 5.28.19d; Pliny *HN* 20.178
Spitting blood	Celsus **4.11.8**
Skin complaints (*erysipelas*)	Celsus 5.28.4d; Pliny *HN* 30.106
Spleen complaints	Pliny *HN* **20.166**
TB (*phthisis*)	Celsus **3.22.10**, 3.22.13–**14**; Pliny *HN* 31.122
Treatments for *fistulae*	Celsus 7.4.4e

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Urinary/bladder problems	Celsus 4.27.1d(fr 2), 4.27.2; Pliny *HN* 22.137, 24.181, 28.63
Uterus purge after miscarriage/afterbirth	Pliny *HN* 22.100, **28.248**
Wasting illness (*tabes*)	Celsus 3.22.6–7
Water on stomach	Celsus 3.21.17
Wet nurse suckling child with mouth ulcers	Celsus 6.11.3–4

[a]Items in **bold** are recommendations to avoid (not just reduce) bathing.

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