

Some Thoughts on Alexander's Battle at the Hydaspes, especially in relation to Xenophon, *Cyropaedia* 7.1

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Abstract: This paper addresses and resolves several connected problems in Arrian's account of the Battle of the Hydaspes: the role of the horse-archers; what happened to the chariots; Alexander's order to Coenus; and whether there was cavalry on the Macedonian left wing. In addition, it is argued that Arrian used Xenophon's fictional Battle of Thyambrara (*Cyropaedia* 7.1) as a model for his account of the Battle of the Hydaspes. Arrian shaped his narrative according to the Xenophontic model, and the parallel explains Arrian's puzzling organization and clarifies his account of the battle.

Keywords: Alexander the Great; ancient military history; Hydaspes; horse-archers; Xenophon, *Cyropaedia*; Thyambrara

Arrian is our best source for Alexander the Great's actions at the Battle of the Hydaspes.¹ As Devine explains, Diodorus' and Curtius' accounts are primarily rhetorical and contribute little except for some statistics (although Curtius does include the order to Coenus), and Plutarch and his sources are unhelpful regarding tactical matters.² But although we must rely on Arrian, there are many frustrating problems with his report of the battle. Devine, for example, points to "interpretative problems" in his account and "the inadequacy of the information evidently available" to his sources, which consisted almost entirely of Ptolemy, who was present at the battle (5.13.1; 5.14.5-6; 5.15.1), and he adds that Coenus' movements must be inferred from "circumstantial evidence."³ Devine says that Ptolemy's account, "at least as reproduced by Arrian, fails to convey any really coherent picture of the overall tactical plan" and he blames Ptolemy for not knowing much about Alexander's tactics; he also faults Arrian's "carelessness" for omitting much information about the battle proper, such as what happened to the chariots during the battle, since even though some orders, names, and dispositions of troops are mentioned beforehand during the march, the description of the battle itself is very brief.⁴

I investigate several of these troublesome "interpretative problems," which are interconnected: what the horse-archers did in the battle; what happened to the chariots; what Alexander's order to Coenus really said; and whether there was a Macedonian left wing. Understanding the horse-archers explains the chariots, and the order to Coenus clarifies the Macedonian left. I also argue that Arrian adopted the narrative structure of Xenophon's *Cyropaedia* 7.1 and shaped his limited material using Thyambrara as his model; this explains why

¹ For J. K. Anderson†, my teacher, and Ian Worthington, my editor.

² Devine 1987, 91-95.

³ Devine 1987, 94.

⁴ Devine 1987, 94-5. Bosworth 1995, 277-8 ad 5.12.1: the record of troops and commanders is incomplete.

his narrative of the battle proper (the *mélé*) is so brief and why his overall account is so elongated. Arrian, faced with inadequate sources and an unusual, foreign battle, deliberately created a tribute to his great predecessor, Xenophon.

1. The horse-archers

Alexander's use of horse-archers as part of his right-wing cavalry force at the Battle of the Hydaspes was an innovation in Macedonian warfare.⁵ But many who write on the battle do not understand their importance.⁶ Alexander used them in his initial attack before his right-wing cavalry charge;⁷ to some extent, they replaced the *sarissophoroi* that he used at the Granikos.⁸ Why did he make the change and why did he place so much reliance on these foreign troops?

Alexander realized what has been a fact throughout the history of warfare: chariots cannot withstand horse archers.⁹ Chariots lack the maneuverability and speed of swift, mobile, deadly horse-archers, who easily attack the exposed sides and rear, destroying drivers and soldiers.¹⁰ Arrian makes this clear in Alexander's encounter with Porus' son: Alexander drew up his column in battle order, selected the best of his cavalry, and placed the mounted archers "in front of the whole line of cavalry" (5.13.4).¹¹ It was in this order (οὕτως ἐκτάξας, "With his army therefore thus marshalled" 5.14.1) that Alexander met Porus' son: he had ordered his infantry to follow while he took the "cavalry only and advanced at all speed" (τοὺς ἱππέας μόνους ἀναλαβὼν σπουδῇ ἡγεῖτο 5.14.1)—"cavalry" meaning both cavalry and horse-archers here. When Alexander encountered Porus' son, who according to Ptolemy had 120 chariots and 2000 cavalry (5.15.1),¹² he "launched against this force his mounted archers, and with no great difficulty

⁵ Fifth-century Athens had horse archers (Hunt 2007, 118, 122; Gaebel 2002, 179). See Spence 1993, 56-8. Cunliffe 2019, 53.

⁶ The exceptions are: Howe, on Ptolemy, *BNJ* 138 F 20, who says, of the skirmish, that they were 'likely . . . developed here specifically to counter the Indian chariots.' Sabin 2007, 417: the horse-archers "countered" the chariots in the battle. Also, Heitland 1879, 122-123 ad loc. and Green 1991, 397. But Milns 1969, 213-14, says the horse-archers were a "covering-force" sent to "soften up" the Indian cavalry. Bury 1900, 804 and Wheeler 1900, 442 say they attacked the cavalry. Devine 1987, 105-6: they harassed with arrows. Fuller 1960, 193-194 says they caused confusion. Bosworth 1995, 296, 298-9; 1994, 429 they were able to harass and confuse the enemy cavalry and prevent them from changing position. Tarn 1927, 408: the horse-archers were sent to attack *the infantry*.

⁷ Devine 1987, 100.

⁸ Heckel 2016, 320, thinks that the horse-archers replaced the mounted javelin men (*hippokontistai*).

⁹ Gode 1947, 34, 40.

¹⁰ Horse-archers were also very destructive to cavalry and infantry because of their mobility (Sabin 2007, 422).

¹¹ Citations of Arrian are from Robson 1933 and Brunt 1976. Translations are from them as well, except as noted.

¹² For the numbers, see Bosworth 1995, 287. Aristobulus (Arr. 5.14.3): 60 chariots; Plut. *Alex.* 60.5: 60 chariots, 1000 cavalry; Curt. 8.14.2: 100 chariots, 4000 cavalry.

turned them to flight, many being wounded” (5.14.3).¹³ Arrian’s (Aristobulus’) statement that the horse-archers easily routed the chariots should be accepted. This, indeed, is the position of Howe on this passage (5.14.3)—that the horse-archers were developed specifically to counter chariots and did so in the skirmish¹⁴ —and of Smith: “The archers in the chariots were not a match for the mounted bowman.”¹⁵ In addition, as Bosworth states: “the role of the horse archers was stressed in all sources.”¹⁶

Arrian cites Ptolemy (who was at the skirmish and the battle) when he says: “It is Ptolemaeus also who narrates that Alexander at first sent against Porus’ son and his force the mounted archers; but that he himself led on the cavalry” (5.15.1).¹⁷ Arrian says that in the attack 400 Indian horsemen (of 2000) fell. He does not give the number of charioteers killed, but likely many were. Both Ptolemy and Aristobulus (5.14.3) state that the horse-archers attacked first.

The capture of the chariots in the skirmish was partly a result of the muddy ground, which hindered mobility in the action and retreat (5.15.2; Curtius 8.14.4 says that it was slippery, which led to chariots running wild). While some of the chariots might have fled (so Aristobulus 5.14.3), Ptolemy reported that all 120 chariots were captured and 400 of 2000 cavalry were killed (5.15.2).¹⁸ Alexander’s success illustrates the great effectiveness of his horse-archers, which overwhelmed the chariots, while the Indian cavalry, inferior to the Macedonian, was no match for Alexander’s Companions.¹⁹ The horse-archers must have shot at the drivers and archers, not the horses, which were valuable, since “the chariots with their teams, were captured” (τὰ δὲ ἄρματα αὐτοῖς ἵπποις ἀλῶναι 5.15.2).

Arrian says that Alexander initially thought that he had met Porus’ army and that is why he first sent the horse-archers and then attacked with his cavalry (5.15.1). Thus, Alexander’s battle plan was to use horse-archers in his first attack, followed by his cavalry. The horse-archers were aimed at the chariots. This is also illustrated by Alexander’s actions in the battle, where he attacked Porus by sending his mounted archers first: “Alexander launched his mounted archers—about a thousand strong—at the Indians’ left wing” (καὶ ἐφῆκεν ἐπὶ τὸ κέρασ τὸ εὐώνυμον τῶν Ἰνδῶν τοὺς ἵπποτοξότας, ὄντας ἐς χιλίους); he then “rode rapidly with his Companion Cavalry” (καὶ αὐτὸς δὲ τοὺς ἐταίρους ἔχων τοὺς ἵππεάς παρήλαυνεν ὁξέως) against the Indian left cavalry (5.16.4; “the mounted archers, who were the first to begin the attack,” τῶν μὲν ἵπποτοξοτῶν, οἱ δὲ καὶ πρῶτοι τοῦ ἔργου ἦψαντο 5.18.3). Since the chariots were in

¹³ καὶ ἐπὶ τούτους ἀφεῖναι Ἀλέξανδρον τοὺς ἵπποτοξότας, καὶ τραπῆναι αὐτοὺς οὐ χαλεπῶς, πληγὰς λαμβάνοντας (Arr. 5.14.3).

¹⁴ Howe, on Ptolemy, *BNJ* 138 F 20, but he says that in the skirmish the horse-archers forced the chariots into the mud. Howe does not address the battle. Olbrycht 2010, 360-1 attributes Alexander’s victory to “cavalry and archers” who were mostly Iranian.

¹⁵ Smith 1920, 64 and Gode 1947, 41.

¹⁶ Bosworth 1995, 291 ad 5.15.1. But Bosworth 1995, 288 says the “cavalry” routed Porus’ son.

¹⁷ καὶ ἐπὶ τούτους τὰ μὲν πρῶτα ἐκπέμψαι Ἀλέξανδρον καὶ οὗτος λέγει τοὺς ἵπποτοξότας, αὐτὸν δὲ ἄγειν τοὺς ἵππεάς (Arr. 5.15.1).

¹⁸ Bosworth 1995, 291 ad 5.15.2: Plutarch (*Alex.* 60.5) follows Ptolemy and says 400 killed and that all the chariots were captured.

¹⁹ Lane Fox 2004, 357: “against the Companions, javelins and primitive curb-chains allowed neither a countercharge nor sharp manoeuvre.” Arr. 8.16.10-12.

front of the Indian cavalry and prevented Alexander from getting to them, he used his horse-archers to destroy the chariots and remove the obstacle. Diodorus, indeed, tells us that “The fighting began, and practically all of the Indians’ chariots were put out of action by Alexander’s cavalry” (Diod. 17.88.1)—by the horse-archers.²⁰ Curtius says: “The Scythians and the Dahae first of all attacked the Indians” (*Scythae et Dahae primi omnium invasere Indos* Curt. 8.14.5).²¹ Hammond, likewise, accepts the importance of the archers in the attack and their use against the chariots: he says that “the mounted archers (1,000 Dahae) attacked the chariots on Porus’ left wing and caused confusion”—Arrian’s word (τὰράξει 5.16.4).²² But Hammond and other scholars limit the role of the horse archers to skirmishing and confusion, not recognizing their role.²³ What Arrian actually says is that the horse archers aimed to “confuse” the enemy “by the severity of the volleys of arrows” (τῇ πυκνότητι τε τῶν τοξευμάτων 5.16.4 Robson’s translation)—πυκνότης meaning both density and frequency (*LS*). The arrows would have not just confused but destroyed them.

It is not surprising that Arrian does not dwell on the horse-archers in the battle. He had just recounted Alexander’s victory over Porus’ son using only his Companion Cavalry and horse-archers against 120 chariots and 2000 cavalry (5.14.6). There was no need for Arrian to repeat the obvious when he reported that Alexander’s horse-archers and cavalry again led the attack against the Indian left wing. The same situation repeated itself. Alexander sent his horse-archers after the 120 chariots on Porus’ left. After they were destroyed, his cavalry charged Porus’ cavalry. Diodorus’ (17.88.1) statement that nearly all the Indian chariots were destroyed (κατεκόπη) by Alexander’s cavalry means that the horse-archers destroyed them. Arrian (5.18.2), too, says all the chariots were destroyed (although Bosworth says the “cavalry” did it).²⁴

Bosworth says that Alexander first used oriental troops in the winter of 328/7 when he levied cavalry that served with the Macedonians in Sogdiana. These were “Bactrians and Sogdianians attached to Amyntas” (4.17.3).²⁵ At the Hydaspes (326) “he employed cavalry from Arachosia, Parapamisadae, Bactria, Sogdiana and the Saca territories to the north (5.11.3, 12.2) supplemented by levies from friendly Indian princes.” They fought in national units, except the

²⁰ So it is interpreted by Heitland 1879, 122-123 ad loc. and Green 1991, 397. γεγονένης δὲ μάχης τὸ μὲν πρῶτον τοῖς ἱππεῦσιν ἅπαντα σχεδὸν τὰ ἄρματα τῶν Ἰνδῶν διεφθάρη (Diod. 17.88.1).

