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Eastern Light on Jerusalem: Educational Practice in the Persian Empire

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Abstract

If the Post-Exilic period is now held to be the main phase of scribal production for the Hebrew Bible, understanding education in the Persian Empire is essential. Biblical scholarship has largely depended on evidence from earlier (Babylonian) or later (Hellenistic) periods, which is not applicable. This essay draws on direct evidence of Persian education in the eastern provinces to suggest a model of broader Persian scribalism.

Keywords: Scribalism; Education; Persia; Taxila; Astadhyayi

Note from the Avar Editorial Team: In Memoriam, Robert D. Miller II, OSF

This article is the product of a joint research venture by the late Dr. Robert (Bob) D. Miller II, OFS and his student Jonathon Riley. Bob and Jonathan submitted this article to Avar shortly before Bob passed away in November of 2023. As one of Bob's final projects, the paper represents a unique opportunity for Jonathon and the editorial team—of which two members (Trinka and Alderman) were also Bob's students—to honor his legacy as a model interdisciplinary scholar of life and society in the ancient Near East. Although reviewed by the editorial team, the article did not pass through the traditional double-blind peer-review process. The article displays Bob's expansive linguistic skill set, his expertise in interdisciplinary approaches, and his collegiality with his students at the Catholic University of America, whom he always considered equals in academic endeavors. Jonathon has brought the essay into its final form in a manner that reflects Bob's wish for his students to draw deeply from anthropological, archaeological, and linguistic wellsprings.

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Introduction

Biblical scholarship has made the Post-Exilic period the scribal production powerhouse of the Hebrew Bible. From the Pentateuch to the Deuteronomistic History, the Persian period, a narrow two centuries 539-333 BCE, has been invoked as the era to which the written form of the text belongs.² Many questions remain as to whether so much of the text can be attributed to this period, but when one considers 1-2 Chronicles, the so-called Priestly Source, the prophets Zechariah, Haggai, and Malachi, Esther, and Ruth at a minimum, Persian Judea's scribes were literary gangbusters. For the bulk of the Wisdom Literature, the Persian and early Hellenistic Periods are the consensus. Moreover, while understanding the nature of Persian-period schools would be useful for discussing any part of the Hebrew Bible, with the Wisdom Literature the text itself describes an "educational" *sitz im leben*. Proverbs, for example, employs a student-pupil genre setting that (regardless of the origins of the material in the book) becomes the "way the authors want their teachings understood."³

However, we have no direct evidence of education in the early Second Temple Period.⁴ Thus, of the fifteen essays in the 2017 volume, *Second Temple Jewish Paideia in Context*, only one deals with the Achaemenid Persian period. That essay, William Schniedewind's "Scribal Education in Ancient Israel and Judah into the Persian Period," builds its limited

² John Van Seters, *The Pentateuch: A Social-Science Commentary*, 2nd ed. (London: Bloomsbury T&T Clark, 2015), 189; Raymond F. Person, Jr., *The Deuteronomistic History and the Book of Chronicles* (Ancient Israel and Its Literature 6; Atlanta: Society of Biblical Literature, 2010), 11; Raymond F. Person Jr., *The Deuteronomistic School: History, Social Setting, and Literature*, Studies in Biblical Literature 2 (Atlanta, Society of Biblical Literature, 2002), 56-63, 73-81; Walter Dietrich, "Vielfalt und Einheit im Deuteronomistischen Geschichtswerk," in *Houses Full of All Good Things*, ed. Juha Pakkala and Martti Nissinen (Helsinki: Finnish Exegetical Society, 2008) 182-83.

³ Michael V. Fox, *Proverbs 1-9* (Anchor Bible 18A; New York: Doubleday, 2000) 75.

⁴ See James L. Crenshaw, *Education in Ancient Israel* (New York: Doubleday, 1998) 4-5 n.6 for review of this discussion.



reconstruction on pre-Persian Babylonian education (and much earlier Ugaritic), epigraphic evidence from Yehud, and passages from Ezra-Nehemiah.⁵

