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The World's Measure: Caesar's Geographies of *Gallia* and  
*Britannia* in their Contexts and as Evidence of his World Map

Christopher B. Krebs

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THE WORLD'S MEASURE: CAESAR'S GEOGRAPHIES  
OF *GALLIA* AND *BRITANNIA* IN THEIR CONTEXTS  
AND AS EVIDENCE OF HIS WORLD MAP

CHRISTOPHER B. KREBS



*Abstract:* Caesar's geographies of *Gallia* and *Britannia* as set out in the *Bellum Gallicum* differ in kind, the former being "descriptive" and much indebted to the techniques of Roman land surveying, the latter being "scientific" and informed by the methods of Greek geographers. This difference results from their different contexts: here imperialist, there "cartographic." The geography of *Britannia* is ultimately part of Caesar's (only passing and late) attested great cartographic endeavor to measure "the world," the beginning of which coincided with his second British expedition.

To Tony Woodman, on the occasion of his retirement  
as Basil L. Gildersleeve Professor of Classics at  
the University of Virginia, in gratitude.

IN ALEXANDRIA AT DINNER with Cleopatra, Caesar felt the sting of curiosity. He inquired of "the linen-wearing Acoreus" (*linigerum . . . Acorea*, Luc. 10.175), a learned priest of Isis, whether he would illuminate him on the lands and peoples, gods and customs of Egypt. Surely, Lucan has him add, there had never been "a visitor more capable of the world" than he (*mundique capacior hospes*, 10.183). Had he not found time to study the heavens even "in the midst of battle" (*media inter proelia*, 10.185)? Now, were he promised the chance to see "the sources of the Nile" (*spes . . . videndi / Niliacos fontes*, 10.191–2), he would readily relinquish the civil war for its pursuit!

A banquet song is a staple of the epic tradition. But if the request itself is conventional, its particular object is not: a didactic poem, more particularly, an ethno-geographical disquisition (as Lucan's typical table of contents reveals: *Phariae primordia gentis / terrarumque situs volgique . . . mores / et ritus formasque deum*, "the origins of the Egyptian

people, the lay of the land, the manners of the common people, and, as for your gods, the forms of worship and their shapes,” 10.177–9).<sup>1</sup> It is true, as Berti (2000, 161–2, 164, 212–4) points out in his commentary, that, by substituting natural history for the traditional mythical topic, Lucan adheres to his overall “historical” poetics; it is no less true that the poet undercuts his presentation of this “Cesare ‘scienziato’” by branding him as vain in comparing himself to Plato, as typically tyrannical in following Cambyses, say, in his quest for the Nile’s source, and as no less insatiable in his hunger for knowledge than he is in his hunger for power. But, just as surely, Lucan’s choice of having his *bête noir* make such a request bears witness to Caesar’s well-known scientific interests, amply attested elsewhere, and, more specifically, to his ethno-geographical interests, as evident from his digressions in the *Bellum Gallicum*.<sup>2</sup> One may also wonder whether Lucan’s poetic episode does not suggest that there was more than just dalliance involved in Caesar’s notorious sail on the Nile “almost to Ethiopia.”<sup>3</sup>

Caesar, it has been proposed since ancient times, merits a place of excellence in the history of ancient geography insofar as he greatly widened Roman (and, in part, also Greek) horizons by repeatedly foraying onto *terra incognita* and writing down what by his pen became *Gallia*, *Germania*, and, to a lesser extent (see n. 42), *Britannia*—an achievement all the more remarkable when considered against the rather rudimentary state of geography at Rome at the time: Cicero, once more, identified the need and attempted but quickly abandoned an adaptation (?) of Eratosthenes (deemed by many the “father of (scientific) geography”).<sup>4</sup>

<sup>1</sup>Trüdinger 1918, esp. 15, admirably sets out the origin and longevity of the set of topics to be addressed by an ethno-geographical author.

<sup>2</sup>Famously, Fronto would comment on Caesar’s ability to write *De Analogia* whilst *inter tela volantia* (Fronto pp. 209–10 van den Hout). Forni’s 1956 discussion of “Cesare ingegnere, scienziato e la riforma del calendario” is rather cursory. For more general overviews of Caesar’s intellectual pursuits, see Fantham 2009 and Schiesaro 2010. I am currently completing a study of Caesar as an “intellectual” (*The Mind of the Commander*).

<sup>3</sup>Suet. *Iul.* 52.1 *paene Aethiopia tenus Aegyptum penetravit*. It is also—and with due delicacy—attested in App. *BCiv.* 2.90 καὶ τὸν Νεῖλον . . . τὴν χώραν θεώμενος, περιέπλει μετὰ τῆς Κλεοπάτρας, καὶ τὰλλα ἠδόμενος αὐτῇ. Hillard 2002 reviews this anecdote’s curious afterlife.

<sup>4</sup>Polverini 2005, 71 (and *passim*); he could have adduced Diod. 3.38.3 οὗτος [Γάιος Καῖσαρ] γάρ τὴν Ῥωμαίων ἡγεμονίαν εἰς ἐκεῖνα τὰ μέρη πορρωτάτω προβιβάσας πάντα τὸν πρότερον ἀγνοούμενον τόπον ἐποίησε πεσεῖν εἰς σύνταξιν ἱστορίας. On the geographical discourse at the time: Rawson 1985, 250–67 (whereof no fewer than five pages are devoted to Caesar); Moatti 2015, 52–68. Cic. *Att.* 2.6.1 (April 59 BC) *a scribendo prorsus abhorret animus. etenim*

Caesar knew his Eratosthenes too, as a reference *suo nomine* in the *Gallic War* reveals;<sup>5</sup> but he was, as I will suggest, demonstrably also familiar with other geographers, Pytheas of Massalia, Hipparchus of Nicaea, and Posidonius of Apamea being most likely presences amongst them. It is worth emphasizing that, in the passage just quoted, he specifically refers to *quidam Graeci*.

For a fuller understanding of “Caesar, the geographer,” I shall look at his fully fledged geographies of both *Gallia* (section 1) and *Britannia* (section 2) in their respective intellectual contexts and with particular attention to the sources, theories, and techniques Caesar brought to bear on them.<sup>6</sup> As will become apparent, these two geographies differ in kind, with the former being more “descriptive,” largely viewed through the eyes of the land surveyor, and named, *pars pro toto*, by Caesar himself; while the one of *Britannia* is thoroughly informed by Greek geography, more “scientific,” and measured as though for a map. Furthermore, while *Gallia* bespeaks an imperialist interest, *Britannia* must be seen in relation to Caesar’s passingly (and only late) attested endeavor to take the world’s measure, as the final section will argue (3): Upon reviewing the evidence for the said project, I shall suggest that it not only bears witness to the same interest as evinced in the (geographic part of the) digression on *Britannia* but can also be dated as having commenced at the same time as Caesar’s second expedition. Often doubted in their authenticity, the (geographic part of the) digression and the cartographic project actually offer mutual corroboration of each another; in fact, the context, or, possibly, *raison d’être* of the geography of Britain in *BG* 5 may well be Caesar’s much grander and more ambitious project, the motivation for which the conclusion will touch upon.

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*geographika quae constitueram magnum opus est. ita valde Eratosthenes, quem mihi proposueram, a Serapione et ab Hipparcho reprehenditur* (cf. *Att.* 2.4.3 [with Shackleton Bailey’s note on 2.4.1 *Serapionis*], 7.1). Rawson 1985, 266, believed that Cicero “may conceivably have ultimately succeeded in [writing a geography].” She refers to Priscian’s possibly quoting a Ciceronian *Chorographia* (*GL* II 267.5). But the frustration Cicero shares with Atticus and his terminal silence about the project make that hard to believe. On Eratosthenes’ standing in Rome: Roller 2010, 32.

<sup>5</sup>*Circum Hercyniam silvam, quam Eratostheni et quibusdam Graecis fama notam esse video, quam illi Orcyniam appellant*, 6.24.2.

<sup>6</sup>Of *Germania* I will treat only cursorily, primarily because its mainly “imaginary” character as “an infinite extension without any interior patterns except for infinite forests” (Krebs 2006, 112) renders further inquiry somewhat moot. This is not to deny the rhetorical manipulation Caesar applies to his other two geographies, too.

*Gallia est omnis constructa:*  
*Caesar's Imperialist Survey of a "Disputed" Territory*

When Caesar left Rome in the spring of 58 to assume his proconsular responsibilities, he did not leave for “Gaul,” for “Gaul” did not exist—other than, perhaps, in his mind.<sup>7</sup> To the Greeks, who had trained their eyes on the east much more than the west (a region encumbered with “darkness,” see below, p. 110), two vague and blurry “territories” formed the north: the Κελτική in the west, extending far across the Rhine (Diod. 5.25; Dion. Hal. 14.1; Plut. *Mar.* 11) and thus into the territory Caesar would style *Germania*, and the Σκυθική to the east.<sup>8</sup> And while there was also the view that the western sphere, the Κελτική, was inhabited by the Γαλάται father to the north and the Κέλτοι to the south,<sup>9</sup> it remains questionable whether Caesar’s three Gallic groups (the *Belgae*, *Galli*, and *Aquitani*), let alone his territorial boundaries, had Greek precedent.<sup>10</sup> To the Romans, on the other hand, *Gallia* signified, first and foremost, the two provinces, *Gallia cisalpina*, basically northern Italy, and *Gallia transalpina*, a stretch of land along the southern coastline of France (Kraner et al. 1961 ad *BG* 1.2.3). They also knew of Gallic tribes farther north, either through war, as when they faced the Arvernians in 121 BCE, or through commerce, and those yonder regions were sometimes called

<sup>7</sup> It has been much debated whether Caesar set out intending to conquer *Gallia omnis* or gradually developed such plan; see, e.g., Walser 1998. Dobesch 2001 has made the most comprehensive case for Caesar’s sensational reorganization of the north; unfortunately, he engages in much speculation.