²¹ Curtius seems to conflate the skirmish and the battle (*pugna* 8.14.6).

²² Hammond 1997, 166. Devine 1987, 105-6: they harassed from a distance. Lane Fox 2004, 356: “chariots were no menace to veterans of Gaugamela, reinforced by mounted archers.” But he says (358) they “harassed” the chariots, not overwhelmed them.

²³ Hammond 1997, 166. Fuller 1960, 194, Gaebel 2002, 177, Bosworth 1994, 829 stress “confusion.” Devine 1987, 113 Plan has the horse archers aimed at the chariots but says they harassed. Lonsdale 2007, 89: “disrupt.”

²⁴ Bosworth 1995, 293 ad 5.15.7. Heitland 1879, 123 (approvingly cited by McCrindle 1896, 360) says the chariots were in the way of Alexander’s cavalry but Diodorus’ (17.88) remark that the “Macedonian cavalry” destroyed them resolved the problem of the chariots. But Arrian says “only cavalry” (τοὺς ἱππείας μόνους 5.14.1, 3; also 5.15.1) when he means cavalry and horse-archers in the skirmish, and he also uses “cavalry” to mean both cavalry and horse-archers before the battle (5.16.1).

²⁵ Bosworth 1988, 271. Bosworth 1995, 119 ad 4.17.3.

Dahae horse-archers, who fought alongside Macedonian cavalry.²⁶ Arrian says the horse-archers at the Hydaspes were Dahae (5.12.2), from the plains of inner Asia.

But there were more horse-archers at the Hydaspes. Arrian only mentions the Dahae once, before the battle (5.12.2); the rest of the time he speaks generally of “horse archers” (ἵπποτοξότας 5.13.4, 14.3, 15.1; “a thousand strong” 5.16.4). The Sacae were one of many northern tribes located east of the Caspian that the Greeks called “Eastern Scythians” (e.g., *celeberrimi eorum [Scytharum] Sacae* Pliny, *HN* 6.17.50). Sometimes Scythian was used of the Sacae; and Scythians were called Sacae.²⁷ The Sacae were also horse-archers: Darius had among his forces at Gaugamela “Sacae, a Scythian people, belonging to the Scyths who inhabit Asia, who came, not as subjects of Bessus, but on the basis of an alliance with Darius; Mauaces was their commander, and they were mounted archers” (ἵπποτοξόται 3.8.3).²⁸

When Arrian lists Alexander’s forces when he crossed the Hydaspes, he specifies, after the Companion Cavalry, “the cavalry from Bactria and Sogdiana” and—Arrian’s Greek sentence is awkward—τοὺς Σκύθας ἱππέας καὶ Δάας τοὺς ἵπποτοξότας, “the Scythian and Dahian cavalry, who were horse-archers” (5.12.2).²⁹ “Scythian” means the Sacae (so Bosworth, who says that at the Hydaspes, Alexander had cavalry from “the Sacae territories to the north,” citing this passage, 5.12.2),³⁰ Arrian means that both the Dahae and the Sacae were horse-archers, as indeed they were (e.g., 4.4.6-7; 3.8.3). Bosworth agrees that the horse-archers consisted of the Dahae and the Sacae and that the Sacae participated in the skirmish.³¹ He also thinks that Arrian’s number of 1000 horse archers (5.16.4) includes both Dahae and Sacae. Hammond, however, rightly calculates that the “Scythian” (Sacae) cavalry numbered an additional 1000.³²

The Sacae were also present at the battle along with the Dahae and the battalions of Companion Cavalry, and the Bactrian and Sogdianian cavalry: Curtius says that “the Scythians [= Sacae] and the Dahae first of all attacked the Indians” (*Scythae et Dahae primi omnium invasere Indos* Curt. 8.14.5; “horse-archers” Arr. 5.16.4)—the Sacae and the Dahae horse-archers

²⁶ Bosworth 1988, 272.

²⁷ Bosworth 1980, 1.289 ad 3.8.3. Cunliffe 2019, 39, 51, 169: Sacae and Scythians are interchangeable in Herodotus and Persian sources. Mounted Sacae warrior archers served the Achaemenids as allies (Cunliffe 2019, 175; Arr. 3.8.3).

²⁸ Burn 1947, 211 states the Sacae were horse-archers, as does Bosworth 1995, 279 ad 5.12.2. Howe, *Commentary on BNJ* 138 F 20 says the Scythians in general were. Brunt 1976, 247 n.2 says they were “apparently from the Pamir highlands” citing A. Hermann (1945) ‘Sakai’, *RE* 1.A.2, cols. 1770-1806. See Cunliffe 2019.

²⁹ I interpret Arrian as: τοὺς Σκύθας ἱππέας καὶ <τοὺς> Δάας <ἱππέας> τοὺς ἵπποτοξότας. Arrian often omits the second definite article when giving a pair of battalions (Tarn 1948, 144). See H. W. Smyth, *Greek Grammar* §1143: “A single article used with the first of two or more nouns connected by *and*, produces the effect of a single notion.”

³⁰ Bosworth 1988, 272. See also Curt. 9.2.24 for Dahae and “Scythians.”

³¹ Bosworth 1995, 279 ad 5.12.2; 291 ad 5.15.1; 298-9 ad 5.16.4. Bosworth 1988, 128: the “Sacae horse archers were in the van” (and took part in the skirmish). Also, Howe, *BNJ* 138 F 20 (but only regarding the skirmish).

³² Hammond 1997, 165. Devine 1987, 98. Arrian (5.14.1) says Alexander’s cavalry numbered about 5000 before the skirmish.

participated in the first charge. Bosworth accepts that both the Sacae and the Dahae were horse-archers in the battle and that they led the first charge in the battle, just as in the skirmish.³³

Other scholars have generally treated the Sacae at the Hydaspes in two ways. First, since Arrian does not mention them at the battle, they are dismissed as unimportant and not present at the battle. Fuller, for example, says that since they are not mentioned in the battle, they should be omitted from the battle numbers.³⁴ Alternatively, they are treated as regular cavalry: e.g., Hammond includes them on his Plan on Alexander's right wing alongside the Companion Cavalry, with the Bactrians and Sogdians, and as participants in Alexander's right-wing charge (Curt. 8.14.5), and he only says that the Dahae attacked the chariots.³⁵ And Bosworth thinks it is likely that they were on Alexander's right with the Dahae and the Companions, while the Bactrians and Sogdians were under Coenus' command together with Demetrius' hipparchy.³⁶

Nevertheless, since the Sacae were horse-archers, they should have fought where they would have been the most effective. When Darius drew up his battle order at Gaugamela, he positioned his Dahae on his left wing and Sacae on his right (3.11.3-4). I argue that likewise at the Hydaspes, the Dahae were on Alexander's right wing and led the attack there, and the Sacae were on the left wing and led an attack from that wing. Both attacked the chariots, which Porus had positioned in two groups, in front of his cavalry on each wing (5.15.7). Both were effective in destroying the chariots since the chariots played no role in the battle.

2. The chariots at the Battle of the Hydaspes

Perhaps something more can be said about the chariots in relation to the horse archers. Arrian (5.15.2) reports that in the skirmish with Porus' son, the chariots became caught in the mud and were all captured. But there is no mention of them in the battle: Arrian only says that Porus had 300 chariots, positioned on each wing in front of his cavalry (5.15.7), and that they were all destroyed (5.18.2). Many scholars likewise omit them from discussions of the battle, apparently assuming that they were immobile, taking no part in the battle raging around them.³⁷

³³ Bosworth 1995, 279 ad 5.12.2; 291 ad 5.15.1. Bosworth 1988, 128. (Curtius seems to combine skirmish and battle.)

³⁴ Fuller 1960, 187, 193, who also omits the Bactrian and Sogdian cavalry.

³⁵ Hammond 1997, 165 Figure 17 Battle and 166.

³⁶ Bosworth 1995, 295, ad 5.16.3. It is disputed whether Coenus commanded his own hipparchy or was only temporarily removed from his infantry command (Bosworth 1995, 294-295). Devine 1987, 99-100 does not mention the Bactrians and Sogdians in Alexander's line.

³⁷ Wheeler 1900, 443, says it is strange the chariots are not mentioned. Bosworth 1988, 128, mentions only cavalry in the skirmish and battle; Milns 1969 and Bosworth 1995, 296 Fig. 4 omit chariots. Bosworth 1994, 829 puts them on each wing but does not mention them in battle. Bosworth 1995, 293 ad 5.15.7, says they had little effect. Hammond 1997, 165-166 puts them on his plan but only says that the chariots on Porus' left were attacked. Bury 1900, 804, Hamilton 1956, and Worthington 2016, 247 do not mention them in battle. Heckel 2008, 117 shows them on his plan.

But Alexander thought that the chariots were important: according to Olbrycht, Alexander issued tetradrachms, some of which depicted an archer in a quadriga representing an Indian chariot on the obverse and with an elephant and two archers on the reverse. He sees this iconography as borrowing from Iranian tradition and argues that they were special issues struck in 324/3 to commemorate the battle.³⁸ It is noteworthy that these coins depicted Indian chariots. Moreover, Holt, who dates these rare issues 326-325, commemorative of the battle, connects the images of Indian chariots, large bows, and Zeus of storms, with the Battle of the Hydaspes.³⁹

Curtius (who says that the chariots formed the “greatest part of Porus’ strength” *summa virium* 8.14.2) tells us that the Indian chariots were four-wheeled and carried six men (two with bucklers, two archers on each side, and two drivers with javelins) (Curt. 8.14.2-3; cf. Strabo 15.1.52).⁴⁰ Curtius says (of the skirmish) that the chariots became bogged down in mud (8.14.4). The chariot drivers rushed too fast “with loose rein” and had difficulty on the slippery ground; the horses ignored their drivers and dragged the chariots into mud, pools, and the river; they lost their drivers, and a few ran empty back to Porus (Curt. 8.14.6-9). The skirmish must have occurred near the river (5.14.2, 4), on marshy ground. But since Porus chose a site for battle that was “not muddy, but being sandy was all level and solid for charges and maneuvers of cavalry” (ἀλλ’ ὑπὸ ψάμμον γὰρ ξύμπαν ἦν ἄπεδον καὶ στερεὸν ἐς τὰς ἐφόδους τε καὶ ἀναστροφὰς τῶν ἵππων 5.15.5), it must have been suitable for battle.⁴¹ It is also unlikely that the ground at the Indian right was poor since it was far from the river; and Porus would not have positioned his cavalry or his chariots where they were inoperable. Since Porus’ son drove to the location of the skirmish, and since Porus traveled several miles, the area must have been solid and flat.

Porus placed 150 chariots on each of his wings (5.15.7): this was typical of Persian and Indian armies.⁴² The Dahae horse-archers attacked the 150 chariots on the Indian left and cut them down just as effectively as they had done with the younger Porus’ 120 chariots (5.14.3).⁴³ Once those chariots were out of the way, the Macedonian cavalry charged the Indian cavalry, aided by Dahae skirmishing. Both Arrian and Curtius say that Alexander first sent his horse-archers against the Indian left, followed by his cavalry (Curt. 8.14.5; Arr. 5.16.4). But few have argued that the horse-archers concentrated on the chariots.⁴⁴ Hammond does say:

³⁸ Olbrycht 2010, 361. Holt 2003, 136-7; Lane Fox 1996, 89, 92-3, 104, 108.

³⁹ Holt 2003, 146-56.