Persian Education

We might look at provincial education in the broader Persian Empire. However, although Hellenistic educational practices are documented,⁶ especially for Ptolemaic Egypt,⁷ about Persian education we know very little, all from Greek writers. Xenophon's *Cyropaedia* is an idealized, romanticized fiction. Herodotus (1.136) says Persians only learned riding, archery, and honesty. Strabo says Persian students "rehearse both with and without song the deeds of gods and noble men," learning "loud speaking," "breathing," and "use of their lungs" (15.3.19). There is a massive literature about scribal practices in the "Persia" of the Talmudic period,⁸ but activities in the Jewish academies of Sura and Pumbeditha cannot be read back several centuries into Achaemenid Judah, precisely for the same reason that New Testament scribalism is irrelevant: because of the intervening advent of Hellenism with its reading-heavy culture.⁹

⁵ William M. Schneidewind, "Scribal Education in Ancient Israel and Judah into the Persian Period," in *Second Temple Jewish Paideia in Context*, ed. Jason Zurawski and Gabriele Boccaccini (BZNV 228; Berlin: De Gruyter, 2017) 11–28.

⁶ Raffaella Criboire, *Gymnastics of the Mind: Greek Education in Hellenistic and Roman Egypt* (Princeton: Princeton University Press, 2001) 145, 181.

⁷ Judith Evans Grubbs, Tim G. Parkin, and Roslynn Bell, *The Oxford Handbook of Childhood and Education in the Classical World* (Oxford: Oxford University Press, 2013) 135.

⁸ Catherine Heszer, "Oral and Written Communication and Transmission of Knowledge in Ancient Judaism and Christianity," in *Oral-Scribal Dimensions of Scripture, Piety, and Practice*, ed. Werner Kelber and Paula A. Sanders (Eugene, OR: Wipf and Stock, 2016) 105–7.

⁹ Helmut Koester, *History, Culture, and Religion of the Hellenistic Age* (Introduction to the New Testament 1; Berlin: De Gruyter, 1982) 93–95, 122–24; Teresa Morgan, *Literate Education in the Hellenistic and Roman Worlds* (Cambridge: Cambridge University Press, 1998) 4, 90; Sean A. Adams, "Themes in Ancient Scholarship," in *Scholastic Culture in the Hellenistic and Roman Eras: Greek, Latin, and Jewish*, ed. Sean A. Adams (Transmissions 2; Berlin: De Gruyter, 2019) 1–2.

Lacking Achaemenid texts (exceptions to be discussed below), this essay reconstructs Persian educational practices from the eastern extreme of the Persian Empire: Taxila in modern Pakistan. It will be shown that Taxila is able to provide authentic evidence of Persian scribal education, and this evidence will be assembled in comparison with the meager textual evidence from Persian texts to illustrate what such education would have been in the Persian province of Yehud, as well.

The Achaemenids administered three satrapies in what is now Afghanistan—Aria (Herat), Arachosia (Kandahar), and Bactria, plus four “Indian” satrapies: Gandhara, Sattagydia, Maka, and “India,” possibly Sindh, which from Persian sources seems wealthier than the other three put together.¹⁰ These provinces were already established by Darius in the late 6th century. Indian troops marched with Xerxes across the Hellespont and with Darius III against Alexander.¹¹ The writers of the Persepolis Fortification Texts consider India as fully Achaemenid as Judea or any other Persian province.¹² Persian administration lasted into the reign of Artaxerxes II (405-359).

Iranian practices influenced the court of Chandragupta Maurya further East: one finds royal hair washing attested by Herodotus for Persia, for example.¹³ Asoka, third Mauryan Emperor, uses the term *marān*, used for satraps in the Elephantine papyri, for his own vassals in Aramaic inscriptions found at Taxila and Kandahar.¹⁴ Achaemenid

¹⁰ David Fleming, “Where Was Achaemenid India?” *Bulletin of the Asia Institute* 7 (1993) 67-72, here 67.

¹¹ Fleming, “Where Was Achaemenid India?” 67; and in reverse, the Achaemenids settled Greek mercenaries in Swat Valley before the coming of Alexander.

¹² Fleming, “Where Was Achaemenid India?” 68.

¹³ Tauqeer Ahmad, “Cultural Impact of the Achaemenian on Ancient Pakistan,” *South Asian Studies* 27 (2012) 221-32, here 228.