<sup>8</sup> For a survey of “Greek geography of the western barbarians,” see, despite minor inaccuracies, Keyser 2011, 37–70. For further instances of Κελτική beyond the Rhine, see Norden 1920, 101–2, and on Caesar’s “invention” of the Rhine as a borderline, esp. Lund 1998. Duval 1989, 710–13, surveys instances of Κελτική and Γαλατία, without, however, always specifying the territory (most likely) associated with either term.

<sup>9</sup> Diod. Sic. 5.32.1: τοὺς γὰρ ὑπὲρ Μασσαλίας κατοικοῦντας . . . Κελτοὺς ὀνομάζουσι, τοὺς δ’ ὑπὲρ ταύτης τῆς Κελτικῆς εἰς τὰ πρὸς ἄρκτον νεύοντα μέρη . . . μέχρι τῆς Σκυθίας Γαλάτας προσαγορεύουσιν: οἱ δὲ Ῥωμαῖοι πάλιν πάντα ταῦτα τὰ ἔθνη συλλήβδην μιᾷ προσηγορίᾳ περιλαμβάνουσιν, ὀνομάζοντες Γαλάτας ἅπαντας. On whether this might be Posidonian, see Malitz 1983, 197; but see also n. 10 below.

<sup>10</sup> The various attempts to trace the tripartite Gaul set out by Strabo at the beginning of book IV (οἱ μὲν δὴ τριχῆ διήρουν, Ἀκυτανοὺς καὶ Βέλγας καλοῦντες καὶ Κέλτας . . .) past Caesar to Posidonius, among which Hering 1954/5 stands out, have ultimately failed to convince (for critical remarks, see Dirkzwager 1975, 5–13). It does not matter much to my argument; but perhaps more than anything, these attempts may exemplify the Pan-Posidonianism pandemic in the first, then discredited in the second half of the twentieth century (cf. Hering 1970).

*Gallia comata*.<sup>11</sup> But there is no indication that any notion of that territory was other than vague, as Caesar's emphatically authoritative *Gallia est omnis* alone would seem to confirm. Lastly, as far as the *Galli* themselves are concerned, given epigraphic and other material evidence, not to mention Caesar's own remark on how the three major ethnic groups differed in everything (see below, pp. 97–8), their knowing of *Gallia omnis* may safely be excluded.<sup>12</sup>

Thus, as far as we can tell, not before Caesar was there *Gallia* as set out in *BG* 1.1.<sup>13</sup> But if, as Caesar himself admits (1.1.2), it lacked foundation in the Gallic societies, the question arises why and how he construed and named *Gallia omnis* the way he did.

Gallia est omnis divisa in partes tres, quarum unam incolunt Belgae, aliam Aquitani, tertiam qui ipsorum lingua Celtae, nostra Galli appellantur. (2) Hi omnes lingua, institutis, legibus inter se differunt. Gallos ab Aquitanis Garumna flumen, a Belgis Matrona et Sequana dividit. (3) Horum omnium fortissimi sunt Belgae, propterea quod a cultu atque humanitate provinciae longissime absunt, minimeque ad eos mercatores saepe commeant atque ea quae ad effeminandos animos pertinent important, (4) proximique sunt Germanis, qui trans Rhenum incolunt, quibuscum continenter bellum gerunt. Qua de causa Helvetii quoque reliquos Gallos virtute praecedunt, quod fere cotidianis proeliis cum Germanis contendunt, cum aut suis finibus eos prohibent aut ipsi in eorum finibus bellum gerunt. (5) Eorum una pars, quam Gallos obtinere dictum est, initium capit a flumine Rhodano, continetur Garumna flumine, Oceano, finibus Belgarum, attingit etiam ab Sequanis et Helvetiis flumen Rhenum, vergit ad septentriones. (6) Belgae ab extremis Galliae finibus oriuntur, pertinent ad inferiorem partem fluminis Rheni, spectant in septentrionem et orientem solem. (7) Aquitania a Garumna flumine ad Pyrenaeos montes et eam partem Oceani quae est ad Hispaniam pertinet; spectat inter occasum solis et septentriones.

Gaul is, as a whole, divided into three parts, whereof the *Belgae* inhabit one, the *Aquitani* another, and the people called *Celtae* in their own language, but *Galli* in ours, the third. They all differ one from the other in language,

<sup>11</sup>Cat. 29.3, Cic. *Phil.* 8.27, *CIL* XI (add.) 7553; cf. Hirt. 8.24.3. Hering 1954/5, 310, suggests that we may infer from these instances that the nomenclature was "auch für die caesarische Zeit . . . gebräuchlich." Cicero would, after Caesar's conquest, also refer to the new territories as *Gallia ultima* (*ibid.* 311).

<sup>12</sup>Wellesley's humorous emendation (1989), that Caesar wrote *in partes iv*, founders in the light of 1.1.5–7 and Pliny *HN* 4.42 (quoted below, p. 102).

<sup>13</sup>I have discussed elsewhere (2006, 114–5) that Cicero in 56 (*prov. cons.*) adopted Caesar's concept of *Gallia omnis*.

institutions, and laws. The Gauls are separated from the *Aquitani* by the river Garonne, from the *Belgae* by the Marne and the Seine. Of all these peoples the *Belgae* are the most courageous, because they are farthest removed from the lifestyle and civilization of the Province, and merchants and their goods that cause effeminacy reach them very rarely; and also because they are nearest to the Germanic tribes who dwell beyond the Rhine and with whom they wage war constantly. For this reason the *Helvetii* also excel in valor over the other Gauls, because they struggle in almost daily fights with the Germanic tribes, when they either ward them off from Gallic territory or wage war in Germanic territory. The one part of the country which, as has been stated, the Gauls occupy, starts from the river Rhone, and is bounded by the river Garonne, the Ocean, and the territory of the *Belgae*; moreover, on the side of the *Sequani* and the *Helvetii*, it touches the Rhine river; its general trend is northward. The *Belgae*, beginning from the edge of the Gallic territory, reach to the lower part of the Rhine river, bearing towards the north and east. *Aquitania*, starting from the Garonne river, reaches the Pyrenees and that part of the Ocean which is by Spain: its bearing is between west and north.<sup>14</sup>

Rawson felt that this introduction of “the geography of Gaul from scratch” could have benefitted from “a simple map with the main rivers . . . , but there is no sign that [there] was [such a map].”<sup>15</sup> She thus voices the difficulty most readers experience in visualizing this written and disjointed map wherein peoples and territories form an indissoluble union. Gaul is defined by the three peoples that inhabit it; a quick remark on their differences is followed by mentions of the rivers that naturally separate them, which then leads to a cultural geography wherein the *Belgae* are the bravest, beyond the reach of traders, as they are, and their softening goods, and near the *Germani*, with whom the *Helvetii*, too, share a borderline. Caesar only then, in a third part, details the borderlines for the three peoples and their relative orientations. Thus the geography of Gaul contains as many parts as its object.

Closer inspection of *Gallia omnis* in comparison with Strabo’s first geography of ἡ Κελτική<sup>16</sup> as well as Caesar’s own geography of *Britan-*

<sup>14</sup>Note: For the three longer passages from Caesar and Diodorus Siculus I have used the translations by Edwards and Oldfather in the Loeb series, with occasional modifications.

<sup>15</sup>Rawson 1985, 260. The so-called Roman map of Gaul allegedly found in 1976 in a Roman camp in Mauchamp, perhaps rashly accepted by Dilke 1987, 207, has rightly been doubted by Brodersen 2001, 21. Hänger 2001, 11–20 offers a circumspect discussion of the question what kind of maps the Romans used. Brodersen 1995 is most skeptical in his assessment of Roman maps, but few have agreed with him.

<sup>16</sup>μετὰ δὲ ταύτην (sc. τὴν Ἰβηρίαν) ἐστὶν ἡ Κελτική πρὸς ἑω μέχρι ποταμοῦ Ῥήνου, τὸ μὲν βόρειον πλευρὸν τῷ Βρεττανικῷ κλυζομένη πορθμῷ παντί· ἀντιπαρῆκει γὰρ αὐτῇ παράλληλος ἡ

*nia* reveals the lack of any mathematical information on the σχῆμα και μέγεθος (“size and form,” Strabo 4.1.1, slightly mod.): Gaul is not likened to any shape or form; there are no absolute (but rather relative) distances or any other numbers; nor is the space viewed in the abstract but as inhabited; the borderlines, finally, the rivers, mountains, and the ocean, are all *natural* features of the landscape. Caesar could have presented a different kind of geography, as his subsequent remark on the size of the Helvetian territory intimates;<sup>17</sup> but he chose this ethno-geographical type, which is “descriptive” in defining the territory by, first and foremost, the people one encounters and, secondly, the natural “borderlines” one comes up against.<sup>18</sup> This may also be evinced in a linguistic detail: while in his definition of *Britannia*, as we will see, he speaks of its *latera* (see below, p. 103), here he repeatedly uses *finēs*.<sup>19</sup>

In consequence, even though *Gallia* appears to be seen from a bird’s eye view, it clearly reflects the way-based (“hodological”) experience of space;<sup>20</sup> and the mention of traders (and their limited range) is rather telling in this context. This perspective hardly surprises insofar as, first, it was the dominant form of spatial perception in antiquity, secondly, the Romans, in particular, took a predominantly practical, *viz.* military, commercial, administrative, interest in space; and, thirdly, and partly as an instantiation of this spatial perception, there existed written *itineraria* that specified marching distances from one location to another, noting rivers and mountains and such along the way.<sup>21</sup> The fourth-century military writer Vegetius would recommend that a general about to embark