⁴⁰ See Bosworth 1995, 289 ad 5.14.3. Dodge 1890, 2.554 and Lane Fox 2004, 356: four-horse chariots. Cf. Holt 2003, 137 who says these would be improbably large.

⁴¹ Milns 1969, 213: ground was firm, level, wide, suitable. Wheeler 1900, 441 suitable for chariots. Burn 1947, 215: ground was sandy. Cf. Bosworth 1995, 291, 293 ad 5.15.7: the ground was slippery, the chariots had little effect. Curt. 8.14.18: the slippery ground hindered the Indians’ large bows.

⁴² E.g., Arr. 3.11.6-7; Xen. Cyr. 7.1.28.

⁴³ Gode 1947, 40; Smith 1920, 64. Wilcken 1967 182 n.1: “probably their drivers were all successfully shot down.” Diod. 17.88 says the *Macedonian cavalry* cut down the chariots; but this must mean the horse-archers. See n.24.

⁴⁴ Green 1991, 397. But Heitland 1879, 123 ad loc. thinks the “cavalry” destroyed the chariots. Also, Bosworth 1995, 293 ad 5.15.7. See n.24.

the mounted archers (1,000 Dahae) attacked the chariots on Porus' left wing and caused confusion, whereupon Alexander with 1,000 Companion Cavalry appeared on the left flank of the column of Indian cavalry which wheeled left to face him.⁴⁵

Hammond's battle plan shows a line directly from the Dahae horse-archers to the chariots on the Indian left (and the Sacae swinging far to Alexander's right).⁴⁶ Although "confusion" is not the same as destruction, Hammond understood that the role of the horse archers was to attack the chariots. Bosworth, who says the horse archers led the charge in both the skirmish and battle, likewise limits them to causing "confusion" so that the Companions could attack the Indian flank,⁴⁷ but he adds that the "Macedonian cavalry" "neutralized" the chariots.⁴⁸ Nevertheless, although horse-archers were skirmishers, at the Hydaspes their focus was on destroying the chariots. Because the horse-archers' bows had a greater range than the heavier Indian bows,⁴⁹ they could shoot the chariot drivers and archers from afar with less risk to themselves.

But what about the 150 chariots on the Indian right⁵⁰ that are never mentioned in the battle? They were a formidable force. Since Porus' infantry outnumbered Alexander's (20,000-30,000 infantry,⁵¹ 4000 cavalry,⁵² 200 elephants 5.15.4; Alexander: 6000 infantry, 5000 cavalry, light-armed, and foreign cavalry 5.12.2),⁵³ Porus' line extended beyond Alexander's (the line was one to five miles, most likely somewhat more than one⁵⁴). Porus' chariots and cavalry right would have enveloped Alexander's left. Alexander did order his Agrianians and archers to protect his left flank, but Arrian mentions no cavalry there. Would Alexander have left his left wing so exposed? Gaugamela had shown that there could be severe problems on the left even with cavalry present to defend it (3.14.4-15.2). (See also Section 4, below.)

⁴⁵ Hammond 1997, 166. Lane Fox 2004, 357: Indian cavalry without bits could not withstand the Companions.

⁴⁶ Hammond 1997, 165. Devine 1987, 113 Plan. But Milns 1969, 212, places the horse archers on the far right while Alexander (behind them) with his cavalry aimed at chariots and cavalry.

⁴⁷ Bosworth 1995, 298-9 ad 5.16.4 (also 290-1 ad 5.15.1); Bosworth 1994, 829. Howe, on *BNJ* 138 F 20 on the skirmish.

⁴⁸ Bosworth 1995, 293 ad 5.15.7. See n.24.

⁴⁹ Lane Fox 2004, 358.

⁵⁰ Fuller 1960, 191 subtracts the 120 chariots lost by Porus' son and has 180 chariots; Devine 1987, 102 subtracts 60 so 240 total. But Arrian (5.15.4) says 300 were in the battle.

⁵¹ Plut. (*Alex.* 22.2) says 20,000 infantry. Diod. (17.87.2) 50,000. Devine 1987, 92-3, 101: 20,000. Bosworth 1995, 292: unknowable.

⁵² Plut. (*Alex.* 22.2): 2000; Diod. (17.87.2): 3000; Devine 1987, 101-2 says 2000 for the battle. Bosworth 1995, 292: Alexander was superior.

⁵³ Tarn 1948, 195 says 6000 is not correct: the Agrianians, archers, and javelin-men were another 4000. Hamilton 1956, 26 has 15,000 (adding Meleager, Attalus, and Gorgias' forces).

⁵⁴ Devine 1987, 101: Arrian (5.15.4-5) says 200 elephants 100 feet apart = over 5 miles; Diod. (17.87.2) says 130 elephants (= 2.5 miles); Curt. 8.13.6: 85. Polyaeus (4.3.22) says 50 feet apart (85 elephants at 50' = 0.8 mile). Devine 1987, 101 says 85 elephants and Porus' infantry 20,000; he and Worthington 2016, 246, say elephants 50' apart, Porus' men 10 deep, and both lines over one mile. See also n.75.

Curtius reports (8.14.7) that at the “first attack” (*primo impetus*) the chariots “trampled” (*obtereabantur*) the Macedonian foot soldiers. But he had just stated that the first attack was Alexander’s charge with the horse-archers and cavalry against the Indian left (Curt. 8.14.5; Arr. 5.16.4). What is Curtius talking about (and can he be trusted)? Curtius seemingly conflates the skirmish and the battle (*aciem hostium* 8.14.2; *pugna* 8.14.6) since the infantry did not take part in the skirmish. Since his context is chariots, the “first attack” must be the first Indian attack, by chariots against the Macedonian infantry. Yet, Arrian says that the chariots were in front of the Indian cavalry and that Alexander ordered his phalanx to wait until his cavalry threw Porus’ infantry and cavalry “into confusion” (τεταραγμένην 5.16.3). Since the chariots on the Indian left were between two masses of cavalry, they could not reach the Macedonian phalanx. But the Macedonian infantry left (if no cavalry protected them) were vulnerable to an assault by the chariots on Porus’ right. As soon as Alexander charged, the chariots began to roll towards the Macedonians on both sides side of the battlefield (e.g., Xen. Cyr. 7.1.28). Thus, Curtius’ “first attack” is the Indians’ response: the chariots’ advance against the Macedonian left. Even without Curtius (who likely is not reliable), we can conjecture that this is what happened.

Even if Curtius were accurate that the Macedonian phalanx’s left flank initially suffered from an attack by the chariots, the Agrianians, foot archers, javelins, and infantry might have still stopped the chariots. Alexander had 1000 Agrianians, 2000 archers, and 1000 javelin-men⁵⁵ on either side of his phalanx (5.13.4). The ratio of 13 light-armed to one chariot might have been sufficient to overwhelm the chariots. Indian armies were accustomed to using the bow and fighting against bowmen, but chariot archers would have been vulnerable to javelins, lances, and more powerful bows. Macedonian archers used a smaller bow and were nimbler; and “the heavier arrows of the Indians would not have the range of Alexander’s.”⁵⁶ (At Gaugamela, Alexander put half the Agrianians, archers, and javelin-men before the *agema* and Companions on the right, opposite the chariots, and they cut the chariots down 3.12.3, 13.5). Nevertheless, it would have been a difficult fight against chariots if the horse-archers were not there (although I argue that they were: Section 1 above). It also would have been a difficult fight against Indian cavalry without Macedonian or allied cavalry in support on their left (the Macedonians could not be certain that the Indian cavalry right would move left, nor is it beyond dispute that they *did* move: see Section 3 below). Lane Fox remarks: “The Shield Bearers, archers, and Agrianians were equipped to deal with the elephants and come to close quarters with the Indian swordsmen, but they were vulnerable to a charge from the enemy cavalry.”⁵⁷ And there was no reason to leave them as the sole protectors of the left flank of Alexander’s phalanx. If as Lonsdale correctly says, “Alexander’s first main concern would be to protect the flanks of the infantry from the Indian cavalry,”⁵⁸ why would Alexander not protect the flanks of his infantry?

I argued above (Section 1) that there were Sacae horse-archers on the Macedonian left as well as the Dahae horse-archers on the right. The Sacae made short work of the chariots there, as they did in the skirmish and as the Dahae did on the right. It makes no sense that Alexander used horse-archers on his right but not his left, especially since he had Sacae horse-archers with

⁵⁵ Tarn 1948,193; Fuller 1960, 187.

⁵⁶ Lane Fox 2004, 358.

⁵⁷ Lane Fox 2004, 358.

⁵⁸ Lonsdale 2007, 89.

him (5.12.2), and the Sacae were part of his first charge (Curt. 8.14.5).⁵⁹ Arrian might have omitted them because Ptolemy did not know about the fighting on the left, or because his sources did not care about foreign forces. (See also Section 5, on Arrian's narrative style.) But Arrian likely was also reticent because a balanced distribution of forces was standard and needed no comment.⁶⁰

Sacae horse-archers on the Macedonian left wing destroyed the chariots there and (whether or not the Indian cavalry departed for their own left) helped protect the left of the Macedonian phalanx. But if there were horse-archers on Alexander's left, then it is likely that regular cavalry was on his left wing as well. (See Section 4 below.)

3. Alexander's order to Coenus

Alexander's order to Coenus is "the crucial point" of the Battle of the Hydaspes.⁶¹ In one of the standard translations, that of Robson, Alexander sends Coenus "to the right" (ὥς ἐπὶ τὸ δεξιόν) "with the regiments of Demetrius and his own; he commanded him that so soon as the Indians should perceive (ιδόντες) the solid body (στίφος) of cavalry beside Alexander (κατὰ σφᾶς) and advance their cavalry to meet it, he should keep behind them" (5.16.3). But is this a correct translation?

First, when Arrian says "to the right," does he mean "to the (Indian) right wing" or "as if to the right," or "to Alexander's/Coenus' right"? Hamilton explains that there are three possible meanings: to the Indian right wing;⁶² or as a feint to the Indian right wing then back to Alexander's right; or to Alexander's right. Tarn and Hammond interpret ὥς ἐπὶ τὸ δεξιόν as meaning "as if to the Indian right;"⁶³ Hamilton, Bosworth, and others as "to the Indian right."⁶⁴ Hamilton remarks that in Classical Greek ὥς + a preposition normally means intention and is very common in Arrian; and while in Arrian ὥς + a preposition can mean "as if going to the right," it is uncommon, and "going to the right" is "more probable."⁶⁵ I likewise accept "to the right" (I shall argue about the meaning of "to the right" more fully in Theory 4, below).

⁵⁹ Bosworth 1988, 128 puts the Sacae at the skirmish; Bosworth 1995, 279 ad 5.12.2; 291 ad 5.15.1 at skirmish and battle.

⁶⁰ Lendon 2017 part 2, 162: battle descriptions were "constrained by generic convention."

⁶¹ Hamilton 1956, 27. For discussion, see Bosworth 1995, 295-7 ad 5.16.3; Seibert 1972, 156-9; Devine 1987 102-5.

⁶² Hamilton 1956, 27; Devine 1987, 102-3. Since Arrian just mentioned "the [enemy's] left wing" (ἐπὶ τὸ εὐώνυμον κέρως 5.16.2), it is supposed that he means the enemy right wing (Hamilton, 1956, 27; Bosworth 1995, 295; Tarn 1948, 196 n.1).

⁶³ Tarn 1948, 196 n.1. Hammond 1997, 165-166 and plan. Bauer 1898, 71.

⁶⁴ Hamilton 1956, 27-8; Bosworth 1995, 295 ad 5.16.3. Hammond 2013 151.

⁶⁵ Hamilton 1956, 27-28. Bosworth 1995, 295-6 ad 5.16.3 agrees, as does Devine 1987, 103, 110-11.