¹⁴ Hartmut Scharfe, “The Maurya Dynasty and the Seleucids,” *Zeitschrift für vergleichende Sprachforschung* 85 (1971) 211-25, here 216.



coins have been found at Bandykhan, Kunduz, Jalalabad, Kabul, and Taxila.¹⁵

Several factors indicate the Achaemenids seem to have involved themselves rather closely in religious conflicts in the Indian satrapies. First, Zoroastrianism rejected Indra and the Hindu Devas as evil *daevas* (*Vendidad* 10.9; 19.43), while Vedic Hinduism demonized the Ahuras (Asuras) and worshipped the Devas.¹⁶ Second, Xerxes' XPh Inscription is best read as a denunciation of a Vedic Hindu version of polytheism. This text, known in Old Persian tablets from Persepolis and Pasargadae, as well as in Elamite and Akkadian copies, describes in its fourth section (lines 35ff) a religious conflict between Zoroastrianism and the worshippers of devas. While it is possible that by analogy these are old Babylonian gods (or even Egyptian), the literal interpretation would be that these are Hindu devas (देव).¹⁷

The Importance of Taxila

The heart of Persian India was Gandhara—not merely Gandhara proper, the Peshawar Valley, but the entire region from Bamiyan east along the Kabul River and Swat Valley to Gilgit in Kashmir south to Taxila in the Punjab.¹⁸ Moreover, the economic and social center of this Greater Gandhara was Taxila. Taxila, the Greek rendering of its Sanskrit name Takshashila, was part of the Persian Empire by the time

¹⁵ Krishna Mohan Shrivastava, *The Age of Iron and the Religious Revolution, c. 700-c. 350 BC* (A People's History of India 4; New Delhi: Tulika / Aligarh Historians Society, 2016) 30 fig. 1.2.

¹⁶ N. D. Kazanas, "Indo-European Deities and the Rgveda," *Journal of Indo-European Studies* 29 (2001) 9.

¹⁷ The possibility that this more than a border conflict between two faiths but rather that Zoroastrianism itself originated in the Indian satrapies is suggested in Karl Hoffmann, "Das Avesta in der Persis," in *Prolegomena to the Sources of the History of Pre-Islamic Central Asia* (Budapest: Akadémiai Kiado, 1979) 89–93.

¹⁸ Fleming, "Where Was Achaemenid India?"; Richard Salomon, *Ancient Buddhist Scrolls from Gandhara: The British Library Kharosthi Fragments* (Seattle: University of Washington Press, 1999) 2–3; Andrew Glass, "Kharosthi Manuscripts: A Window on Gandharan Buddhism," *Nagoya Studies in Indian Culture and Buddhism: Sambhava* 24 (2004) 129–152, here 130–31, 137.

of Cyrus the Great, and had become a center of learning by the 4th century. Taxila was excavated thoroughly in the early 20th century and partially in the 1960s.¹⁹ It is actually an ensemble of three cities, some going back to the 6th century BCE, with numerous surrounding Buddhist monasteries and stupas, and was one of the largest cities in the eastern portion of the Achaemenid Empire.²⁰ Arrian calls it “the largest of all between the Indus and the Hydaspes” (*Anab.* 5.8.2).

The Bhir Mound is the key site for the Achaemenid period.²¹ Persian punch-marked bar weights were found in the relevant Stratum I,²² which covered some 13 hectares—a possible population of 5200 people.²³ Unfortunately, it is difficult to learn much from its old excavations done without modern archaeological techniques and strictures.²⁴ One can identify narrow asymmetrical streets and lanes,²⁵ a possible two-block temple in the western portion of the city,²⁶ but nothing necessarily administrative, mercantile, or academic.²⁷

Pottery found at Hathial Mound B, east of the Bhir, matches that found in Achaemenid levels of Bala Hisar of Charsadda and other sites of the Swat Valley.²⁸ East of this, some have identified an incompletely excavated “retreat” as an Achaemenid “Stupa of Uttarārāma,” occupied by scholars and monks into later periods, as well.²⁹

¹⁹ Nayanjot Lahiri, *Ashoka in Ancient India* (Cambridge, Mass.: Harvard University Press, 2015) 69.

²⁰ Lahiri, 72; Richard Stoneman, *The Greek Experience of India* (Princeton: Princeton University Press, 2019) 463.

²¹ Lahiri, *Ashoka in Ancient India*, 66.

²² On the dating of the stratum, see A. Ghosh, “Excavations at Bhir Mound, Taxila,” *Pakistan Archaeology* 6 (1969) 3-99, here 13, 16-17, 63-64.

²³ Shrimali, *People’s History of India*, 40.

²⁴ Fleming, “Where Was Achaemenid India?,” 69.

²⁵ Lahiri, *Ashoka in Ancient India*, 76.

²⁶ Lahiri, *Ashoka in Ancient India*, 78.