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νήσος αὐτῆ πᾶσα πάση, μήκος ὅσον πεντακισχιλίους ἐπέχουσα· τὸ δ’ ἐωθινὸν τῷ Ῥήνῳ ποταμῷ περιγραφομένη, παράλληλον ἔχοντι τὸ ρεῦμα τῆ Πυρρήνη· τὸ δὲ νότιον τὸ μὲν ταῖς Ἄλπεσι τὸ ἀπὸ τοῦ Ῥήνου, τὸ δ’ αὐτῆ τῆ καθ’ ἡμᾶς θαλάττῃ, καθ’ ὃ χωρίον ὁ καλούμενος Γαλατικὸς κόλπος ἀναχεῖται . . . ἀντίκειται δὲ τῷ κόλπῳ τούτῳ κατ’ ἀποστροφὴν ἕτερος κόλπος ὁμωνύμως αὐτῷ καλούμενος Γαλατικὸς, βλέπων πρὸς τὰς ἄρκτους καὶ τὴν Βρεττανικὴν· ἐνταῦθα δὲ καὶ στενότατον λαμβάνει τὸ πλάτος ἡ Κελτικῆ· συνάγεται γὰρ εἰς ἰσθμὸν ἐλαττόνων μὲν ἢ τρισχιλίων σταδίων, πλειόνων δ’ ἢ δισχιλίων. μεταξὺ δὲ ἐστὶ ῥάχις ὄρεινῃ πρὸς ὄρθας τῆ Πυρρήνη, τὸ καλούμενον Κέμμενον ὄρος· τελευτᾷ δὲ τοῦτο εἰς μεσαίτατα τὰ Κελτῶν πεδία. τῶν δὲ Ἄλπεων, . . . (2.5.28).

<sup>17</sup> *Helvetii . . . angustos se fines habere arbitrabantur, qui in longitudinem milia passuum CCXL, in latitudinem CLXXX patebant* (BG 1.2.6). There is, of course, ironic intent, too, in the contrast between *angustos . . . fines* and the actual size.

<sup>18</sup> More detailed definitions of “descriptive” and “scientific” geography will be given below, p. 103.

<sup>19</sup> A semantic differentiation Strabo upholds as well, as Hering 1954/5, 298, n. 92 suggests; cf. n. 19.

<sup>20</sup> For discussion of the hodological perception of space, see Janni 1984.

<sup>21</sup> Sherk 1974 surveys the evidence of exploration in tandem with campaigning. On *itineraria*, see Salway 2007.



on a campaign have such *itineraria* “written out in the fullest detail.”<sup>22</sup> There is no reason to doubt that Caesar did just that in the first century BCE (merchants would have been among his first and foremost sources, see below), even though the only roughly contemporary *itinerarium* of sorts to come down to us is the so-called Polla elogium.<sup>23</sup> And if the Artemidorus fragment is representative, he might also have had access to rudimentary maps of the northwestern territories that noted rivers, settlements, and, possibly, thoroughfares.<sup>24</sup>

Roads and borders were the technical business of the *agrimensores* (also known as *gromatici* and, simply, *mensores*), who played such a central role in Roman life that Plautus could use their technical language to comic effect and Catullus, in his *Acme Septimius, suos amores, tenens* (“Septimius, holding Acme, his love,” Cat. 45), could expect his readers to see how “Priapus assumes the role of a surveyor.”<sup>25</sup> They measured out and partitioned territories (often in the context of new land allocations), oriented and projected roads, and drew up camps and forts, temporary and permanent, around the intersection of the *kardo* and the *decumanus*.<sup>26</sup> We have a fairly good understanding of their functions, techniques, and forms of spatial perception because of a disparate collection of texts, known as the *corpus agrimensorum*.<sup>27</sup> Caesar, during his many campaigns, would have had ample opportunity to observe and study the work of the *agrimensores*, but perhaps never more so than when he himself served as curator of the *Via Appia*; there is, in fact, no reason

<sup>22</sup>Veg. *Mil.* 3.6: *primum itineraria omnium regionum, in quibus bellum geritur, plenissime debet habere perscripta, ita ut locorum interualla non solum passuum numero sed etiam viarum qualitate perdiscat, compendia deverticula montes flumina ad fidem descripta consideret, usque eo, ut sollertiores duces itineraria provinciarum, in quibus necessitas gerebatur, non tantum adnotata sed etiam picta habuisse firmentur, ut non solum consilio mentis verum aspectu oculorum viam profecturus eligeret.* On the Romans’ practical interest in space, see Kolb 2015.

<sup>23</sup>CIL F. 638 = ILLRP 454 = Inscr. It. III 1, 272. For discussion, see Salway 2007, 190–92.

<sup>24</sup>It has often been remarked, however, that Caesar nowhere mentions maps (and he is not an exception). The extant fragment covers Spain only; but there is no real reason to doubt that other parts of Europe were mapped. Talbert 2009, in a careful evaluation of the evidence, doubts whether a set of lines on the fragmentary map may be read as thoroughfares. Schiano 2010 offers a discussion of Artemidorus in context.

<sup>25</sup>Plaut. *Poen.* 46–9: *ad argumentum nunc vicissatim volo / remigrare, ut aequae mecum sitis gnarures. / eius nunc regiones, limites, confinia / determinabo: ei rei ego finitor factus sum.* He continues the allegory soon after. Cairns 2005, 537–40 (quotation: 540). Cf. Dilke 1971, 31–7, and, on the following, Campbell 2000, xlvi.

<sup>26</sup>For PS-Hyginus *De mun. cast.*, see Lenoir 1979.

<sup>27</sup>I will be quoting from Campbell’s splendid 2000 edition.

to doubt that Caesar—or other members of the Roman “political elite” more generally—took an interest in technical questions and their solutions.<sup>28</sup> This is, in this particular case, rendered even more likely given that a late source suggests that Caesar deserves credit for an (unfortunately undetermined) contribution to the profession.<sup>29</sup> It comes as little surprise, then, that Caesar’s presentation of space in the *commentarii* in general has been found to share conceptual aspects with the spatial perception of the *agrimensor*.<sup>30</sup>

With regard to Caesar’s geography of *Gallia*, three aspects seem of particular relevance. Firstly, both the *agrimensores* and Caesar, as Riggsby 2006, 32, observes, “tend to emphasize physical (esp. natural) features around the edge of each area, and both tend to minimize the physical features within each area.” There is, indeed, frequent mention of rivers and mountain ranges as borderlines in the corpus: *ex colliculo qui appellatur ille, ad flumen illud, et per flumen illud ad rivum illum, aut viam illam, et per viam illam ad infima montis illius, . . .* (“from the small hill called such and such, to such and such a river, and along that river to such and such a stream or such and such a road, and along that road to the lower slopes of such and such a mountain . . .,” Hyginus 1.78.25–7).<sup>31</sup> Caesar’s geography of Gaul shares these features: the territorial borders of *Gallia omnis* are either rivers or mountains or the ocean, as are the borders between the three peoples, whereas the territories themselves lack any further internal features.

<sup>28</sup> ὁδοῦ τῆς Ἀππίας ἀποδειχθεὶς ἐπιμελητῆς (sc. Caesar): Plut. *Caes.* 5.9. One might, in this context, also think of Caesar’s agrarian laws. For Caesar’s interest in technical questions as evinced, in particular, in his *commentarii*, see Krebs (forthcoming b). For a more accommodating view of Roman power and technology, see Cuomo 2000 and 2002, 201.

<sup>29</sup> *Nunc ad epistolam Iulii Caesaris veniamus, quod ad huius artis originem pertinet, ut nec ipsius auctoris gloria pereat et nobis plenissime rei veritas ad notitiam veniat. quisquis ille tamen hanc epistolam studiose legere voluerit, quibusdam compendiis intro ductus lucidius maiorum dicta in brevi percipiet. Diuus Iulius Caesar, vir acerrimus et multarum gentium dominator, . . . postquam hostilem terram obtinuit, deletis hostium civitatibus denuo novas urbes constituit, dato iterum coloniae nomine cives ampliavit* (Ps. Boeth. *grom.* (Blume 1848 395.15–396.3)).

<sup>30</sup> Rambaud 1974, 127–9, suggests that the grid of *kardo* and *decumanus* is fundamental to Caesar’s presentation of the battle for Alesia; and Riggsby 2006, 33–45, argues that Caesar’s “tactical” space shares fundamental features with the space as viewed by the land surveyor. Generally on “das Raumbild der Feldmesser,” see Hänger 2001, 21–63.

<sup>31</sup> Cf. Sic. Flac. 130.23–6: *Territoria inter civitates, id est inter municipia et colonias et praefecturas, alia fluminibus finiuntur, alia summis montium iugis ac divergiis aquarum, alia etiam lapidibus positis praesignibus, qui a privatorum terminorum forma differunt.*

Secondly, the surveyors had an ontology of space that differentiated between three basic types: *agrorum qualitates sunt tres: una agri divisi et adsignati, altera mensura per extremitatem comprehensi, tertia arcifini, qui nulla mensura continetur* (“There are three types of land: firstly, land that has been divided and allocated; secondly, land that has been contained in a survey throughout its extent; thirdly, land of “uncertain” boundary, which is not contained in any survey,” Front. *Agr. qual.* 2.3–4). It is the last-mentioned category wherein natural borders play a particularly determinative role, as, in the absence of proper mathematical comprehension, the *ager arcifinius* is considered, “to be bounded by rivers, ditches, mountains, roads, trees previously planted, watersheds. . . .”<sup>32</sup> Given the absence of absolute numbers in Caesar’s *Gallia* and the emphasis on these “traditional” borderlines, the geography would seem to intimate that the territory is such an *ager arcifinius*.