Tarn interpreted κατὰ σφᾶς to mean “facing themselves” (the Indian cavalry);⁶⁶ but Hamilton says the Attic indirect reflexive (referring to Alexander) is more likely because the *barbaroi* are the Indian right, but σφᾶς are those on the Indian left. He thinks κατὰ means “beside, near” instead of “opposite.”⁶⁷ In addition, he interprets αὐτόν κατόπιν ἔχεσθαι αὐτῶν as meaning “rides along to meet” as opposed to Tarn’s “take in the rear.”⁶⁸ (Robson has “should keep behind them”). Thus, in Hamilton’s translation, Alexander “commanded [Coenus] that as soon as the Indian cavalry (on their right) should perceive the solid body of cavalry beside Alexander (κατὰ σφᾶς) and advance their cavalry to meet it, he should ride to meet them” (5.16.3).⁶⁹

But Hamilton’s interpretations twist the Greek so that it conforms to his pre-determined movement of forces. Tarn (and Bosworth) is correct that κατὰ σφᾶς means facing themselves (the Indian cavalry) because, as Bosworth says, the “reflexive naturally refers to the immediate (plural) subject.”⁷⁰ In addition, it must mean the Indians’ left-wing cavalry since the Indian right down the line could not see what Alexander was doing. (Tarn rightly emphasizes Arrian’s ἰδόντες “see” but he has the wrong interpretation⁷¹). Thus, Chinnock’s translation (1884) correctly says: “the barbarians when they, seeing the dense mass of cavalry opposed to them, should ride out to fight them.” In addition, the usual meaning of αὐτόν κατόπιν ἔχεσθαι αὐτῶν is “follow close behind” (*LS*),⁷² but in this context it could also mean “attack from behind.”

There are four interpretations of Alexander’s order to Coenus:

1. Theory 1 is that Coenus started on the Macedonian left with 1000 cavalry (perhaps at first hidden from the enemy) and rode around the Indian right wing, pursuing the Indian right-wing cavalry along the *back* of the Indian forces as it moved to the Indian left. (Or, Coenus and his cavalry rode between the lines to Alexander’s left, and then around and behind the Indian ranks, following the Indian right-wing cavalry to the Indian left.)

This theory is ridiculous (Wheeler calls it “miraculous”⁷³) but it has had a surprising amount of life.⁷⁴ Alexander was not so foolish as to have his cavalry ride around the enemy’s right wing

⁶⁶ Tarn 1948, 196.

⁶⁷ Hamilton 1956, 28.

⁶⁸ Hamilton 1956, 28-9. McCrindle 1896, 104: “attack.”

⁶⁹ Romm 2010, 216: “having ordered him to keep close behind the barbarians once they had glimpsed Alexander’s approach and ridden out to counter it.” Hamilton 1956, 29 admits Porus’ right cavalry could not reach his left in time to meet Alexander’s charge.

⁷⁰ Bosworth 1995, 296 ad 5.16.3.

⁷¹ Tarn 1948, 196.

⁷² So Bosworth 1995, 295-6 ad 5.16.3 translates it.

⁷³ Wheeler 1900, 442. Wheeler attributes it to a mistranslation.

⁷⁴ Bosworth 1995, 295-6 ad 5.16.3; Bosworth 1996, 16 Plan 17; Devine 1987, 104-5; Lane Fox 2004, 359; Romm 2010, 218 Map 5.16; 193; Naiden 2019; Gaebel 2002, 180; Green 1991, 397; Gabriel 2008, 17; Robinson 1963, 121; Hamilton 1956, 29, 31; Smith 1924, 60. Dodge 1890, 2.556-8: Coenus rode to the Macedonian left while hidden and then behind the enemy. Bosworth 1994, 829: when the Indian cavalry right moved left, “Coenus struck at the right” (behind the line) and Bosworth 1988, 128-9 and n.320: “Coenus charged from the right.” Burn 1947, 215-16: Coenus followed the Indian cavalry. De Sélincourt 1971 says Coenus went to the Indian right and his order was: “when the enemy moved their cavalry across to their left . . . he should hang on to their rear.” Hammond 2013, 151 “to the

and along the back of the Indian army for one to five miles (and in front of the line and elephants for the same distance) without knowing the depth of the Indian army,⁷⁵ the ground behind it, or what else lurked there (wagons, baggage, camp followers, elephant fodder), or to risk his cavalry being attacked by Indian archers, elephants, and infantry, his horses being wounded or lamed by bad ground, and his cavalry being cut off while behind enemy lines.

2. Theory 2 is that Coenus was out of sight of the enemy as he rode to his left wing. After the Indian right cavalry moved to their left, he followed, between the lines, and attacked their left wing. This is the view of Milns (1969), Veith (1908), Fuller (1960), Heckel (2004), and Lonsdale (2007). Milns says he rode to the Macedonian right "across the front of the enemy line."⁷⁶ Veith says that both the Indian right-wing cavalry and Coenus rode between the lines.⁷⁷ Fuller's plan shows both cavalries riding between the lines.⁷⁸ Heckel (2004) and Worthington (2016) have Coenus start on the left and ride in front of the line in pursuit of the enemy.⁷⁹

But would Alexander, who attacked the Indian left to avoid the elephants and was well-aware that they frightened horses (5.11.4, 15.4), have ordered Coenus to ride along the entire Indian line in front of all the elephants, for one or more miles? This would have exposed his horses to a row of elephants⁸⁰ and have tired his horses before the fight, if they even completed the route and did not run from the elephants. It also assumes (like Theory 1) that both armies passively watched Coenus ride in front of them without moving.

Discussion of Theories 1 & 2

Both Theories 1 & 2 assume that Porus' right-wing cavalry moved to his left wing. Fuller asserts that to protect the Macedonian left and rear (devoid of cavalry), the Indian cavalry right had to be induced to move to their left where they could be destroyed. Alexander made Porus underestimate his cavalry strength by keeping Coenus out of sight and this caused him to

enemy right, with instructions to press closely after them in their rear when the barbarians . . . rode round in support." Heckel 2008, 117-119, says Coenus started on the left, rode behind the phalanx, then attacked behind the lines.

⁷⁵ Hamilton 1956, 27 n. 11: if the Indian line was 5 miles, the infantry were 6 feet per man and more than 8 deep. If the line were 2 miles, it would have been 12 to 15 deep. Worthington 2016, 246 estimates both lines more than one mile long and 10 deep. Wheeler 1900, 441-2: Porus' line was three to four miles long. Devine 1987, 101 explains: Arrian 5.15.4-5 says 200 elephants 100 feet apart = over 5 miles; Diod. 17.87.2 says 130 elephants (= 2.5 miles); Polyaeus (4.3.22) says the elephants were 50 feet apart (85 elephants at 50' = 0.8 mile). Wheeler 1900, 441-2: Porus' line was 3 to 4 miles long, and that Alexander's line was about one mile. Devine 1987, 101-2, says that Arrian's figures (5.15.4-5), which indicate Porus' line was 4 miles, cannot be right. He says Porus' infantry were 20,000, 10 deep and the line was over one mile.

⁷⁶ Milns 1969, 214 (plan 212).

⁷⁷ Veith 1908, 138.

⁷⁸ Fuller 1960, 192-3 Plan. Lonsdale 2007, 89: Coenus "swept across the battlefield."

⁷⁹ Heckel 2004, 242 Battle plan: Coenus attacks the Indian right cavalry as they move to their left in front of the line. Worthington 2016, 247.

⁸⁰ Hamilton 1956, 29. Devine 1987, 104-5. Bosworth 1995, 299 ad 5.17.1.

move.⁸¹ Alternatively, Worthington believes Coenus was in view and that Alexander used “the bulk of his cavalry to lure Porus into ordering the cavalry on his right flank to change position” and move left so that Alexander could defeat them.⁸²

This is valid if one assumes that Porus wanted all his cavalry to face Alexander and was willing to leave his right unprotected, that his cavalry could get to their left in time to help, and that Alexander knew that Porus would move his cavalry. Bosworth remarks that if the Indian right did not move, Coenus would have to deal with them on the Indian right—that Alexander’s order really had two parts, one of which is missing.⁸³ Thus, Worthington says Alexander’s orders were: if the Indian cavalry on their right *did* move left, Coenus was to ride to the Indian left and “trap them between the two Macedonian offensive lines”⁸⁴—that of Coenus and of Alexander. If the Indian right cavalry did *not* move, he was there to counter them.

But, as Fuller says (in regard to Coenus moving at the same time as Alexander’s attack), Porus would have noticed Coenus and changed the position of his troops.⁸⁵ The same applies whenever the Indians observed Coenus changing position. Arrian remarks that at Issos before the battle, when Alexander observed that Darius had repositioned his cavalry, he ordered his Thessalian cavalry to move from the right wing to the left wing, “but not to ride in front of the line, so that their change of position might not be sighted by the enemy” (2.8.9). While this supports the idea that Coenus was hidden behind Alexander’s phalanx and then moved to the left wing, it argues against Theory 2 (riding between the lines). Theory 1 is also doubtful because Porus’ forces would see and attack cavalry trying to move behind them. Moreover, since the Indian cavalry could not have arrived in time to help their left with Alexander’s charge,⁸⁶ it is unlikely Porus would have moved them. Most importantly, inducing enemy movement is an elaborate idea susceptible to many sorts of failures. It would have been better (and simpler) to have positioned some cavalry openly on Alexander’s left to protect it from the Indian cavalry.

Another problem is raised by Heckel, who asks why, if the Indian cavalry were no longer on their right wing, Coenus (at his left wing) did not attack the Indian phalanx on their exposed flank. He answers: “The fact that Coenus did not attack the now exposed right flank of Porus’ infantry suggests that Alexander’s purpose was to annihilate the Indian cavalry, in the belief that he would then have the infantry entirely at his mercy.”⁸⁷ It does seem very odd, however, that Macedonian cavalry would pass up a chance to attack an unprotected enemy flank—at *their* mercy—in favor of riding one to five miles to assist in a conflict already being handled by Alexander. But Hamilton and Devine have argued that the elephants prevented the Macedonian cavalry from attacking the infantry and because Porus knew he did not need cavalry protection on his right, he could move his right-wing cavalry.⁸⁸ But in that case, he should not have put

⁸¹ Fuller 1960, 196.

⁸² Worthington 2016, 247. Also Hamilton 1956, 29.

⁸³ Bosworth 1995, 297, citing G. T. Griffith in Hamilton 1956, 29-30. Devine 1987, 105.

⁸⁴ Worthington 2016, 247.

⁸⁵ Fuller 1960, 195.

⁸⁶ The Indian left cavalry could not have got there in time: Devine 1987, 104. Hamilton 1956, 29.

⁸⁷ Heckel 2008, 119.

⁸⁸ Hamilton 1956, 29; Devine 1987, 104.

them on his right in the first place since moving them would take considerable time. Also, by moving his right-wing cavalry, Porus would give up his offensive ability to use his cavalry right to attack the unprotected Macedonian left flank and rear. And if instead there *were* Macedonian cavalry on their left, Porus would leave his flank and his rear (without elephants) vulnerable to them. Finally, since Alexander's cavalry did eventually attack the enemy infantry (5.17.4-5) after his infantry hurled javelins at the elephants, it could be done. Both Theories 1 and 2, therefore, have significant problems and are not reasonable.