²⁷ Lahiri, *Ashoka in Ancient India*, 83-85.

²⁸ Ahmad Hasan Dani, *The Historic City of Taxila* (UNESCO Centre for East Asian Cultural Studies; Lahore: Sang-e-Meel, 1999) 41; Fleming, “Where Was Achaemenid India?,” 69.

²⁹ Dani, *The Historic City of Taxila*, 42.



Finally, at Jandial, north of Hathial Mound, is a structure that “has been plausibly interpreted as a Zoroastrian” fire temple.³⁰ Philostratus (AR 3.6) refers to a Temple of the Sun, with might be such a Zoroastrian temple or one refitted for Buddhist worship.³¹

Proof that Taxila was a *Persian* center of learning is that cuneiform writing and the Aramaic language proved central for the Kharosthi alphabet which was used in India.³² Although only one Aramaic inscription has been found at Taxila, one of Emperor Asoka’s,³³ Aramaic was the lingua franca of the Persian Empire,³⁴ already introduced in northwest India as early as the 6th century. Later it became an essential language of Asoka’s inscripational enterprise, Darius’ rock inscriptions providing the model for Asoka’s edicts.³⁵ Nevertheless, Aramaic was unsuitable for the local spoken Gandharan Prakrit as its phonology was completely different.³⁶ To suit the local phonology, a new abugida syllabary script, with the Aramaic name Kharosthi, evolved in the vicinity of Taxila out of the forms of the Aramaic abjad (consonantary), just as Persian syllabic script similarly evolved out of cuneiform under Aramaic influence, as did Avestan in the 5th century AD.³⁷ Moreover, Kharosthi was not originally ordered in

³⁰ Stoneman, *The Greek Experience of India*, 466.

³¹ Stoneman, 469.

³² Glass, “Kharosthi Manuscripts,” 131. We are grateful to Dr. Steve Farmer for some suggestions in this section.

³³ Dani, *The Historic City of Taxila*, 152. Taxila also held a Greek Asoka inscription; Glass, “Kharosthi Manuscripts,” 133.

³⁴ See inscripational evidence listed already in Eduard Meyer, *Die Entshehung des Judentums* (Halle: Max Niemeyer, 1896) 9–12.

³⁵ Dani, *The Historic City of Taxila*, 43; Charles Allen, *Ashoka: The Search for India’s Lost Emperor* (London: Little, Brown, 2012) 354.

³⁶ Dani, *The Historic City of Taxila*, 44, 152; Allen, *Ashoka*, 363; Salomon, *Ancient Buddhist Scrolls from Gandhara*, 3.

³⁷ Dani, *The Historic City of Taxila*, 43; Ahmad, “Cultural Impact of the Achaemenian on Ancient Pakistan,” 226; Peter T. Daniels, “On Writing Syllables: Three Episodes of Script Transfer,” *Studies in the Linguistic Sciences* 30 (2000) 73–86, here 76, 81; Richard Salomon, “On the Origin of the Early Indian Scripts,” *JAOS* 115 (1995) 271–79, here 274, 276; Salomon, *Ancient Buddhist Scrolls from Gandhara*, 4. The most detailed model of the derivation process is Andrew Glass, “A Preliminary Study of Kharosthi Manuscript Paleography” (MA Thesis, Seattle, University of Washington, 2000) 18–20.

the phonological series of earlier Indian Brahmi-derived scripts, but according to an arrangement known as Arapacana. Arapacana lacks several syllables needed for Prakrit and includes twelve needless consonants.³⁸ Richard Salomon has shown that the earliest Arapacana syllabaries are Gandharan Kharosthi, although he attributes its origin to “some sort of mnemonic device based on a Buddhist canonical or didactic text.”³⁹ The Arapacana order is perfectly explained, however, if it derives from Aramaic.⁴⁰ Kharosthi then become an easily used vehicle of expression for Aramaic-speaking Achaemenid clerks for transliterating local languages.⁴¹ It was widely used not only in royal inscriptions of Persian and local kings but in the writings of commoners, as well.⁴²

Taxila is never mentioned in early Buddhist suttras. Later commentaries say students travelled there from all over India, including the Buddha’s physician Jivaka, who studied medicine in Taxila.⁴³ These sources—none of which can be established as having an historical basis—give elaborate descriptions of Taxila’s various schools of military science, politics, and other disciplines.⁴⁴ Although some scholars accept these accounts,⁴⁵ one cannot presume they are accurate.