Such territories, and this is going to be my third point, are not necessarily unoccupied; quite the contrary. But for such *agri occupatorii* (“lands occupied by squatting,” as they are then sometimes called), there exist “no bronze record, no map of these lands which could provide any officially recognized proof for landholders. . . .”<sup>33</sup> In other words, ownership thereof is disputable. In the instance of *Gallia*, Caesar goes to quite some length to dissociate the territory, *Gallia omnis*, from its three occupants, an apparent paradox Pliny would later comment on (*NH* 4.42), remarking that “all of *Gallia comata* is actually divided into three nations, even though it is called by one name only” (*Gallia omnis comata uno nomine appellata in tria populorum genera dividitur*). Who, then, owns *Gallia omnis*? The natural answer, the *Galli*, is complicated by two facts: They are only one of the three occupants; and, as Caesar emphasizes just for them but not the other two groups, it is *only* the Romans who call them “Galli,” whereas they call themselves “Celtae.” And it is not the Gauls but Caesar who, by synecdoche, names the space that he presents as naturally defined after the Roman name of its largest occupant, who awaits proper integration into and taxation by the Roman empire.

In sum, *Gallia omnis* is seen through the imperial eye of the Roman land surveyor. It is ready for the taking.

<sup>32</sup> *Finitur secundum antiquam observationem fluminibus, fossis, montibus, viis, arboribus ante missis, aquarum divergiis* (Front. *Agr. qual.* 2.18–20).

<sup>33</sup> *horum ergo agrorum nullum <est> aes, nulla forma, quae publicae fidei possessoribus testimonium reddat, . . .* (Sic. Flac. 102.9–10).

*In Bed with the Sun: Caesar's Geography of Britain*

Caesar's geography of Britain as delineated in book 5 is markedly different from his Gallic geography: with its focus on geometrical shape (*insula . . . triquetra*), orientation on the compass (*vergit ad Hispaniam atque occidentem solem*),<sup>34</sup> and presentation of concrete figures for the lateral extensions as well as the circumference (*longitudo lateris . . . septingentorum milium, . . . est in circuitu*), it is "scientific" rather than "descriptive." With the help of Strabo, these two kinds of geography can be defined further: the "descriptive" kind, characterized by an interest in "the nature of the land and the species of animals and plants . . . and all that pertains to the sea" (τῆς χώρας τὴν φύσιν καὶ ζώων καὶ φυτῶν ιδέας . . . καὶ τὰ τῆς θαλάττης, 1.8.16) and viewing the world primarily through the eyes of the traveling explorer, mixes with ethnography, natural history, and history; the "scientific" geography, meanwhile, preferring the view from a distance, abstracting from the particular, and measuring "shapes, sizes, distances, and 'zones'" (σχήματα καὶ μεγέθη καὶ ἀποστήματα καὶ κλίματα), rests on "astronomy and geometry" (τῶν οὐρανίων καὶ γεωμετρίας, 1.7.13).<sup>35</sup> Among practitioners of the latter, Hipparchus of Nicaea, especially in arguing *Against the "Geography" of Eratosthenes*, insisted that celestial observation alone, not the fluctuating measurement of days spent sailing or marching, allowed for the accurate calculation of lengths, distances, and, particularly, latitude.<sup>36</sup> As will appear shortly, the work of Greek geographers can be discerned in *BG* 4, thoroughly informs Caesar's geography of Britain in *BG* 5, and helps to illuminate one particular puzzling detail.

Caesar set sail for Britain in 55 BCE, somewhat suddenly and too late in the summer for proper campaigning. And even though he asserts that the island's military support of Gaul's resistance to Rome's rule necessitated intervention, "[t]here is something rather mysterious about this first invasion," as C. E. Stevens remarked; the threat of recall from

<sup>34</sup>This information was provided for the various parts of *Gallia* as well.

<sup>35</sup>For further discussion of the difference between "descriptive" and "scientific" geography, which Ptolemy (Geogr. 1.1.1) will designate *χωρογραφία* and *γεωγραφία* respectively, see Strabo 1.7.12–8.17; Nicolet 1991, 57–84, esp. 58–66; Hänger 2001, 117–21. A variation of this distinction can be found within the rhetorical tradition, wherein praise of a country was "either according to nature or according to position" (ἢ κατὰ φύσιν ἢ κατὰ θέσιν, Men. Rhet. 344.17).

<sup>36</sup>Dicks 1960, 18–36, offers a summation of Hipparchus' contributions to the field of geography; Neugebauer 1975, 274–345, offers a comprehensive appreciation. See below, p. 111.

*Gallia pacata* may indeed have forced Caesar's hand.<sup>37</sup> Reconnaissance was of the essence (cf. 4.21.1 *ad haec cognoscenda*), but more so than usual insofar as no one, not even traders, seemed to know the first thing about the "localities, harbors, landing-places" (*loca, portus, aditus*, 4.20.2) or "the size of the island" (*quanta esset insulae magnitudo*, 4.20.4).<sup>38</sup> By having his readers participate in the failed information gathering, Caesar dramatizes the geography of Britain as beyond the pale "and," as Vergil would phrase it, "of the Britons [as] fully separate from the entire world" (*et penitus toto divisos orbe Britannos*, *Ec.* 1.66). Whatever else his motivation, he must have known that, by sailing for the island, he would conquer Roman minds (if not British lands).<sup>39</sup>

Caesar dispatched Volusenus on an exploratory periplus of sorts, which, after a four-day sail (4.21.9), brought intelligence that was to come in quite handy, given that Caesar, his first attempt at landing having failed, knew of an open shore 6-and-a-half miles farther up (4.23.3–5). Upon arrival, he spent three weeks in the southeastern region around Kent to little military purpose, not least because he lost most of his 80 vessels to a spring tide that occurred "when the moon was full; that is the day which usually produces the highest tides in the Ocean. This was unknown to our men" (*accidit ut esset luna plena, qui dies maritimos aestus maximos in Oceano efficere consuevit, nostrisque id erat incognitum*, *BG* 4.29.1). The

<sup>37</sup> *BG* 4.20.1. Caesar mentions British involvement once only: 3.9.10 *auxilia ex Britannia, quae contra eas regiones posita est, arcessunt* (sc. Veneti); but 2.4, 2.14, and 6.13.11 suggest closer ties as well (as does the numismatic evidence: Kent 1978). There was the economical motive too, as Cicero's disappointed expectation (*Att.* 4.176) reveals; this motive would seem even weightier, if Mitchell 1983, 93–9 is right in arguing that Publius Crassus, stationed with Caesar, is the Crassus credited with discovering the long-sought access to the tin mines. Lastly, there is Stevens' argument that Britain was Caesar's "answer to the hostile maneuvers in Rome" (1947, 5), which has found favor.

<sup>38</sup> On Caesar's reputation for diligence in reconnaissance, which he himself goes to great length emphasizing, considering the more than forty instances of *explorare* (and derivatives) in the *commentarii* (Menge and Preuss 1972 s. vv.), see also Suet. *Iul.* 58.1. It does not surprise that Caesar singles out merchants: not only had there been vigorous trading, especially of tin (Mitchell 1983, esp. 87–90); but also, and as importantly, merchants traditionally enjoyed pride of place among sources of information for Greek (and then Roman) ethno-geographers. It may in this context also be relevant that Polybius reports of Scipio (Aemilianus, probably) inquiring about Britain with citizens of Massalia, Narbo, and Corbilo, only to learn "nothing worth mentioning" (οὐδὲν μνήμης ἄξιον, Polyb. 34.10.7 with Walbank 1979, 612).

<sup>39</sup> Plut. *Caes.* 23.3 mentions doubts about the very existence of the island at the time (which both Suet. *Iul.* 25.2 and App. *Celt.* fr. 1.5.13 may suggest too); but this seems hardly credible (cf. Pelling 2011, 256).

narrator here, remarking on the regularity of the phenomenon, contrasts his own learning to his “men’s” ignorance.

An interest in the nature of the tides can be traced back to the Homeric poems, but Pytheas seems to have been the first to tie it back to lunar activity: how “the fullness and faintness of the moon cause high tides and low tides respectively” (τῆ πληρώσει τῆς σελήνης τὰς πλημμύρας γίνεσθαι τῆ δὲ μειώσει τὰς ἀμπώτιδας, Ps.-Plut. *Epit.* 3.17.2).<sup>40</sup> He is also credited, by Pliny, with claiming that “above *Britannia* the tidal wave swells to a height of 80 cubits” (*octogenis cubitis supra Britanniam intumescere aestus Pytheas Massiliensis auctor est*, *NH* 2.217). Pytheas’ work, τὰ περὶ τοῦ ὠκεανοῦ, was (almost) certainly known to Caesar, as its author enjoyed a certain notoriety: among his most notable critics were Eratosthenes and Polybius, both demonstrably known to Caesar, and Strabo himself, who more than once calls him “the worst possible liar.”<sup>41</sup> This vilification bespeaks just how important Pytheas was to anyone interested in northern Europe; unsurprisingly, he will also figure as one of the major sources on the tides in Pliny’s *Natural History* (1.2). His “discovery” of the mysterious island of *ultima Thule* (*Verg. Georg.* 1.30) contributed to this notoriety.

But the tides had also more recently received the attention of Posidonius, who was the one to work out “a complete theory of diurnal, monthly and annual cycles,” to whom Strabo would defer as an authority on the matter, and who explicitly stated that “a new moon coincided with the highest tide” (μέγισται μὲν αἱ παλίρροιαί γίνονται περὶ τὰς συνόδους, *Fr.* 217, Strabo 3.5.8, Kidd 1988, 774). “More recently” requires some qualification, however, as, unfortunately, the precise provenance of the fragment is not certain; nor is its date. It is certainly tempting, however, to read Caesar’s rather specific remark on the highest tide as owed to Posidonius. But whether or not Caesar had received his information from Posidonius, Pytheas, or someone else such as Seleucus, or someone entirely unknown to us, he had clearly read up on the subject.<sup>42</sup>

Since the men on the ground, however, and presumably including their general, were incognizant, there was little for Caesar to do but hurry

<sup>40</sup> Roller 2015, 21f. For the difficulties with the remark on fullness and faintness of the moon, see Roseman 1994, 102–4.