3. Theory 3 is that of Tarn, Bauer, Hammond, and Wicklen.⁸⁹ Coenus was on the Macedonian right and moved to his left, towards the enemy right, as a feint, just far enough so that Porus' cavalry on the Indian right did not immediately move to aid the Indian left. Coenus swung back to his own right and attacked the cavalry on the Indian left, which had turned towards Alexander, hitting their rear. Thus, Coenus only pretended to move to the left wing. (Or, Coenus moved slightly left and then right to induce Porus to attack.⁹⁰)

Hammond's Plan has Sogdian, "Scythian," and Bactrian cavalry on Alexander's right, along with two hipparchies of Companion Cavalry, and Coenus' cavalry, and Dahae mounted archers. The 2000 archers and Agrianians are on the right and left of the phalanx, and there is no cavalry on Alexander's left. Porus' line is longer than Alexander's, two miles to one. The Plan shows the horse-archers aiming at the chariots on Porus' left and Alexander's Scythian cavalry swinging far to his right; Alexander's Companions also outflank the Indian cavalry on the Indian left. It shows Coenus' feint to his left and then his cross to his right in front of both infantries. The Indian cavalry on their right move left, behind the Indian line, after Coenus moves. Coenus attacks the rear of the Indian left-wing cavalry after they turn to face Alexander's cavalry.⁹¹ Hammond says that Alexander sent Coenus towards his left "in order to deceive Porus and make him keep his 2,000 cavalry there." Alexander "drew the Indian [left wing] cavalry away from the infantry line. That was the moment for Coenus, in accordance with his orders, to change direction and charge the flank and rear of the Indian [left-wing] cavalry."⁹²

Theory 3 makes some sense because it alleviates the problem of Coenus' ride in front of or behind the lines. But it is very difficult to see men or horses one mile (or more) distant. Porus' right-wing could not have seen the feint (and rain the night before would have prevented any dust cloud), and if the Indians could not see the feint, it would be useless. In fact, the feint exists only to explain Arrian's "to the right." In addition, this theory leaves the Macedonian left exposed: on Hammond's plan, Alexander's line is half of Porus' in length and is in danger of encirclement. It also requires Coenus to act solely for the purpose of briefly keeping Porus' right-wing cavalry on their right even though it postulates that Alexander wanted them to move to their left. Since the Indians might never have moved away from their right, where the

⁸⁹ Tarn 1948, 196-7; Tarn 1927, 408; Bauer 1898, 71; Wilcken 1967, 182-3; Hammond 1997, 165-166 and plan.

⁹⁰ Tarn 1948, 195-6; Tarn 1927, 408. But Fuller 1960, 195 rightly objects that cavalry do not wait to be attacked; the good cavalry commander always charges, and it was not in Alexander's nature to wait for the enemy to act.

⁹¹ Hammond 1997, 165.

⁹² Hammond 1997, 165-166.

Macedonian left flank had no cavalry protection, Coenus' action is illogical.⁹³ And Coenus, after his feint, would have had to wait for the Indian right cavalry to ride one or more miles to their left before he could attack their rear. What did he do during that time? Thus, this theory also has many problems that make it difficult to accept.

4. Theory 4 is that Coenus moved to the Macedonian right, to the right of Alexander, going around the Indian left wing and hitting the back/flank of the cavalry there while Alexander attacked the front.⁹⁴ (Or Coenus went to the right of Alexander and attacked the front while Alexander hit the flank. Or Coenus moved to his own right but still on Alexander's left and attacked the flank of the Indians' left-wing cavalry that was turned towards Alexander.)

I agree with Theory 4 and accept that ὡς ἐπὶ τὸ δεξιὸν means that Alexander sent Coenus "to the Macedonian right/Alexander's right." Examination of the Greek text makes this clear. Before and after the order to Coenus, Arrian says: ἐπὶ τὸ εὐώνυμον κέρας τῶν πολεμίων (5.16.2) and ἐπὶ τὸ κέρας τὸ εὐώνυμον τῶν Ἰνδῶν and ἐπὶ τὸ εὐώνυμον τῶν βαρβάρων (5.16.4). All three times he specifies that it is the left wing "of the enemy." A clarification in the genitive (often of the enemy) is standard in the historians, e.g., "on the Corcyraean left wing:" ἐπὶ μὲν τὸ δεξιὸν κέρας Κερκυραίων (Thuc. 1.48); "the Athenian left towards Eion . . . broke and fled" τὸ μὲν εὐώνυμον κέρας αὐτῶν τὸ πρὸς τὴν Ἡϊόνα, . . . ἀπορραγὲν ἔφευγε (Thuc. 5.10.8); "the Athenian right wing" τὸ δὲ δεξιὸν τῶν Ἀθηναίων (Thuc. 5.10.9); "the enemy right wing" ἐπὶ τὰ δεξιὰ μέρη τῶν πολεμίων (Polyb. 10.39.4); "to the barbarians' right wing" ὡς ἐπὶ τὸ δεξιὸν τῶν βαρβάρων (Arr. 3.15.1).

When the genitive is absent, the definite article means one's own right or left.⁹⁵ "Cleon made his right wing turn" ἐπιστρέψας τὸ δεξιὸν (Thuc. 5.10.5); "Cleon ordered his men to go to the [their] left . . . towards Eion" παρήγγειλε τοῖς ἀπιοῦσιν ἐπὶ τὸ εὐώνυμον κέρας (Thuc. 5.10.4 trans. Smith);⁹⁶ "Brasidas was going to the right wing" ἐπιπαριῶν τῷ δεξιῷ (Thuc. 5.10.8 trans. Jowett).⁹⁷ "The Athenians extended their left wing out to sea" οἱ δ' Ἀθηναῖοι ἀντανήγοντο εἰς τὸ πέλαγος τῷ εὐωνύμῳ (Xen. Hell. 1.6). "Extending their right wing towards the sea" πρὸς τὸ πέλαγος ἀνατείναντες τὸ δεξιὸν κέρας (Polyb. 1.27.3). "Cyrus' left" (πρὸς τῷ εὐωνύμῳ Xen. Cyr. 7.1.19); "Cyrus' right" ἐπὶ τὸ δεξιὸν (Cyr. 7.1.23); "those opposite our right wing" τοῖς κατὰ τὸ δεξιὸν κέρας (Cyr. 7.1.22); "on Darius' right wing" ἐπὶ τῷ δεξιῷ κέρατι (Arr. 2.8.10); "to Alexander's right wing" ἐπὶ μὲν τὸ δεξιὸν κέρας (Arr. 5.13.4). Thus, when Arrian says Coenus went "to the right" (ὡς ἐπὶ τὸ δεξιὸν 5.16.3),⁹⁸ since the wing is not identified as the enemy's, it is Coenus' right.

⁹³ Adcock 1956, 48-9: infantry flanks were vulnerable to cavalry.

⁹⁴ Heitland 1879, 122 ad loc. cites Diodorus 17.88: the destruction of the chariots enabled Coenus and Alexander to attack. Heitland 1879, 122 and McCrindle 1896 ad loc. translate as "you then advance the right wing." McCrindle in a note accepts Heitland's opinion.

⁹⁵ Definite article as personal pronoun: LS ὁ B.1; H. W. Smyth, *Greek Grammar* §1121 (citing Xen. Anab. 1.8.3); §1199 2.d N.

⁹⁶ Jowett 1900: "retire on the [Athenian] left."

⁹⁷ Jowett 1900 is surely correct. Cf. Graves 1891: "Brasidas was passing on to attack the right." C. Smith 1959: "pressing forward against the right wing,"

⁹⁸ Plut. Alex. 60.5 αὐτὸς μὲν ἐνσεῖσαι κατὰ θάτερον κέρας, Κοῖνον δὲ δεξιῷ προσβαλεῖν κελευσαι, translated Perrin: Alexander "assaulted their left wing and ordered Coenus to attack their right." Hamilton 1969, 166; Tarn

In Rolfe's translation, Curtius (8.14.15) reports the order to Coenus as: after Alexander charged towards the enemy's left wing (*in laevum hostium cornu*), "do you [Coenus] move to the right wing and attack the enemy while they are in disorder" (*ipse ad dextrum move et turbatis signa infer*). But *movere* means to move something or to excite or begin something (Lewis and Short); it does not mean "go." Capps added *ad* to agree with Arrian (*ad* meaning towards a place or goal); without it (and it is not in Hedicke's or Foss' Teubners), *dextrum* ("right," "to the right" Lewis and Short) means that Coenus should move his own right wing (*cornu*) or excite his own right side (*latus*) (and attack the enemy after Alexander did).⁹⁹ According to Devine, Curtius misunderstood the order because he reports later that "Coenus attacked the left wing with great force" (*in laevum cornu invehitur* 8.14.17).¹⁰⁰ But perhaps the misunderstanding is that of Capps, Rolfe, and Devine. Yardley's translation, indeed, says: "I [Alexander] am going to attack the enemy left wing. . . . When you see me in the thick of the fight, set our right wing in motion and attack the enemy while they are in confusion" (8.14.15).¹⁰¹ Yardley also has: "When [Alexander] had attacked the enemy ranks according to plan, Koinos made a vigorous attack on the left wing" (8.14.17).¹⁰² In both Rolfe's and Yardley's translations, the concluding statement is that Coenus attacked the *enemy left wing*.

Thus, Arrian's (and Curtius') "to the right," ὡς ἐπὶ τὸ δεξιόν (5.16.2) means to Alexander's right. This argument is old (Droysen 1880; Heitland 1879; McCrindle 1896; Wheeler 1900; Bury 1900);¹⁰³ but since it was proposed while there were still horse cavalry regiments, it should be respected. Heitland correctly says that it does not matter what the Indian cavalry right did.¹⁰⁴ Even if the Indian cavalry right did move, it did not have any impact at the Indian left, and it would have taken significant time to ride to their left. In addition, it is not certain that all the

1948, 196; Devine 1987, 92. But δεξιὸν is "on the [his] right" since the preposition is used for movement towards the right (LS). McCrindle 1896, 308: Alexander "attacked them himself on the left wing, ordering Koenus to fall upon them on the [his] right."

⁹⁹ Note also Curt. 8.14.5 *in dextrum cornu hostium* and *in laevum hostium cornu* (8.14.15), but [*ad*] *dextrum move* (8.14.15). Also, Livy 13.21.12: *duas legiones ex subsidiis dextra laevaue alae* (The praetor moved) two legions in reserve to the right and the left of the allied troops." Cf. Livy 28.14.15: *mittit ut cornu extenderent in sinistram partem quemadmodum se tendentem ad dextram uidissent*, "he ordered them to extend their wing towards the left just as they had seen him moving his wing to the right." Bosworth 1995, 295 cites "to hasten their fate" *movere fortunam* Curt. 10.9.17, but this supports the idea that *dextrum move* means "hasten his right." Devine 1987, 103 translates it as "move towards the right" (although he thinks it is Porus' right).

¹⁰⁰ Devine 1987, 94. Cf. Heitland 1879, 123: the Indian left. Hedicke 1919 has *a laevo cornu*, apparently an emendation.

¹⁰¹ "Cum ego," inquit, ... *in laevum hostium cornu impetum fecero, viderisque me in medio ardore certaminis, ipse [ad] dextrum move et turbatis signa infer*" Curt. 8.14.15.

¹⁰² *Iamque, ut destinatum erat, invaserat ordines hostium, cum Coenus ingenti vi in laevum cornu invehitur* Curt. 8.14.17.

¹⁰³ Wheeler 1900, 442 says those who think Coenus moved to his left misread Arrian. Bury 1900, 804 says Coenus rode toward the Hydaspes—Alexander's right. Wilcken 1967, 182: Coenus was behind Alexander then moved up and turned to his right, attacking the rear of the Indians' left-wing cavalry that was facing Alexander. Romm 2011, 216 n.5.16.3b "to the right" is possible but "problematic."

¹⁰⁴ Heitland 1879, 123.

Indian cavalry fought Alexander on their left: Arrian (5.17.1) says “the Indians brought together their cavalry from everywhere” to face Alexander, but this need not include the Indian right.

McCrindle, in a note in his appendix, approvingly quotes Heitland’s position about Coenus’ actions.¹⁰⁵ Heitland says once the chariots were out of the way, there was more flexibility to act against the Indians’ left wing. He translates Arrian as: “[Alexander] ordered him, when the barbarians on seeing what a dense mass of cavalry was opposed to them, should be riding along to encounter it, to hang close upon their rear” (5.16.2).¹⁰⁶ Heitland and Droysen think that Alexander put Coenus on the Maceconian far right wing. Alexander made a flanking movement against the Indian horse, which was facing Coenus. They turned towards Alexander, and Coenus fell on what had been their front but was now their flank.¹⁰⁷ (Any movement of the Indian right cavalry did not depend on Coenus’ position or action.¹⁰⁸) But based on Arrian, Coenus was on the far right, and Alexander made the charge (5.16.4) against the Indians (out of position) facing him, and Coenus fell on their rear.¹⁰⁹ This is Wheeler’s view: Alexander sent Coenus in a “wide swing to the right against the extreme flank of the enemy, so that as the enemy’s horse advanced obliquely out of position to meet Alexander, [Coenus] might fall upon their rear.”¹¹⁰

Xenophon advised that cavalry should be divided “into two units, one to follow the other thus disguising the total number of cavalry committed to the action. On close approach to the enemy the rear unit should wheel to come into line just prior to the charge, thus gaining an element of surprise which would give them an advantage” (*Hipp.* 8.17-18).¹¹¹ This is what Coenus did: Alexander sent Coenus with two regiments (who were behind Alexander) to his right just before Alexander’s charge. This increased the element of surprise. It also answers Tarn’s question about what Arrian meant when he said: “when the Indian cavalry shall see the body (στῖφος) of my cavalry facing them” (5.16.3);¹¹² Coenus moved up besides Alexander (so that his cavalry became more “solid” στῖφος) and surprised the enemy with his presence; then Coenus rode around the enemy wing and hit their flank or rear.