³⁸ Richard Salomon, “New Evidence for a Gandhari Origin of the Arapacana Syllabary,” *JAOS* 110 (1990) 255–73, here 256.

³⁹ Salomon, “New Evidence for a Gandhari Origin of the Arapacana Syllabary,” 268–70.

⁴⁰ Frits Staal, *What Euclid Is to Europe, Pāṇini Is to India - or Are They?* (Bangalore: National Institute of Advanced Studies, 2005); Harry Falk, *Schrift im alten Indien: ein Forschungsbericht mit Anmerkungen*, *ScriptOralia* 56 (Tübingen: G. Narr, 1993) 236–37.

⁴¹ Dani, *The Historic City of Taxila*, 152.

⁴² Dani, 152; Roy Lowe and Yoshihito Yasuhara, eds., *The Origins of Higher Learning* (London: Routledge, 2017) 35.

⁴³ Dani, *The Historic City of Taxila*, 42–43.

⁴⁴ Dani, *The Historic City of Taxila*, 43; Lowe and Yasuhara, *The Origins of Higher Learning*, 35.

⁴⁵ E.g., Lowe and Yasuhara, *The Origins of Higher Learning*, 36–37; S. Srikanta Sastri, “Taxila: An Ancient Indian University,” 1961, <https://www.srikanta-sastri.org/taxila-an-ancient-university/4586205497>; Thomas S. N. Chen and Peter S. Y. Chen, “Jivaka, Physician to the Buddha,” *Journal of Medical Biography* 10 (2002) 88–91.



There are two other famous early Indian scholars supposedly active in Achaemenid Taxila. The first of these is a figure associated with late Persian Taxila and the early Mauryan Empire, variously known as Chanakya or Kauṭilya, author of the *Arthashastra*. In truth, the *Arthashastra* is a composite document, assembled in multiple stages,⁴⁶ none of which are earlier than 200 BCE.⁴⁷ While an actual Kauṭilya may be behind this text,⁴⁸ no Chanakya of the 4th century or otherwise ever existed.⁴⁹

Panini

The other intellectual figure associated with Persian Taxila is Panini, and here we are on surer ground.⁵⁰ Although an actual individual named “Panini” is beyond reconstruction, the best scholarship puts the *work* of Panini at Taxila, particularly his groundbreaking grammar the *Astadhyayi*, in the Persian period.⁵¹

Panini’s *Astadhyayi* is “one of the greatest monuments of human intelligence,” a model for comprehensive linguistic grammars of both ancient India and the modern West.⁵² It is an eight-volume masterpiece

⁴⁶ Thomas R. Trautmann, *Kautilya and the Arthashastra* (Leiden: Brill, 1971) 4–7, 118, 169, 174–75; Mark R. McClish, “Political Brahmanism and the State: A Compositional History of the Arthashastra” (Diss., Austin, The University of Texas at Austin, 2009) 44–58.

⁴⁷ Trautmann, *Kautilya and the Arthashastra*, 176, 183; McClish, “Political Brahmanism and the State,” 315; Mark R. McClish and Patrick Olivelle, trans., *The Arthashastra* (Indianapolis: Hackett, 2012) xxviii; Patrick Olivelle, *King, Governance, and Law in Ancient India: Kautilya’s Arthashastra* (Oxford: Oxford University Press, 2013) 26–27.

⁴⁸ Olivelle, *King, Governance, and Law in Ancient India: Kautilya’s Arthashastra*, 8, 11; McClish and Olivelle, *The Arthashastra*, xv–xvi.

⁴⁹ McClish and Olivelle, *The Arthashastra*, xiii–xiv.

⁵⁰ Saroja Bhate, *Panini* (Makers of Indian Literature; New Delhi: Sahitya Akademi, 2002) 1–4.

⁵¹ George Cardona, *Panini: A Survey of Research* (The Hague: Mouton, 1976) 260, 262, 268; Vidya N. Misra, *The Descriptive Technique of Panini: An Introduction*, Janua Linguarum, Series Practica 18 (Berlin: Mouton de Gruyter, 1966) 14–15; Scharfe, “The Maurya Dynasty and the Seleucids,” 224; Steve Farmer, John B. Henderson, and Michael Witzel, “Neurobiology, Layered Texts, and Correlative Cosmologies: A Cross-Cultural Framework for Premodern History,” *Bulletin of the Museum of Far Eastern Antiquities* 72 (2002) 48–90, here 68; not in the 6th century, as per Frits Staal, *Ritual and Mantras: Rules without Meaning* (Delhi: Motilal Banarsidass, 1996) 39.