<sup>41</sup> The title: Geminus 6.9. Eratosth. *Fr.* 14 (Strabo 2.4.2 τὸν δ’ Ἐρατοσθένη διαπορήσαντα εἰ χρὴ πιστεῦναι τούτοις); see Roller 2010, 18, on Pytheas’ (likely) significance. Polyb. 34.5.7 πῶς ἰδιώτῃ ἀνθρώπῳ καὶ πένητι τὰ τοσαῦτα διαστήματα πλωτὰ καὶ πορευτὰ γένοιτο. Strabo 1.4.3 Πυθέας ἀνὴρ ψευδίστατος. On Caes. and Erat. cf. *BG* 6.24.2, quoted above, n. 5, and on Caes. and Polybius, Grillo 2016.

<sup>42</sup> Caesar finds further occasion to remark on the tides: *BG* 3.12.1, 13.1, 5.1.2, 6.31.3.

back to the continent, all the warier because of the “approaching autumnal equinox” (*propinqua die aequinocti*, *BG* 4.36.2), commonly accepted as the starting date of the storm-fraught season (cf. *Cat.* 46.1 *caeli furor aequinoctialis*, “the furor of the equinoctial skies”). Thus ended the first expedition, to little avail but great acclaim: The senate voted Caesar an unprecedented *supplicatio* of 20 days (*BG* 4.38.5.), a clear expression of Roman excitement about the exploration of new territory.

Caesar returned to Britain the following year for a proper campaign. It is only then that he provides his readers with the ethno-geographic digression (the earliest extant of its kind). It handily provides answers to some of the questions that Caesar had raised the year before regarding the island’s size, points of access, and distances. There is an information differential from one year to another that could be read as suggesting that Caesar’s reconnaissance had achieved its aims. However, much of the information in the digression (*BG* 5.13) can be traced back to Greek predecessors:

insula natura triquetra, cuius unum latus est contra Galliam. huius lateris alter angulus, qui est ad Cantium, quo fere omnes ex Gallia naves appellantur, ad orientem solem, inferior ad meridiem spectat. hoc pertinet circiter milia passuum quingenta. (2) alterum vergit ad Hispaniam atque occidentem solem; qua ex parte est Hibernia, dimidio minor, ut aestimatur, quam Britannia, sed pari spatio transmissus atque ex Gallia est in Britanniam. (3) in hoc medio cursu est insula, quae appellatur Mona: complures praeterea minores subiectae insulae existimantur, de quibus insulis nonnulli scripserunt dies continuos triginta sub bruma esse noctem. (4) nos nihil de eo percontationibus reperiebamus, nisi certis ex aqua mensuris breviores esse quam in continenti noctes videbamus. (5) huius est longitudo lateris, ut fert illorum opinio, septingentorum milium. (6) tertium est contra septentriones; cui parti nulla est obiecta terra, sed eius angulus lateris maxime ad Germaniam spectat. hoc milia passuum octingenta in longitudinem esse existimatur. (7) ita omnis insula est in circuitu vicies centum milium passuum.

The island is triangular in shape,<sup>43</sup> one side of which lies opposite Gaul. Of this side one angle, which is by Kent (where almost all the ships from Gaul come in to land), faces east; the lower angle south. This side stretches about five hundred miles. (2) The second side bears towards Spain and the west, in which direction lies Ireland, smaller by one half, as it is thought, than Britain; but the sea-passage is of equal length to that from Gaul to

<sup>43</sup> Cf. *TLL* 9.1.166.34–45 (Hajdú) on *natura* in the sense of *status vel forma naturalis, integra*, in particular *Sen. Nat.* 7.26.2 *cometarum natura . . . , ut ceterorum siderum, globus est*, and *Curt.* 6.4.19 *mare relabens terram naturae suae reddit*. This instance in Caesar is not listed.



Britain. (3) Here in mid-channel is an island called Mona;<sup>44</sup> in addition, several smaller islands are supposed to lie close to land, about which some have written that, in midwinter, night there lasts for thirty whole days. (4) We could discover nothing about this by inquiries; but, by exact water measurements, we observed that the nights were shorter than on the continent. (5) The length of this side, according to their belief,<sup>45</sup> is seven hundred miles. (6) The third side bears northwards, and has no land confronting it; the angle, however, of that side faces on the whole towards Germany. The side is supposed to be eight hundred miles long. (7) Thus the whole island is two thousand miles in circumference.

A comparison with Diodorus Siculus' slightly later geography of Britain (5.21.3–4),<sup>46</sup> more detailed than either Strabo's or Mela's and demonstrably derived from a source different from that used by Caesar (see below), will help to throw Caesar's Britain into relief:

αὕτη (sc. ἡ Πρεττανικῆ) γὰρ τῷ σχήματι τρίγωνος οὔσα παραπλησίως τῇ Σικελίᾳ τὰς πλευρὰς οὐκ ἰσοκώλους ἔχει. παρεκτεινούσης δ' αὐτῆς παρὰ τὴν Εὐρώπην λοξῆς, τὸ μὲν ἐλάχιστον ἀπὸ τῆς ἠπείρου διεστηκὸς ἀκρωτήριον, ὃ καλοῦσι Κάντιον, φασὶν ἀπέχειν ἀπὸ τῆς γῆς σταδίου ὡς ἑκατόν, καθ' ὃν τόπον ἡ θάλαττα ποιεῖται τὸν ἕκρον, τὸ δ' ἕτερον ἀκρωτήριον τὸ καλούμενον Βελέριον ἀπέχειν λέγεται τῆς ἠπείρου πλοῦν ἡμερῶν τεττάρων, τὸ δ' ὑπολειπόμενον ἀνήκειν μὲν ἰστοροῦσιν εἰς τὸ πέλαγος ὀνομάζεσθαι δ' Ὀρκαν. τῶν δὲ πλευρῶν τὴν μὲν ἐλάχιστην εἶναι σταδίων ἑπτακισχιλίων πεντακοσίων, παρήκουσαν παρὰ τὴν Εὐρώπην, τὴν δὲ δευτέραν τὴν ἀπὸ τοῦ πορθμοῦ πρὸς τὴν κορυφὴν ἀνήκουσαν σταδίων μυρίων πεντακισχιλίων, τὴν δὲ λοιπὴν σταδίων δισμυρίων, ὥστε τὴν πᾶσαν εἶναι τῆς νήσου περιφορὰν σταδίων τετρακισμυρίων δισχιλίων πεντακοσίων.

[Britain] is triangular in shape, much in the same way as Sicily, but its sides are not of equal length. It stretches obliquely along the coast of Europe; the point least distant from the continent is the promontory called Cantium,

<sup>44</sup> See below, n. 56.

<sup>45</sup> "ille," often in Caesar, *pertinet ad ea, quae antecedunt*, and particularly, (1) *ad membrum proxime antecedentis enuntiati*, as Menge and Preuss put it (1972, 572, whose own classification of this instance, however, under *in universum ad ea, quae ante commemorata sunt* . . . (2) *de quibuslibet hominibus et rebus* baffles me). Since "some writers" have just been mentioned, they are the most likely referent of *illorum*, as Kraner-Dittenberger-Meusel 1961 *ad loc.* observe. Edwards 1917 in the Loeb series, however, renders it as "according to the belief of the natives." Not impossible, but implausible.

<sup>46</sup> As the mention of Caesar reveals (5.21.2): καθ' ἡμᾶς δὲ Γάιος Καῖσαρ ὁ διὰ τὰς πράξεις ἐπονομασθεὶς θεὸς πρῶτος τῶν μνημονευομένων ἐχειρώσατο τὴν νῆσον. . . . "Diodorus' main account of Britain came in connection with Caesar's campaigns, and is unfortunately lost," as Rawson 1985, 255, reminds us.



which, we are told, is about one hundred stades from the land, and the place whereby the (North) sea has its outlet (into the ocean). The second promontory, meanwhile, known as Belerium, is said to be a four-days sail from the continent; the last one, our sources say, extends into the open sea and is named Orca. (They also specify that) of the sides, the shortest, extending along Europe, is seven thousand five hundred stades long; the second side, stretching from the Strait to the (northern) tip, is fifteen thousand stades long, and the last twenty thousand stades. Thus, the entire circumference of the island is forty-two thousand five hundred stades.

It is a traditional feature of classical geography to delineate the shape of a country and compare it to familiar objects: in the build-up to the Sicilian expedition, the Island's triangular shape was so familiar to Athenians that they drew maps of it in the sand, harbors, orientation, and all, to discuss strategy.<sup>47</sup> Caesar complies, likening Britain to a triangle, just as Diodorus' source had done (and Strabo and Pomponius Mela would do).<sup>48</sup> To orientate a land on the compass and with regards to other lands was a standard feature, too (Thomas 1982, 3, for references): Caesar begins, unsurprisingly, with the side facing "his" territory, *Gallia*, which he positions to the island's south(east), goes on to position Britain in its western direction opposite not just Ireland but also Spain (a common misconception: Kraus in Woodman 2014, 131), and, lastly, asserts how the northern coast faces but vastness. Diodorus's source, on the other hand, relates the island to Europe rather than Γαλατία (Casevitz and Jacquemin 2015, 174), provides the names of not just one promontory but all three, makes no mention of Ireland at all, but agrees with Caesar regarding the open sea to the north. While Diodorus may have consulted Caesar, he certainly did not rely on him for geographical information in this passage.