Theory 4 makes the most sense given what cavalry horses could and would do in battle. It is preferable to the positions of Hammond, Tarn, Heckel, Bosworth, and Worthington, all of whom, however, tried to address in a reasonable way the problem of Coenus’ movements in

¹⁰⁵ McCrindle 1896, 360. Heitland 1879, 122-3.

¹⁰⁶ McCrindle 1896, 360. Heitland 1879, 122-3.

¹⁰⁷ Droysen 2012 [1880], 308-9. McCrindle 1896, 360.

¹⁰⁸ Bosworth 1988, 128 somewhat agrees, saying that the Indian cavalry on its left was outnumbered and needed to transfer cavalry to its left whether or not it saw Coenus. But it is more likely that no Indian cavalry transferred from the Indian right to its left.

¹⁰⁹ This is supported by Polyaeus, if we can trust him, (*Strat.* 4.3.22): Alexander on his right had half of his cavalry in front and half in an “angled formation,” and his phalanx and light-armed troops were to their left. Coenus, then, commanded the “angled formation.”

¹¹⁰ Wheeler 1900, 442. The enemy faced Alexander but since they were out of order, Alexander attacked their flank, as did Coenus in the rear. (Bosworth 1995, 299 ad 5.16.4 translates κατὰ κέρας . . . ἔμβαλεῖν as “to attack the Indians in the flank.”)

¹¹¹ Hutchinson 2000, 204.

¹¹² Tarn 1948, 146. Bosworth 1995, 295-6 ad 5.16.3: “mass of cavalry facing them.” Robson 1933 (at Arr. 5.16.3) has “so soon as the Indians should perceive the solid body of cavalry beside Alexander.”

relation to the ancient sources and who realized that Coenus contributed to Alexander's encirclement of the Indian cavalry-left (so Hammond's battle plan has the Scythian cavalry in the role that Coenus plays according to Wheeler, but still has Coenus attack the Indian left wing).¹¹³ Because what happened on the Macedonian left does not matter, Theory 4 obviates the necessity of the pointless feint (Theory 3) as well as the suggestions of riding behind the Indian line (Theory 1) or between the lines (Theory 2). Theory 4 keeps the main cavalry action on the Indian left while closely following the Greek and Latin sources. It also corresponds to the actions of Xenophon's Cyrus at Thymbrara, where he attacked the back of the enemy left. (See Section 5.)

Consequently, Arrian (5.16.3) means: Alexander sent Coenus "to *his* right with the regiments of Demetrius and his own; he ordered that as soon as the enemy should perceive the solid body of Alexander's cavalry opposite him and advance to meet it, Coenus should attack their rear."¹¹⁴

4. Symmetry of Forces

Porus drew up his forces in a symmetrical manner, with his cavalry on either wing (5.15.4, 7);¹¹⁵ Alexander's left faced 2000 enemy cavalry. According to Bosworth, it makes sense that Coenus would be on the Macedonian left so that the Macedonian cavalry charged on both the left and right;¹¹⁶ and he says Coenus commanded the left wing (5.16.3; Curt. 8.14.15).¹¹⁷ Bosworth is correct that cavalry were on both of Alexander's wings, but this symmetry should have existed before and during the battle. If the ground was adequate for Porus to have cavalry and chariots on his right, then Alexander could have cavalry there. Some of Alexander's cavalry (but not Coenus and Demetrius) must have been positioned on his left to protect it and to attack the enemy.¹¹⁸ Since Porus had more infantry than Alexander, his line is usually estimated as two or more miles long and Alexander's line as a bit more than one mile.¹¹⁹ Thus, Alexander's left wing would have been enveloped by the enemy forces. He could not have left his left, and his rear, exposed to such danger with only light-armed to protect it (even if the lines were equal length).

¹¹³ Hammond 1997, 165.

¹¹⁴ ἔχουσθαι αὐτῶν Mid. + gen. is usually hold on to or follow (LSJ).

¹¹⁵ This was the typical formation for Hellenistic armies (Sabin 2007, 404), but classical Greeks weighted the right wing more.

¹¹⁶ Bosworth 1995, 295 ad 5.16.3.

¹¹⁷ Bosworth 1995, 295 (ii) (a).

¹¹⁸ Heckel 2008, 117-18 has Coenus on left hidden from view and the mercenary cavalry arrives later. Worthington 2016, 247 starts Coenus on the Macedonian left, as do Heckel 2004, 242 Battle plan and Bosworth 1995, 295-6.

¹¹⁹ For the length of the lines, see n.75. Hammond 1997, 165 Plan: Porus' line was about 2 miles and Alexander's one mile. Porus had more (20,000-30,000, ten deep) infantry than Alexander (6000-10,000, 8 deep). Bosworth 1996, 16 thinks 20,000 likely. Bosworth 1995, 292 says the numbers are unknown but Alexander's line was 7000 m (0.4 miles) if 8 deep. Worthington 2016, 246: both lines were one mile and 10 deep.

It is probable that there was Macedonian cavalry on their left. Arrian tells us twice that Alexander did not have all his cavalry with him on his right: he selected the best of his cavalry when he drew up his marching order (5.13.4), and just before the battle, “he took with him the majority of his cavalry” (τὴν πολλὴν τῆς ἵππου ἀναλαβὼν 5.16.2). Arrian does not say which units Alexander selected (except the horse-archers).¹²⁰ What did the rest of his cavalry do in the battle?¹²¹ He also had the mercenary cavalry with Meleager, Attalus, and Gorgias that arrived later (5.12.1).¹²² All this cavalry must have encircled the enemy (5.17.7), and some of it should have guarded Alexander’s left flank prior to that. Arrian says that before the battle Alexander did not immediately put his forces in battle order and lead them forward but rested his infantry, “moving his cavalry around in a circle” (ἐξ κύκλους περιπτεύων 5.16.1), screening them from the enemy. Then, when he drew up his battle line, he must have revised his order and positioned his cavalry on each wing, with “the majority” (5.16.2) on his right.¹²³

Curtius says: “The Scythians and the Dahae first of all attacked the Indi; then Alexander sent Perdiccas with the cavalry against the right wing of the enemy (*in dextrum cornu hostium*). And already the battle had begun everywhere” (8.14.5-6; Arr. 5.13.1; 5.12.2 says Perdiccas was present). Bosworth says Curtius means that Perdiccas “led a charge against the enemy right” and commanded Alexander’s cavalry left (8.14.5).¹²⁴ This may be evidence for regular cavalry on the Macedonian left. Bosworth thinks it might be an “authentic detail” but believes Curtius is “confused” and that he is speaking about the skirmish, not the battle.¹²⁵ Yet, the skirmish and the battle had similar order on the right wing since Alexander thought that he was encountering Porus at the skirmish (5.15.1), and his actions there were repeated in the battle. Moreover, since I have argued (Section 1) that the Sacae (Scythians) were on the left wing while the Dahae were on the right, Curtius would be speaking about forces on both of Alexander’s wings in addition to Perdiccas’ command. If Curtius confusedly combined the skirmish and the battle but is accurate about left-wing cavalry, then (with or without Perdiccas) Alexander positioned some of his cavalry (and horse-archers) on his left and they attacked from the left in the battle.¹²⁶

Heckel does take the problem of symmetry into account: on his Plan he shows Coenus and Demetrius on the Macedonian left wing, along with Greek mercenary cavalry (with a note “late in arriving”).¹²⁷ Worthington, too, and others (Theories 1 & 2) have Coenus start on the

¹²⁰ Hammond 1997, 165 Plan has the Sacae and Bactrian and Sogdian cavalry on Alexander’s right. Bosworth 1995, 295 has Coenus command the Bactrians and Sogdian cavalry along with the hipparchy of Demetrius on the Macedonian left.

¹²¹ Some would have joined their hipparchies before the battle, while Alexander rested his troops.

¹²² Bosworth 1995, 277-8 ad 5.12.2: they crossed late. Heckel 2008, 117-18: they arrived late to left wing. Cf. Fuller 1960, 187; Tarn 1948, 190-2.

¹²³ A second order of battle. Devine 1987, 99 says he had two.

¹²⁴ Bosworth 1995, 291 ad 5.15.2, citing Anspach 52. Bosworth 1995, 294-5: Coenus led the Bactrians, Sogdians, and Demetrius’ unit.

¹²⁵ Bosworth 1995, 291 ad 5.15.2 says that “Curtius’ narrative is not beyond suspicion” and is confused.

¹²⁶ Perdiccas’ role cannot be determined. He was present at the battle (Arr. 5.13.1). Tarn 1948, 142-4 says Perdiccas was promoted to staff; at the Hydaspes he had an overall command but (141) also commanded cavalry. (Curt. 8.14.15; Arr. 5.13.1; 5.12.2). Cf. Bosworth 1995, 294-5.

¹²⁷ Heckel 2004, 242 Battle Plan. Heckel 2008, 117 Battle Plan.

Macedonian left, although they think he moves to his right wing.¹²⁸ But some of the other cavalry that crossed the river with Alexander should have been on the Macedonian left, including the Bactrian and Sogdian cavalry and the Sacae.¹²⁹ It is not necessary to place Coenus there. Remarkably, Tarn includes the Bactrian and Sogdian cavalry on Alexander's right and then complains that when Arrian (5.16.4) said that Alexander took "the Companions" with him (τοὺς ἑταίρους ἔχων τοὺς ἱππέας), he included foreign forces under "Companions."¹³⁰ But Arrian would be correct if the foreign cavalry were at the Macedonian left.¹³¹ In addition, situating the foreign cavalry (i.e., the Bactrians, Sogdians, and Sacae) on the left wing clarifies why Arrian gives as battle casualties 20 Companions and 200 non-Macedonian cavalry, numbers Bosworth finds hard to understand.¹³² But if Alexander had his hipparchies and Coenus' (Theory 4), the *agema*, and Dahae (3300),¹³³ they could have defeated Porus' 2000 (or 1500)¹³⁴ left cavalry especially in view of the superiority of the Companions; and the Bactrians, Sogdians, and Sacae on his left (2000)¹³⁵ would have been able to check Porus' 2000 (or 1500) cavalry on Porus' right until the mercenary cavalry arrived, but likely struggled to do so.

The arguments that Coenus was hidden from view on his left to induce the Indian cavalry right to move to their left (Theories 1 & 2) or that Coenus feinted a move to his left to hold the Indian cavalry right on their right so that they did *not* move (Theory 3) have been rejected above. But if Alexander had cavalry positioned on his left wing, those theories are unnecessary. I argue, therefore, that Alexander placed his foreign cavalry on his left wing where they protected his phalanx left and prevented the enemy from outflanking his left wing, and they also helped to defeat the Indian right-wing cavalry there and assisted in the encirclement.

5. The Battle of the Hydaspes and Xenophon's Battle of Thymbrara

Why is Arrian's account of the Battle of the Hydaspes so abbreviated? Why does he devote so much attention to the line of march and actions before the battle, why are orders and dispositions given during the march, and why are so many pieces of information about

¹²⁸ Heckel 2008, 117-18. Worthington 2016, 247. Milns 1969, 214 (plan 212). Bosworth 1995, 295.

¹²⁹ Bosworth 1995, 294-5 has the Bactrian and Sogdian cavalry on the left, under Coenus' command. Fuller 1960, 187, who omits the Bactrian, Sogdian, and Sacae from the battle, puts Meleager, Attalus, and Gorgias, and the Greek mercenaries, horse and foot (possibly 500 cavalry and 5,000 foot) in Alexander's rear, citing Arr. 5.12.1. Also Tarn 1948, 190-2, but he says Alexander had no cavalry on his left. Hammond 1997, 165 puts the foreign cavalry on the right.