⁵² Staal, *Ritual and Mantras*, 379; Staal, *What Euclid Is to Europe, Pāṇini Is to India - or Are They?* 11–12, 19, 24.

whose dependence on linguistic usage reflects awareness of a wide range of learning, extending far beyond the field of Sanskrit linguistics.⁵³ In other words, Panini (we shall treat him as an individual for convenience) was not merely a linguistic scholar but a scholar in general.

This means the *Astadhyayi* is witness to an entire academic world, namely, as shown above, a fundamentally Achaemenid academic world. Moreover, while later material intermingles with authentically Persian-period in the *Astadhyayi*, the presence of Greek loan words warns one what sections to avoid.⁵⁴ This, then, is the portrait of education presented:

Education according to *Astadhyayi*

In contrast to Herodotus' comments that Persian education kept to skills like riding and shooting, the *Astadhyayi* depicts education in the Achaemenid Empire as devoted to texts, which it mentions often. There are commentaries on religious rituals (4.3.68), commentaries on the mantras one recites while performing religious rituals, like a food offering (4.3.70), and commentaries on the Vedas (4.3.71). But there were also commentaries on various linguistic and grammatical topics, such as commentaries on accentuation (4.3.67), or commentaries on affixes (4.3.66). A person's studies were focused on texts like these to such an extent that students even had a designation based on what they were studying. There were the Taittiriya, the people who studied "the Mantras and Brahmanas expounded by Tittiri," the Varatantuviya who studied the mantras expounded by Varatantu,

⁵³ Misra, *The Descriptive Technique of Panini*, 18–19.

⁵⁴ The translation used here is Rama Nath. Sharma, *The Aṣṭādhyāyī of Panini* (6 vols.; New Delhi: Munshiram Manoharlal, 1987).



and students who were experts in the works of Khandika, Ukha, Kasyapa, and Kausika (4.3.102-103). Vedic texts and the commentaries on those texts by various sages were important subjects of study in Achaemenid Taxila (4.3.105-111).

Moreover, it is unlikely that commentaries like this were predominantly oral in nature. Most of these texts were probably written, not merely circulating orally. The *Astadhyayi* refers to chapters containing commentary on the mantras of the sages Vasistha and Visvamitra (4.3.69). The reference here to a book chapter strongly suggests a written text rather than an oral composition. It was taken for granted that students studied chapters of books, or even entire books (3.3.122), and the *Astadhyayi* specifically refers to writers of poetry and stories (3.2.23).

In other words, Persian India was by no means illiterate. Persian India, where Aramaic was used, was the birthplace of the earliest Indic scripts and the most sophisticated Indian linguistic traditions. Aramaic and Kharosthi writing would soon be joined by Brahmi and, even before Asoka in the 3rd century, Greek. The fragments of Nearchus's *Indikê* preserved by Arrian claim Indians wrote on cloth before the Greeks arrived. The sutras found in the Brahmana and Aranyaka layers of the Vedas contain clear references to writing, along with extensive internal cross-referencing to other texts, "suggesting that India was undergoing a textual revolution...no less extreme than those occurring in China, Greece, or the Middle East."⁵⁵ The emphatic assertion by the Greek ambassador to Chandragupta Maurya, Megasthenes, that the

⁵⁵ Steve Farmer, John B. Henderson, and Michael Witzel, "Neurobiology, Layered Texts, and Correlative Cosmologies: A Cross-Cultural Framework for Premodern History," *Bulletin of the Museum of Far Eastern Antiquities* 72 (2002) 68. For the counter argument, see Richard Salomon, "On the Origin of the Early Indian Scripts," *JAO* 115 (1995) 271-78.

Indians were illiterate reflects the *eastern* Mauryan heartland of Magadha, not Achaemenid India.