This impression is confirmed by the divergent specifications of lengths, which were also a traditional feature (cf. Strabo 2.1.30). The figures Caesar presents are 500, 700, and 800 Roman miles, respectively, whereof only the latter two are qualified by a reference to a source (*illorum*

<sup>47</sup>Plut. *Nic.* 12.1; cf. *Alc.* 17.3. Strabo 2.1.30: . . . σχῆμα δ', ἂν τῶν γεωμετρικῶν τινὶ σχημάτων εἰκάσης, ὡς τὴν Σικελίαν τριγώνῳ, ἢ τῶν ἄλλων γνωρίμων τινὶ σχημάτων, οἷον τὴν Ἰβηρίαν βύρρη, τὴν Πελοπόννησον πλατάνου φύλλῳ . . . Περὶ σχήματος: Trüdinger 1918, 21; cf. Diod. Sic. 5.21.3 and Strabo 4.5.1 (below, n. 52).

<sup>48</sup>On *triquetrus*, see Krebs 2013, 774. Diod. Sic. 5.21.3 (see above, p. 107), Strabo 4.5.1 ἢ δὲ Βρεττανικὴ τρίγωνος μὲν ἐστὶ τῷ σχήματι, Mela 3.41 *triquetra et Siciliae maxime similis*. It is interesting that all three compare Britain with regard to its shape to Sicily—so well known to the Greeks since, at least, the late fifth century. On Livy and Fabius Rusticus, see Kraus in Woodman 2014, 132–3. Cf. n. 57.

*opinio, existimatur*). This may bespeak greater confidence in the first figure or claim credit, even, for that measurement, as it is certainly possible that Caesar himself had a ship sail along and measure out the southern coastline.<sup>49</sup> Whatever the criteria underlying this hierarchy of information, all figures differ from those listed in Diodorus (7,500, 15,000, and 20,000 stades, respectively), no matter what conversion rate is employed between stades and miles. In consequence, first, the overall orientations of their respective islands vary, with Caesar's triangle pointing in a mostly northern, slightly western direction, and Diodorus' triangle pointing in a northeasterly direction.<sup>50</sup> Second, the total circumference reported by Diodorus (42,500 stades), while at odds with Caesar's, matches the one both Polybius and Pliny report of Pytheas.<sup>51</sup> If not just the circumference but also the trilateral figures recorded in Diodorus are ultimately from Pytheas (as seems likely), they would prove that the notion of Britain as triangular in shape could be traced back to the latter as well.<sup>52</sup> In any case, the triangular shape of Britain predates Caesar.

Caesar is also the earliest extant author to mention *Hibernia*, Ireland, said to be located to the west of *Britannia*, of half its size, and as distant from it as *Britannia* is from the continent. But once again he reveals that he is reporting others (*ut aestimatur*).<sup>53</sup> Furthermore, (comparative) sizes and distances greatly concerned the Greek geographers, as Strabo's summaries of the disagreements between Eratosthenes and Hipparchus show.<sup>54</sup> A further reason for Caesar to mention Ireland here may have

<sup>49</sup> See Geus 2013, 212, on days of journey as a unit of measure.

<sup>50</sup> There are helpful illustrations in Jones-Mattingly 1990, 18, whose assignment of Diodorus' geography to Eratosthenes does not, however, reflect the *communis opinio*. Should one be intrigued by the fact that Caesar's Britain is closest to the actual Britain?

<sup>51</sup> Polyb. 34.5.2 τὴν δὲ περίμετρον πλείωνων ἢ τεττάρων μυριάδων . . . τῆς νήσου. Pliny *NH* 4.102 *circuitu patere XXXXVIII: LXXV Pytheas et Isidorus tradunt*; 4875 Roman miles convert to about 40500 stades. On Pytheas' measurements, see Roseman 1994, on *Test.* 22 and *Frg.* 5, and, on how circumference seems to have been a standard feature in Greek history and geography, Geus 2013, 213.

<sup>52</sup> Mette 1952 includes this passage in *Diod. Sic.* in his collection of Pytheas' fragments; Roseman does not, even though, in her discussion, she seems to lean towards Pytheas as Diodorus' source (1994, 20); this applies to Bianchetti 1998, 60, 64–5, too.

<sup>53</sup> On Avienus' *ora maritima* and its sources, some of which possibly dating back to the fifth century BC and possibly containing an earlier reference to Ireland, see Freeman 2001, 28–33; on "Hibernia," *ibid.* 37–8. For the actual distances, see Radt 2006, on Strabo 199.28–30 and Freeman 2001, 38.

<sup>54</sup> Roller 2010, 31, provides a summary of the issue Hipparchus took with Eratosthenes. One may want to note that, somewhat uncharacteristically, Caesar himself specifies the distance from Portus Itius to Britain as 30 miles (*BG* 5.2.3).

been the fact that, within the Greek debate, it had received particular attention as the boundary of the inhabitable world (Strabo 2.5.8 ἐνταῦθα νομίζω τὸ πέρασ εἶναι θετέον); its distance from Britain in particular must have been a topic too, as Strabo states that “it is *no longer* well known” (τὸ δ’ ἐκείθεν ἐπὶ τὴν Ἰέρην οὐκέτι γνώριμον πόσον ἂν τις θείη, 2.5.8).<sup>55</sup> Caesar locates a smaller island of the name of Mona (possibly the Isle of Man) half way between Britain and Ireland,<sup>56</sup> and he speaks of other “smaller islands” mentioned in his sources, just as Strabo references those “who have seen both Britain and Ireland and who mention other small islands round Britain” (οἱ τὴν Βρετανικὴν καὶ Ἰέρην ἰδόντες . . . ἄλλας νήσους λέγοντες μικρὰς περὶ τὴν Βρετανικὴν, 1.4.3).

The seemingly perpetual darkness of winter, lasting up to six months, is a characteristic Greek and Roman authors commonly attribute to the north; it can be traced back to Herodotus and Homer.<sup>57</sup> The long days during the summer are similarly noted: Strabo (2.1.18) reveals that both Hipparchos and Pytheas took note of the hours, the latter even claiming that he had been shown the location where “the sun [lay] down to rest (ὄπου ὁ ἥλιος κοιμάται).”<sup>58</sup> To geographers, these durations mattered exceedingly, as the equinoctial hours in particular allowed for the determination of latitude and a place’s location on the world map.<sup>59</sup> Caesar reports what some had written in regard to this question but only to distance himself therefrom with a Herodotean move (cf. n. 57, esp. “ἔμοι μὲν,” “τοῦτο δὲ οὐκ ἐνδέκομαι”), as he was unable to verify those tall claims. The noun he uses to describe his inquiries merits attention: *percontatio* occurs once elsewhere in the *BG*, in reference to his soldiers’ “asking around.” In general, it signifies “interrogation,” often of a witness before

<sup>55</sup> However, soon after (as well as 1.4.4), he places Ireland about 4,000 stadia farther north (!), but without specifying the precise distance between the two islands.

<sup>56</sup> So will Ptolemy (*Geography* 2.1). But Tacitus (*Ag.* 14.3) uses the name in reference to the island of Anglesey (Kraus in Woodman 2014, *ad loc.*), as does, quite possibly, Pliny (*NH* 2.187, 4.103).

<sup>57</sup> Hdt. 4.25.1 μέχρι μὲν δὴ τούτων γινώσκεται, τὸ δὲ τῶν φαλακρῶν κατῦπερθε οὐδεὶς ἀτρεκέως οἶδε φράσαι. ὄρεα γὰρ ὑψηλὰ ἀποτάμνει ἄβατα καὶ οὐδεὶς σφεα ὑπερβαίνει. οἱ δὲ φαλακροὶ οὗτοι λέγουσι, ἔμοι μὲν οὐ πιστὰ λέγοντες, οἰκέειν τὰ ὄρεα αἰγίποδας ἄνδρας, ὑπερβάντι δὲ τούτους ἀνθρώπους ἄλλους οἱ τὴν ἐξάμηνον κατεύδουσι. τοῦτο δὲ οὐκ ἐνδέκομαι τὴν ἀρχὴν, ἀλλὰ . . . Hom. *Od.* 11.14–19 with the discussion (of the Cimmerians) in Heubeck, West, Hainsworth 1989, 77–9.

<sup>58</sup> Pytheas *Frg.* 7. Cf. Roseman 1994, 75–9, on Test. 18a.

<sup>59</sup> Dicks 1960, 41, lists other “methods then known for fixing the latitude of a place,” and van Brummelen 2009, 65, discusses the math involved in the “calculation of an observer’s terrestrial latitude,  $\varphi$ , from the length of the longest day of the year,  $M$ .”

a court.<sup>60</sup> It here strongly suggests that Caesar had made inquiries with inhabitants (just like Herodotus and the many Greek ethno-geographers after him). It also appears that Caesar clearly differentiates between (i) written sources (*non nulli scripserunt*),<sup>61</sup> (ii) information gathered by inquiry (*percontationibus reperiēbamus*), and, as will be discussed shortly, (iii) autopsy (*videbamus*). Not only are these the traditional “sources” within the ethno-geographical (and historical) discourse; but it also seems no coincidence that autopsy comes as the last and weightiest argument, as it was widely considered of the highest epistemological order.<sup>62</sup> One should also note that the clear specification of method is itself something Caesar shares with the ethno-geographic genre, as Posidonius’ presentation of his investigation of sunsets off Cadiz reveals (F217).<sup>63</sup>

Caesar also had the duration of the daylight measured with the help of a water clock, on the island as well as on the continent, as it is the comparison of the two sets of data that reveals the comparative shortness of northern nights.<sup>64</sup> Such a remark (let alone the effort) would seem in place in a geographical treatise rather than a digression within a *commentarius* (and it seems noteworthy that the other Roman discussions of the short and long summer and winter nights have no such specific remark); and the only reason to come to mind why Caesar would measure daylight hours is precisely a geographical one: to establish latitudes. In this context, Caesar’s noteworthy emphasis on precision—“exact measurements with the help of water” (*certis ex aqua mensuris*)<sup>65</sup>—might acquire further significance: for Hipparchus had not only insisted on astronomical calculations such as the determination of “the ratio of the longest day to the shortest” (ἡμέρας μεγίστης πρὸς τὴν βραχυτάτην λόγον, Hipparchus *frg.* 14 *apud* Strabo 2.1.11) in geographical matters; he had also repeatedly found

<sup>60</sup> Caes. *BG* 1.39.1. *ex percontatione nostrorum vocibusque Gallorum ac mercatorum, qui ingenti magnitudine corporum Germanos . . . esse praedicabant . . . tantus subito timor omnem exercitum occupavit.* Cf. *TLL* 10.1.1218.32–1219.19 (Hajdú).