¹³⁰ Tarn 1948, 194 n.4 who says that this is the only time this occurs in Arrian.

¹³¹ Polyaeus (*Strat.* 4.3.22): Alexander on his right had half of his cavalry in front and half in an "angled formation," and his phalanx and light-armed troops were to their left, and "adjacent to these he posted [another] 'angled formation' (ἐπικλῆμπιος)", Devine 1987, 93-4. Perhaps this "angled formation," a technical term, next to the phalanx was non-Macedonian left-wing cavalry, to protect Alexander's left.

¹³² Bosworth 1995, 304.

¹³³ Hammond 1997, 165: Alexander had 1000 and Coenus 1000; Devine 1987, 98-9. Cf. Tarn 1948, 166.

¹³⁴ Devine 1987, 104 subtracts the losses of Porus' son, so 1500 for Porus on his left.

¹³⁵ Hammond 1997, 165.

Alexander's battle plan, forces, commanders, and maneuvers missing? Why are we not informed about who was on Alexander's left wing and what they did? Why are the chariots ignored in the battle? And why is the battle proper (the *mél *) so brief? An answer to some of these problems is found in Arrian's narrative structure of the battle, which was profoundly influenced by Xenophon.

Xenophon used his fictional Battle of Thymbrara (Cyr. 7.1) to explore the strategy and tactics of contemporary Spartan and Theban armies.¹³⁶ It was "a device designed to teach tactical lessons."¹³⁷ Anderson remarks that Sparta preferred flanking actions, while Thebes relied on the wedge; at Thymbrara, Cyrus faced both dangers and overcame them by outflanking and encircling the enemy.¹³⁸ Xenophon's work was read by later commanders, and since Alexander was famous for combining the Spartan and Theban systems,¹³⁹ and Philip and Alexander knew about the great battles of Sparta and Thebes, they both likely read Xenophon.¹⁴⁰ Arrian says that Alexander mentioned Xenophon and his Ten Thousand (2.7.8), and Brunt believes that Alexander read him.¹⁴¹ Hutchinson goes so far as to say that Cyrus' use of cavalry was "being thought of by Epaminondas and Philip II" and that Philip perhaps got the idea for the *sarissa* from Thymbrara.¹⁴² And Sekunda points to the "mixed" infantry both of Alexander and of Cyrus at Thymbrara and says that Alexander was inspired by reading Xenophon.¹⁴³ Thus, when Alexander was confronted with an exotic eastern enemy with unusual armaments, he naturally would have thought of Xenophon and Thymbrara as he confronted Porus. Alexander faced chariots (encountered at Gaugamela and by Xenophon at Cunaxa, *An.* 1.8) and elephants, and an infantry armed with bows and shields that rested on the ground.¹⁴⁴ Cyrus, armed with camels and chariots, faced enemy Egyptians with full body shields (cf. *Xen. An.* 1.8.9). Alexander, although he, like Cyrus, was "over-winged and over-filed"¹⁴⁵ at the Hydaspes, similarly prevailed by outflanking and encircling the enemy. Therefore, some of Alexander's major decisions (e.g., encirclement, honoring Porus) were likely inspired by Xenophon's Thymbrara.

More importantly, Arrian was strongly influenced by Xenophon both as a commander himself and as a historian. Matten has argued that a Roman commander of Arrian's time would have been trained by reading historians like Xenophon and treatises on tactics.¹⁴⁶ In addition, the historian Arrian was "celebrated as the new Xenophon" and stressed Xenophon's influence in his writings; he titled his history *Anabasis* and even used the name Xenophon for himself.¹⁴⁷

¹³⁶ Anderson 1970, 71. Stadter 1991, 473: "Thymbrara must be seen from the point of view of contemporary tactics."

¹³⁷ Anderson 1970, 170.

¹³⁸ Anderson 1970, 165.

¹³⁹ Sabin 2007, 410.

¹⁴⁰ McGroarty 2006; Due 1993, 54; Lane Fox 2004, 83. Stadter 1991.

¹⁴¹ Brunt 1976, 1.147 n.4. Also Sekunda 2007, 353.

¹⁴² Hutchinson 2000, 214, 216.

¹⁴³ Sekunda 2007, 353.

¹⁴⁴ Lane Fox 2004, 358.

¹⁴⁵ Anderson 1970, 165.

¹⁴⁶ Matten 1999, 18.

¹⁴⁷ Bosworth 1980, 2, 5, 6-7. Liotsakis 2019; Leon 2021. Stadter 1980, 165.

Bosworth in his commentary on Arrian notes verbal similarities between the two.¹⁴⁸ When Arrian, a “literary stylist” who chose what to include and employed rhetorical skills in doing so,¹⁴⁹ examined his sources for the Hydaspes, he recognized already existing parallels among Alexander's actions and his enemy at the Hydaspes and Xenophon's Battle of Thymbrara that were perhaps derived from Alexander's own respect for Xenophon. Arrian decided to use Xenophon's story of Thymbrara as his narrative model for his account of the Hydaspes, increasing the similarities with Xenophon.

Difficulties with Arrian's account of the Battle of the Hydaspes include: much detail is omitted, there is no information about many of Alexander's forces that crossed the river, information about troop units and commanders is incomplete, most commanders and units are mentioned only before the battle, and the battle narrative is very brief and concentrates on Alexander's right-wing cavalry. Devine, probably rightly, blames Ptolemy for this, saying that Ptolemy's “account, at least as reproduced by Arrian, fails to convey any really coherent picture of the overall tactical plan.”¹⁵⁰ Nevertheless, comparison with Xenophon's account of Thymbrara makes Arrian's narrative understandable since some of these problems are found in Xenophon as well. Arrian did not make up his account or omit historical facts or distort his material.¹⁵¹ Rather, because of deficiencies in his sources and his interest in writing in an elevated style that honored his famous predecessor, Arrian shaped his material (which already inclined towards Xenophon) in Xenophon's style of organization. This explains Arrian's elliptical structure that has led Bosworth to suspect an unsound text at Arrian's account of Alexander's dispositions (5.13.4).¹⁵² Xenophon's model resulted in Arrian's narrative having an elongated structure, limited information about forces and orders scattered before and during the march, terse descriptions, and a very brief battle narrative. This enabled Arrian to obscure his lack of facts and to honor Xenophon by following the paradigm of his predecessor. This interpretation may even explain puzzling problems: e.g., the Lydian front stretched five and one quarter miles, which Hutchinson says was “beyond the experience of Greek warfare.”¹⁵³ Thus, Arrian's outrageous length of Porus' line (five miles) (5.15.4-5)—his source may not have been accurate, but Arrian did not object—corresponds to the line at Thyambrara.

Xenophon's single battle in the *Cyropaedia* is a standard type of description (ecphrasis) that is found in the *progymnasmata* of Hermogenes. The type includes Antecedents (topography, reconnaissance, numbers, arrangement), Engagement (skirmish, advance, maneuvers, *mélée*),

¹⁴⁸ Arr. 1.12.3-4. Bosworth 1988, 2-3; Bosworth 1995, 297; 286 ad 5.13.4: κατὰ δὲ τὰ ἄκρα “at the extremities (wings) of the phalanx” (5.13.4) is “yet another borrowing” from Xenophon, *Cyr.* 7.5.4 συνῆσαν τὰ ἄκρα.

¹⁴⁹ Howe 2016.

¹⁵⁰ Devine 1987, 94.

¹⁵¹ Bosworth 2003, 172, 194: Arrian primarily recorded truth and only secondarily what was plausible.

¹⁵² Bosworth 1995, 283 “it is hardly possible that the text is sound.” Also, Bosworth 1995, 283 ad 5.13.4 “deep-seated corruption” and Tarn 1948, 191-2 on 5.13.4.

¹⁵³ Hutchinson 2000, 212.

and Consequents (rewards, prisoners)¹⁵⁴. Both battles conform to this outline, although the fictional Thymbrara lacks topography, date,¹⁵⁵ and skirmish, and Arrian ignores reconnaissance.

The most notable parallel is the asymmetrical pattern: the focus on the march and right-wing cavalry, with limited attention to the battle that ends in encirclement. Much about each battle must be deduced from the march to the battle-site and the orders before battle. Xenophon, since his battle is fictional, possibly was influenced by his experiences at Cunaxa (*An.* 1.8.17-1.10.19), where the Greeks on the right knew little about the rest of the battle. In any case, Xenophon chose his irregular narrative order: Cyrus' march and orders explain the battle-formation and commanders' actions later. In Arrian, too, the crossing, the march, and the skirmish provide most of the detail for the battle. But Arrian's emulation of Xenophon also hides his source deficiencies since his source Ptolemy likely only reported about the Macedonian right.

Xenophon's report of the battle proper is terse: Cyrus charged the enemy's left wing with his cavalry; his infantry followed (7.1.26). The camels attacked on their left and frightened the horses (7.1.27); Artagerses and the chariots charged, and the cavalry and chariots killed many (7.1.28). Abradatas' chariots (in front) advanced (7.1.29); they crushed horses and men, and there was "indescribable confusion" (τὰράξω 7.1.31-2). The Egyptians with great spears and shields kept shoving (7.1.33-5), were shot by missiles, and there was "dreadful carnage" (7.1.35). Cyrus' cavalry hit the enemy rear (7.1.36) and surrounded the Egyptians (7.1.39). Cyrus' left wing and his other commanders are not mentioned.

In Arrian, Alexander charged with his cavalry and horse-archers against the enemy left; the infantry waited until there was "confusion" to move (5.16.2-4). The Indian left-wing cavalry divided to face Alexander and Coenus (5.17.2) but fell back. The phalanx advanced, shooting elephants with javelins, and the cavalry attacked (5.17.3-4, 6); the elephants crowded together and trampled the enemy (5.17.5-6). Alexander's cavalry and infantry encircled the infantry and elephants (5.17.7). Alexander's left and his commanders, except Coenus, are not mentioned.

Xenophon tells us before the battle that Abradatas commanded the chariots in front (7.1.9, 15), ahead of the heavy infantry. Artaozus and Artagerses with infantry follow the women's carriages and then Pharnuchus and Asiadates with their cavalry; Artagerses commanded the camels (6.3.31-33). Cyrus ordered Hystaspas on his left wing, who had "half the Persian cavalry," to attack those opposite him (7.1.19);¹⁵⁶ he tells Arsamas (with infantry) and Chrysantas (with cavalry) to take charge of the "right wing" (6.3.21) (in front)¹⁵⁷ and follow Abradatas when he charges with his chariots (7.1.9). Artagerses commanded the infantry in the rear (and Pharnuchus the cavalry there) and was ordered to attack the enemy's flank opposite him (7.1.22)—on his left—with the camels and his infantry (and Pharnuchus with his cavalry), after Cyrus attacked on his right. Xenophon's terse battle description concentrates on Cyrus.¹⁵⁸ Without this other information (scattered over two books), we would know little about the battle

¹⁵⁴ Pease 1934, 436-7. See also Lendon 2017 for patterns in battle narratives.

¹⁵⁵ Pease 1934, 436-7.

¹⁵⁶ Anderson 1970, 179, 400 puts Hystaspas on his left front wing; Hutchinson puts him in the left rear.

¹⁵⁷ So Anderson 1970, 179. Cf. Hutchinson 2000, Plan.

¹⁵⁸ Anderson 1970, 400 Plan.

and would not understand the order of forces, the commanders, how Cyrus destroyed the enemy right wing, or how he prevailed.

In Arrian, Alexander left behind Craterus with his cavalry, the Arachotians and the Parapamisadae, the brigades of Alcetas and Polysperchon, and the 5000 Indians (5.11.3). Meleager, Attalus, and Gorgias with mercenary cavalry and infantry were ordered to cross during the battle (5.12.1). Alexander had the *agema* and the cavalry of Hephaestion, Perdiccas, and Demetrius, the Bactrian and Sogdian cavalry, and the Sacae and Dahae; the bodyguard, the brigades of Cleitus and Coenus, the archers and Agrianians (5.12.2). After the crossing, Alexander selected the best of his cavalry for his right and put the light forces on either side of the infantry (5.13.4). But Arrian's report of the dispositions after the crossing is "seriously defective" and there is no reference to the phalanx battalions.¹⁵⁹ Immediately before the battle, only the cavalry right is mentioned, and the "phalanx" is ordered to delay its attack (5.16.2-3).

Alexander's battle line is presented as asymmetrical: archers, Agrianians, and javelin-men on either side of the phalanx (5.13.4), cavalry and horse-archers only on the right. Arrian says nothing about foreign cavalry or other forces, or if cavalry were on the left, or the fighting on the left, or many of his commanders. Meleager, Attalus, and Gorgias with mercenary cavalry and infantry probably did join the battle at some point. Craterus arrived late (5.18.1). Horse-archers in front of the Companion cavalry played a significant role in the skirmish (5.13.4, 15.1, 15.3) and the battle. Arrian (like Xenophon) includes a series of orders well before the battle: to Craterus (5.11.4), Meleager, Attalus, Gorgias (5.12.1), the phalanx (5.14.1), Tauron (5.14.4), Coenus (5.16.3), and Seleucus, Antigenes, and Tauron (5.16.3).¹⁶⁰ The battle order and battle itself must be deduced from prior information. Porus' line, with light armed on either side of the phalanx, elephants in the middle, and cavalry and chariots on each wing, is symmetrical (5.15.5, 7). Alexander's likely was, too. Xenophon's model suggests cavalry and Sacae horse-archers on Alexander's left and right, the Bactrian and Sogdian cavalry on the left wing, and mercenary cavalry and infantry arriving later and in the rear.

There are other narrative parallels:

5.1 Perception in Cyrus' and Alexander's orders

Cyrus tells Arsamas and Chrysantas that when he attacks, "you will perceive it (αἰσθήσεσθε), for there will great noise" and then they should follow Abradatas' charge (7.1.9). Cyrus ordered Artagerses and Pharnuches to attack when they "see" the enemy fleeing (θεάσῃ 7.1.17; ἴδῃς 7.1.17; αἰσθάνησθε 7.1.22) and the chariots to advance when they "see" Cyrus attacking (αἰσθησθε 7.1.21). When Artagerses saw (ᾗσθετο) the enemy fleeing, he attacked (7.1.27).

¹⁵⁹ Bosworth 1995, 283, ad 5.13.4. Tarn 1948, 291-2.

¹⁶⁰ Devine 1987, 94.

Alexander commanded that when the Indians perceive (ιδόντες) the cavalry opposite them and advance, Coenus should follow behind them (5.16.3). The infantry was to wait until “they observed” (κατίδωσιν) the enemy in confusion (5.16.3; also ἴδοιεν 5.12.1).

5.2 Direct speech

Alexander’s order to Craterus is in direct speech (5.11.4); Bosworth says this is a “conscious imitation” of Xenophon.¹⁶¹ There are many examples in the *Cyropaedia*, e.g., 7.1.8-22.

5.3 Surprise

Cyrus kept cavalry and infantry hidden behind his forces to make his attack on the enemy wings a surprise. (Theory 4): Coenus was hidden behind Alexander and moved up to *his* right just before Alexander’s charge. This increased the element of surprise.

5.4 Attacking the enemy left

Cyrus attacked the enemy’s left wing with some of his cavalry; Abradatas (and the heavy infantry) were told to wait (7.1.17) until the enemy fled. The other infantry followed Cyrus and “began to envelop the enemy” wing (7.1.26) and put them to flight because the enemy wing was away from the phalanx (7.1.6-8). Hutchinson says that Cyrus dealt “with the wings piecemeal while holding the enemy centre and denying it any possibility of giving support.”¹⁶²

Alexander ordered his infantry to wait while he attacked the enemy left-wing cavalry (5.16.4)¹⁶³ with selected units of cavalry. The enemy cavalry faced both Alexander and Coenus and fell back (5.17.1-2). Wheeler: “The enemy’s left was simply drawn out of position, and then caught between two masses of the Macedonian cavalry . . . thrown into confusion, and scattered to the shelter of the elephants.” It was “utterly broken” and the infantry center was exposed to flank attack.¹⁶⁴ Alexander’s center held and pushed back the enemy center (5.17.3-4).

5.5 Attacking the “tip”

Cyrus says that he shall attack the “tip” of the enemy’s left wing (κατ’ ἄκρον 7.1.21). In the battle, he “enveloped the enemy” on either side (περιεπτύσσοντο ἔνθεν καὶ ἔνθεν 7.1.26) of the enemy wing—he attacked and went around its tip to its back.¹⁶⁵

¹⁶¹ Bosworth 1995, 277.

¹⁶² Hutchinson 2000, 216.

¹⁶³ Bosworth 1995, 299 ad 5.16.4: Alexander attacked the cavalry flank.

¹⁶⁴ Wheeler 1900, 443.

¹⁶⁵ See the plans of Hutchinson 2000; Anderson 1970, 401.

Alexander charged the enemy cavalry left as it was moving towards him and away from their phalanx. Coenus, on Alexander's right (Theory 4), went around the end of the enemy cavalry and hit their rear.¹⁶⁶ Alexander and Coenus together attacked the Indian cavalry left.

5.6 The confusion of battle

Both battles consist of dense hand-to-hand fighting by the infantry, the use of javelins, and general confusion, with animals mixed in. The narratives of both express this confusion by being limited to a few paragraphs about animals trampling soldiers and disordered fighting.

Abradas and his chariots moved against the center (7.1.29). Horses and men were caught in the chariots and many horses and men fell, and wheels ran over them, crushing men. There was "a dreadful conflict with spears, lances, and swords" (7.1.31-33). The Egyptians locked shields and shoved, and the Persians were forced back to the towers (7.1.33-34). There was "a dreadful carnage" by all kinds of missiles and arms (7.1.35).

The Macedonian phalanx advanced, throwing javelins at the elephants, which charged into the infantry, as did the Indian cavalry (5.17.3). Then, the cavalry forced the elephants back, which trampled the Indians, and pushed back the Indian cavalry. The elephants were continually shot with javelins while they trampled friend and foe until they finally retreated (5.17.4-7).¹⁶⁷

5.7 Encirclement

Both battles end when one side encircles the other. After the Persians were forced back, Cyrus attacked the enemy in the rear. He killed many; but the Egyptians faced about and fought vigorously (7.1.36-37). Then Hystaspas and Chryasntas came up with the Persian cavalry and "the Egyptians were now assailed on every side." Cyrus told his cavalry to shoot and hurl from a distance (7.1.39). Eventually, the Egyptians "formed a complete circle" and crouched behind their shields. Cyrus surrounded the enemy with cavalry and towers.¹⁶⁸

At the Hydaspes, after the elephants were forced back (and the Indian infantry trampled), Alexander "threw his cavalry in a circle around their whole division, and then gave signal for the infantry, locking shields and concentrating into the most compact mass possible, to move up in full phalanx" (5.17.7). The Indian cavalry and their infantry were all cut down.

5.8 Animals (camels; elephants)

Cyrus used camels (with two archers riding them) on his left; they frightened the horses on the enemy right (7.1.27) but were ineffective in the battle (7.1.48). Porus had elephants (with archers

¹⁶⁶ Polyaeus (*Strat.* 4.3.22): Alexander intended to "outflank" (ὕπερκεράσαι) the enemy and surrounded them.

¹⁶⁷ Cf. Curtius (8.14.18-32) and Diodorus (17.88.1).

¹⁶⁸ Anderson 1970, 401

riding) to frighten horses. The elephants were in front of the infantry and became mixed into the dense fighting; they contributed to the confusion by trampling their own side (5.17.6-7).

5.9 Chariots, bows, and shields

Cyrus used chariots in front of his infantry, and they led his frontal attack (7.1.9, 15, 19). The enemy Egyptians were armed with huge spears and body shields (7.1.33-5), although the bow was a standard weapon for Egyptians.

Porus positioned chariots on each of his wings, in front of his cavalry (Arr. 5.15.7). The Indian infantry were primarily armed with long bows the height of a man that rested on the ground and with small shields (8.16-6-8).

5.10 Praise and treatment of the enemy (Egyptians, Porus)

Cyrus admired the Egyptians' bravery and regretted their deaths; he ceased fighting and sent a herald to ask if they wished to live and be accounted brave by surrendering and becoming his friends. He offered pay, land, cities, wives, and servants. The Egyptians agreed (7.1.41)

Arrian praises Porus as a commander and "a brave soldier" (5.18.4), tall, handsome, spirited, brave, and a king (5.19.1; Curt. 8.14.13-14). "Alexander having seen him play a great and gallant part in the battle desired to save him" and sent two messengers (5.18.6-7). Porus asked to be treated as a king, and Alexander confirmed him in his realm (5.19.2-3; Curt. 8.14.31-46).

5.11 Hypaspists

When Cyrus reformed the Persian army, he gave the same armament to the entire infantry that previously only the peers (ὁμοτίμοι)—his "friends" (2.1.11)—had worn: a corslet, a shield, and a sabre (2.1.9). I (hesitatingly) wonder if the problem at Arrian 5.13.4, the "triple division" of royal hypaspists, the *agema*, and the other hypaspists,¹⁶⁹ is the result of the influence of Xenophon. Arrian meant that the usual *agema* and hypaspists were present. But because he remembered the Persian "shield" (γέππον 2.1.9, 16) in the context of the shield-bearers, he alluded to Xenophon's "peers" and common infantry by his "royal hypaspists" and "the rest of the hypaspists." (Tarn argued that the hypaspists were peasants.¹⁷⁰) Alexander's regular infantry is omitted to make the parallel stronger. This is unprovable, but since Arrian is the only historian who uses the term hypaspists,¹⁷¹ this interpretation makes as much sense as any other.¹⁷²

¹⁶⁹ See Bosworth 1995, 283-4 for discussion.

¹⁷⁰ Tarn 1948, 140. Milns 1971, 186.

¹⁷¹ Milns 1971, 189, who thinks Arrian took the term from Ptolemy.

¹⁷² Alternatively, the "royal hypaspists" are the hypaspists and "the rest of the hypaspists" are the regular infantry (Tarn 1948, 148f.; Milns 1971, 189. Bosworth 1995, 284-5). Since Tarn argued that the hypaspists and

Summary

Some of these parallels (e.g., attacking the enemy left, the element of surprise, encirclement of the enemy, the treatment of Porus) can be traced to Alexander's actions (and Arrian's sources) and suggest that Alexander himself was influenced by Xenophon's Thymbrara and that Arrian noticed this and stressed it. But most of the similarities (e.g., orders and information provided in the line of march, the confusion of battle, the elongated account, the brevity of the battle narrative, the inclusion of perception and direct speech, and the concentration on trampling animals) strongly support the theory that Arrian shaped his account based on Xenophon's narrative of Thymbrara. Therefore, the involvement of Alexander's other forces in the battle, especially cavalry, and the possibility of a more symmetrical line, including cavalry on his left should not be dismissed just because they are not mentioned in Arrian's account of the *mél  *.

Conclusion

It is important to recognize the vital role that the horse-archers played in the battle of the Hydaspes. While most scholars limit them to causing confusion, they in fact destroyed the chariots, alleviating a great threat to the Macedonian forces and allowing Alexander more flexibility in his tactics. Since the chariots were on either side of Porus' line, the horse-archers were on either side as well. In addition, although Bosworth, Heckel, and Worthington all want Coenus to be positioned on the Macedonian left wing because they are bothered by the lack of Macedonian offensive symmetry, I go a step further and situate the Bactrian and Sogdian cavalry there, along with the Sacae horse-archers. This provides the necessary symmetry and protection to Alexander's line while enabling Coenus to remain where he should have been, on his own right wing (as Arrian's Greek text says he was). And an awareness that the elongated arrangement of Xenophon's narrative of Thymbrara was Arrian's model for his account of the Hydaspes explains many of the oddities and omissions in Arrian's narrative and supports a greater symmetry to Alexander's line than has been previously accepted.

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infantry had the same equipment (Tarn 1948, 153 although they are often thought to be light-armed), this is possible. The parallel with Xenophon is the same—the “peers” and others.

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