<sup>61</sup> I find it most likely that all other references to a source—*ut aestimatur, existimantur, illorum opinio, existimatur*—refer to written sources too.

<sup>62</sup> On the various sources of information and their respective value, see Marincola 1997, 63–86, esp. 63–5, 83–5.

<sup>63</sup> Kidd 1988, 775, remarks, in concluding his discussion of the fragment, that “there is a careful distinction between autopsy, reported information, and derived theory.”

<sup>64</sup> Clepsydrae served the army to measure out the night watches, as Veg. *Mil.* 3.8 (with Milner 1997) specifies: *in quattuor partes ad clepsydram sunt divisae vigiliae.* Dicks 1953, 84–5, describes their functionality. I am grateful to James Ker for discussion *per litteras.*

<sup>65</sup> For the (common) instrumental use of *ex* see *TLL* 5.2.1111.52–1113.43, esp. 1111.84–1112.3 (Rehm).

fault with Eratosthenes (in particular) for lacking in accuracy.<sup>66</sup> Lastly, he himself had recorded equinoctial hours of daylight for territories he seemed to consider Celtic but Strabo deemed Britannic (Hipp. Frg. 61 *apud* Strabo 2.1.18), and he is recommended by Strabo to “anyone wishing to learn about these [regions] and all the other astronomical phenomena that Hipparchus speaks about” (ὁ δὲ βουλόμενος καὶ ταῦτα μαθεῖν καὶ ὅσα ἄλλα τῶν οὐρανίων”Ἱππάρχος μὲν εἶρηκεν . . . , frg. 62 *apud* Strabo 2.5.43). Thus Caesar’s passing remark on his accurate measurements shows him to be aware of the geographical debate and, more importantly, actively engaged in geographical research of his own.

Cornelius Nepos commented on Cato’s descriptions of the wondrous in Italy and Spain, saying that they showed “great industry but lacked learning” (*multa industria et diligentia . . . , nulla doctrina, Cat. 3.4*). Not so Caesar in his description of Britain in the *Bellum Gallicum*. Read against the more and less contemporary Greek geographical discourse, it reveals his thorough familiarity not just with the geographical *topoi* in general, but also with the questions pertaining to Britain in particular. Third, if the significance of the *certae mensurae* is the one just suggested, it would bespeak an awareness of the issue of accuracy in “mapping” the οἰκουμένη, partly acrimoniously debated and especially associated with the name of Hipparchus. Here, already, casuistry would seem required to explain how (and why) an alleged interpolator could command such knowledge. But how, other than with sheer brazenness, should one explain the casual reference to *nos* and the claim to have engaged in measurements?<sup>67</sup> Just as the straight line is the shortest distance between two points, so the straightest explanation of the *geographical* character of the digression would seem to be to accept Caesar as its author, who was well-read, on site, and quite possibly already thinking about the more ambitious endeavor to take the world’s measure; to which I will now turn.<sup>68</sup>

### *Cosmographia Iulii Caesaris: Taking the World’s Measure*

The persistence of the classical tradition is such that, as Jerzy Linderski phrased it, “classical elements are presumably still to be discovered in

<sup>66</sup> See, e.g., the corrections Hipparchus makes to Eratosthenes’ calculations in frgs. 30, 31 (*apud* Strabo 2.1.39).

<sup>67</sup> Cf. the noticeable puzzlement in Kraner et al. 1961 *ad loc.*

<sup>68</sup> Nicolet and Dalché 1986, 157, n. 2 put it well: “La volonté de refuser toute disposition scientifique aux Romains a été poussée jusqu’à la caricature par les éditeurs de César.”

many places . . . where nobody suspects their presence. . . ."<sup>69</sup> The late-antique mention of Caesar's project to measure the *οικουμένη* may be an (early) case in point.

Little is known of Julius Honorius, a teacher of rhetoric and grammar of the fourth and fifth centuries CE.<sup>70</sup> But, because of an insubordinate student of his, we know that he produced a geographical manual to facilitate his students' consultation of a partly illegible school map of the world. The said student decided to publish parts of it, now known as *excerpta*. They have reached us, in part, in one manuscript from the sixth century.<sup>71</sup> But there exist two further versions of Honorius' manual: the so-called *Cosmographia* (or: *cronica*) *Iulii Caesaris*, which survives in several manuscripts, the oldest also dating back to the sixth century. An augmented revision of Honorius' work upon a fresh consultation of the map, it mentions in its opening paragraph Caesar's geographical project (quoted in full below), which probably accounts for the title.<sup>72</sup> From this second version a third was composed, heavily interpolated and rhetorically elaborated. It circulated under various titles, partly because it became attached to a section of Orosius' *Historiae Adversum Paganos* (1.2). It has reached us in several manuscripts and is now often referred to as, simply, *Cosmographia* (but was long attributed to Aethicus). It also makes mention of Caesar's measuring the world, and it is further referred to by about half a dozen other documents, including two medieval maps.<sup>73</sup>

The project is described as follows:

(1) *Cosmographia Iulii Caesaris*

Iulio Caesare et Marco Antoni{n}o consulibus omnis orbis peragratus est per sapientissimos et electos viros quattuor: Nicodemo orientis, Didymo occidentalis, Theudoto septemtrionalis, Polyclito meridiani. (2) A consulibus supra scriptis usque in consulatum Augusti IIII et Crassi annis XXI mensibus

<sup>69</sup> Linderski 1964, 439; Wiseman 1987, 57 alerted me to him.

<sup>70</sup> I am here relying on Kubitschek's entry in *RE* X.2 (1919); still unrivalled in its detail.

<sup>71</sup> *Haec omnia in descriptione recta orthographiae transtulit publicae rei consulens Iulius Honorius magister peritius atque sine aliqua dubitatione doctissimus: illo nolente ac subterfugiente nostra parvitas protulit, divulgavit et publicae scientiae obtulit* (p. 55). The full title is *excerpta eius sphaerae vel continentia*. All quotations are taken from Riese's 1878 edition (= *GLM*, wherein this is A). I am following his reconstruction of the three versions.

<sup>72</sup> The *subscriptio* to the *codex Veronensis* says *Cosmographia Iulii Caesaris* (*GLM* 21), as, in slightly garbled fashion, does the *Parisinus* 4871 (*Cosmo. Graf. Iuli Caesaris*, to be precise: *GLM* 55). The incipits vary, some containing *cronica* (*GLM* 21).

<sup>73</sup> "L'histoire des quatre géomètres est assez abondamment mentionnée au Moyen Age." Nicolet and Dalché 1986, 164, who provide references.

quinque diebus novem oriens dimensa est. Et a consulibus supra scriptis usque in consulatum Augusti VII et Agrippae III annis XXVI mensibus III diebus XVII occidui pars dimensa est. A consulibus supra scriptis usque in consulatum Augusti X annis XXVIII mensibus VIII septemtrionalis pars dimensa est. A consulibus supra scriptis usque in consulatum Saturnini et Cinnae annis XXXII mense I diebus XX meridiana pars dimensa est. (*GLM* 21–2, 72)

Under the consulship of Iulius Caesar and Marc Antony the entire world was traversed (measured out) (cf. *TLL* 10.1.1184.10–13 (Schwind)) by four truly wise and chosen men: to Nicodemus fell the east, to Didymus the west, to Theudotus the north, and to Polyclitus the south.<sup>74</sup> (2) From the consuls mentioned above until the consulships of Augustus, for the fourth time, and Crassus, in the course of 21 years, five months, and nine days the east was measured out. And from the consuls mentioned above until the consulships of Augustus, for the seventh time, and Agrippa, for the third time, in the course of 26 years, three months, and 17 days the western part was measured out. From the consuls mentioned above until the consulship of Augustus, for the tenth time, in the course of 29 years and eight months the northern part was measured out. From the consuls mentioned above until the consulships of Saturninus and Cinna, in the course of 32 years, one month, and 20 days the southern part was measured out.

(2) *Cosmographia*:

Itaque Iulius Caesar bissextilis rationis inventor divinis humanisque rebus singulariter instructus cum consulatus sui fasces regeret, ex senatus consulto censuit omnem orbem iam Romani nominis admetiri per prudentissimos viros et omni philosophiae munere decoratos. Ergo a Iulio Caesare et M. Antonio consulibus orbis terrarum metiri coepit, id est: a consulatu supra scripto usque in consulatum Augusti tertium et Crassi annis XXI mensibus V diebus VIII a Nicodexo omnis oriens dimensus est, sicut inferius demonstratur. A consulatu item Iulii Caesaris et M. Antonii usque in consulatum Augusti septimum et Agrippae a Didymo occidui pars dimensa est annis numero XXXI mensibus III diebus XII, sicut aperietur stilo. A consulatu item Iulii Caesaris et M. Antonii usque in consulatum Augusti decimum annis XXVIII mensibus VIII diebus X a Theodoto septemtrionalis pars dimensa est, ut evidenter ostenditur. A consulatu similiter Iulii Caesaris usque in consulatum Saturnini et Cinnae a Polyclito meridiana pars dimensa est annis XXXII mense I diebus XX, sicut definita monstratur. Ac sic omnis orbis terrae intra annos XXXII a dimensoribus peragratus est, de omni eius continentia perlatum est ad senatum.

<sup>74</sup>I understand the names to be in the dative case, and the genitives to depend on *orbis* (“the world in its eastern part” etc.).



Thus Julius Caesar, the inventor of the intercalary system, singularly learned in all divine and human affairs, when he held his consulship, ordained by way of a decree of the senate, that the whole world already under Roman rule be measured out by men of great intelligence and learning in all aspects of philosophy. In consequence, starting from the consulship of Julius Caesar and M. Antony, the measuring of the world began, *viz.*: from the above mentioned consulship until the consulships of Augustus, for the third time, and Crassus, in the course of 21 years, five months, and nine days the whole east was measured out by Nicodoxus, as shown below. Again, from the consulship of Caesar and Antony until the consulships of Augustus, for the seventh time, and Agrippa, the western part was measured out by Didymus in the course of 31 years, three months, and 12 days, as the text will reveal. Again, from the consulship of Caesar and Antony until the consulship of Augustus, for the tenth time, in the course of 29 years and eight months and ten days the southern part was measured out by Theodotus, as is clearly shown. Likewise, from the consulship of Julius Caesar until the consulship of Saturninus and Cinna, the southern part was measured out by Polyclitus in the course of 32 years, one month, and 20 days, as described and shown. And in this way, the whole world was traversed by the surveyors in the course of 32 years; a report was sent to the senate about the whole content of it.

This notice has met with skepticism; unsurprisingly, one might feel, given that it is only here “found for the first time [and] in such a miserable compilation,” as E. H. Bunbury already put it in his wide-ranging *History of Ancient Geography*.<sup>75</sup> But he, just like Friedrich Ritschl before him and many others since, was also quick to point out that the information given was of “such circumstantial form as render[ed] it probable that it must have had some foundation.”<sup>76</sup> The “circumstantial form”—the proffered dates and durations, even though they do not tally (see below), as well as the names of the four Greek geographers—would seem hard indeed to explain as mere figments of the late-antique imagination; all the more so, if two of these said geographers can be identified, as Ritschl suggested for Didymus and Claude Nicolet, in a more recent discussion, for Theodotus.<sup>77</sup> These Greek geographers also render it somewhat unlikely

<sup>75</sup> Bunbury 1879, 693, whose remark pertains specifically to the third version.

<sup>76</sup> Ritschl 1842, 484: “und wir gestehen . . . nicht wohl zu begreifen, wie [die gegebenen Details] sollten ersonnen sein.”

<sup>77</sup> Ritschl 1842, 491, suggesting he might be identical with the author of a meteorological treatise (of, however, ultimately uncertain date). Nicolet and Dalché 1986, 177–8, proposing Theodorus might be identical with the mathematician Theodosius (of Bithynia).



that this report refers in a garbled fashion to Roman land surveying, an art the Romans had fully mastered in Caesar's time (see above, p. 110). Meanwhile, attempts to read this as a misdirected echo of Agrippa's efforts leading to his world map bespeak a reluctance to credit Caesar with such an endeavor, which appears less unlikely, however, when seen, "like the calendar, [as] representing an attempt by [him] to use Greek science in the service of the state," as Rawson observed.<sup>78</sup> There may, indeed, be a further and, as far as I can see, hitherto unnoticed reason to regard it just so.

The dates and durations reported of the four measurements do not tally, as has often been observed; there are also some (mostly minor) discrepancies between the two versions (Kubitschek 1919, 626–7). The end dates for the surveys of the east, west, north, and south are specified as (all BCE): 30 (*consulatum Augusti IIII* [the *Cosmographia* has, wrongly, *tertium*] *et Crassi*), 27 (*consulatum Augusti VII et Agrippae III* [both *Cosmographiae*, wrongly, omit the number entirely]), 24 (*consulatum Augusti X*), and (probably) 19 (*consulatum Saturnini et Cinnae*).<sup>79</sup> Given the project's stated starting date, 44, this yields calculated durations of 14, 17, 20, and 25 years, whereas the durations are specified as 21, 26 (not 31),<sup>80</sup> 28, and 32. Kubitschek considered the stated durations and (I assume) the specified consulships too precise to be discarded; he proposed that we accept the respective durations along with the individual end dates, an approach which, counting backwards, leads to the following, differing, starting dates: 52/1 (east), 54/3 (west), 53/2 (north), and 52/1 (south).<sup>81</sup> This suggests first, that the endeavor began at the same time as Caesar explored Britain and (in all likelihood) wrote about his geographical exploration; and, secondly, that it began in the same northwestern region.

<sup>78</sup> Rawson 1985, 113.

<sup>79</sup> There is no record of a consulship identified by these two names. For the (likely) identification of *Saturninus et Cinna* as *Saturninus et Lucretius*, see Kubitschek 1919, 626, and, in more detail, Nicolet and Dalché 1986, 169–71.

<sup>80</sup> *annis numero XXXI* (C) as opposed to *annis XXVI* (B) is certainly wrong. The durations are listed in order of length: 21, 26 (not 31), 29, 32. Even if this were not so, a corruption from XXVI to XXXI is easier to explain than from XXXI to XXVI. Neither Kubitschek 1919 nor Nicolet and Dalché 1986 seem to discuss this.

<sup>81</sup> Kubitschek 1919, 626: "so würde man für zwei Erdviertel zum J[ahr] 51 und für die beiden anderen zum J[ahr] 53 als Ausgangspunkt gelangen." Or, possibly, 52 and 54, respectively.

*Measure for Measure*

The geographies of *Gallia* and *Britannia* clearly vary in type. That variance results from their respective contexts: *Gallia omnis*, its natural confines surveyed with the imperialist's eye, its proprietary status established as indeterminate, is presented as a lived-in Roman province-to-be. The *insula natura triquetra*, on the other hand, its shape outlined, lateral lengths measured, and position confidently defined along latitudinal lines and with regard to the continent, Ireland, and other smaller islands, appears as though drawn by the hand of a cartographer. The context of the scientific geography of *Britannia* is not Caesar's *Galic Wars* but his larger endeavor to take the world's measure, which began with the north-western sphere and, quite possibly, around the time of the second British expedition.

If *Britannia* in *BG* 5 testifies to Caesar's larger cartographic project, it begs the question of what may have motivated its commission. It seems safe to say that "the world," especially with regard to its perceived inclusion by the Roman Empire, was a hot topic in the middle of the first century. Pompey, in the context of his celebrated triple triumph in 61, promulgated an inscription (possibly on his temple to Venus) listing his accomplishments wherein "the borders of the empire [were] confused with those of the *oikoumene*."<sup>82</sup> A few years later, in 55, he dedicated Rome's first stone theatre, built with revenues from the Third Mithridatic War; it included sculptural representations of fourteen far-flung conquered nations.<sup>83</sup> The world also, and even more ostentatiously, figured on a series of coins overseen by Faustus Sulla, Pompey's son-in-law; on one of them, the globe is presented as subject to Pompey's triumphs in Europe, Africa, and Asia (Nicolet and Dalché 1986, 37 with references). The *orbis terrarum* seemed to lie in Pompey's hand.

If Caesar's forays across the Rhine and the English Channel onto new western territories were partly motivated by his desire to rival Pompey's reaching the Euphrates and bridging the Araxes into fabled eastern territories, and if he envisioned the *Saepta Iulia*, begun a few months after Pompey's *theatrum*, "as an architectural counterpoint to the construction[s] of his rival," one may be forgiven the thought that a map

<sup>82</sup> Nicolet 1991, 32. His entire chapter "Symbolism and Allegories of the Conquest of the World: Pompey, Caesar, Augustus" provides much further evidence.

<sup>83</sup> Plin. *HN* 7.158; Plut. *Pomp.* 52.4; Plin. *HN* 36.41; Suet. *Ner.* 46. See further Richardson 1992, s.v.

of the world, one that accounted for the territories reached by Caesar, would have been of great symbolic value.<sup>84</sup>

Whatever its symbolic value, a “map” of the Roman Empire (and beyond) would be a natural fit not just with Caesar’s reformed calendar, as Rawson suggested, but also with the reformed Latin language, as advocated in his treatise *De Analogia* and by his own style. The three projects combined would have set the Roman Empire on a sound foundation with regard to its spatial, temporal, and linguistic complexity.<sup>85</sup> In any case, Roman geography, even at its most scientific, would ultimately be political still.<sup>86</sup>

STANFORD UNIVERSITY  
cbkrebs@stanford.edu

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<sup>84</sup> Appian, *Mith.* 103 along with Verg. *Aen.* 8.728. On Pompey’s and Caesar’s buildings: Jacobs and Conlin 2014, 11–3 (quotation: 12). Wiseman 1987, 56, speculates that the rectangular *saepa* was going to host the four parts of the world map. He could have adduced Theophrastus’ request that the Lower Stoa be embellished with panels depicting a περίοδος γῆς; Dilke 1985, 31.

<sup>85</sup> I will have more to say about these “pillars of empire” in Krebs (forthcoming a).

<sup>86</sup> Parts of this paper were presented to audiences in Boulder, Charlottesville, Boston, and Oxford; I am grateful for the invitations and the comments I received. I should also like to thank Christina Kraus, Andrew Johnston (both of Yale University), and James Ker (University of Pennsylvania) for helpful discussions of individual points; and Tony Woodman (University of Virginia), once again, for his inspiring comments on an earlier draft.

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