Yet despite a focus on physical texts, orality was also important to education in Taxila.⁵⁶ The *Astadhyayi* mentions a commentary on a recitation of the *Rigveda* (4.3.73) showing that the *Rigveda* was recited, suggesting that orality was still important, even in an education environment with so many physical texts. In fact, recitation seems to have been an important part of the education system. The *Astadhyayi* mentions students who studied “Padapatha” (Vedic recitation of hymns done in a specific way) as well as students who studied Kramapatha (recitation of hymns two at a time) (4.2.61). Panini mentions the “reciters of the Ukthas of *Samaveda*” as well as “those who can recite many hymns” (4.3.129). It also mentions students who have learned various kinds of Vedic recitation (2.4.5). The *Astadhyayi* may also give derogatory nicknames of students who did not pronounce things well: “this jackal (loudmouth) mispronounces” or “this crow (impudent one) mispronounces” (1.3.34). Students apparently recited all of the Vedas from memory (5.1.72, 2.4.3), and may also have memorized Upanishads (3.2.130). When it came time for a final exam, the students had to undergo recitation tests in which they were judged by the number of mistakes they made, with scores of one, three, thirteen, and fourteen errors being specifically noted, perhaps as part of a grading rubric of some kind (4.4.63-64). The *Astadhyayi* also talks about repeatedly mispronouncing a word, and may refer to a student mispronouncing a word as part of a final recitation like this (1.3.71).

⁵⁶ Frits Staal, *What Euclid Is to Europe, Pāṇini Is to India - or Are They?* 14–15.



The teachers also seem to have given lectures of some kind as well. The *Astadhyayi* refers to “he who wishes to hear the teacher” (1.3.57), and may refer to teachers as “he who explicates” (3.4.68). The *Astadhyayi* also states that the teacher leads the students towards the knowledge of the Shastras, or books, (1.3.36). This suggests an environment in which the teacher discusses the work with the students, perhaps in the form of lectures, and perhaps in more of a seminar-type setting.

In addition to more general insight into written and oral pedagogy, the *Astadhyayi* also gives insights into what instruction was like for students. It mentions a program of study with five stages of repetition (5.1.58). It is unclear exactly what this looked like, but may have been some kind of teaching technique. Sometimes the entire class participated together, as an entire class seems to have sometimes recited texts together (1.3.48), but things may also have been more individualistic at times. There appears to have been a school exercise in which a student sought to refute someone else’s argument, with some kind of debate going back and forth between the students (8.2.94). It was expected that students would have in-depth and precise knowledge of some material such that the “intellect moves freely” in this material, presumably indicated memorization of the corpus (1.3.38).

This in-depth knowledge of certain texts suggests that students may have specialized in the words of a certain sage, or in a certain text. As noted above, students were given a designation based on what they were studying. Some seem to have only studied only two or three Vedas (4.1.88), although this may have been just during a single period of time—something like a semester—or it may represent how someone started out in their education, not what they “majored” in. However, the *Astadhyayi* refers to one student who congratulates himself

because he is a “reciter of the Katha recension” presumably something that he focused on in school and had now memorized (5.1.134). It also refers to “an assembly of those who study what has been expounded by Sakala” and a “mark of those who study what was expounded by Sakala” (4.3.128). This suggests some kind of a “major” or niche, and that students were known as people who studied a specific topic, and may have had something visual “a mark” that made it obvious who was “majoring” in which specialization.

The *Astadhyayi* also refers to knowledge learned from a teacher, as well as knowledge learned from the disciple of a teacher (4.3.77), and much of the education system revolved around the close relationship between teachers and students. It talks about assemblies of “descendants” of the sages Bida, Garga, and Daksa (4.3.127), and it also suggests that these assemblies of “descendants” are “those who study what has been expounded” by these sages (4.2.128). Students were given names like Haridravins, “those who study what was expounded by Haridu, a pupil of Kalapin,” Alambins, “those who study what was expounded by Alambin, a pupil of Vaisampayana” (4.3.104), Kathas, students of the branch of Vedic learning started by Katha, or Kalapas, students of the branch of Vedic started by Kalapa (4.2.46). Alternatively, sometimes they would just be referred to as students of Panini, students of Kasakrtsna (6.2.104), students of Apisala, or students of Rodhi (6.2.36). Students were described as seeking shelter under their teachers as well as covering their teacher’s failings (4.4.62). This kind of close relationship was not always the case, as some teachers stayed only for a month before moving on (5.1.80).

Students focusing on a certain niche would study together, hence the reference in the *Astadhyayi* to, “a fellow student who has made a similar vow of studying the same branch of the Veda,” as well as a



reference to “he who studies at the same teacher’s place” (6.3.86). It is likely that the reference to studying at the same teacher’s “place” is literal, in that the students seem to have lived in the same house as their teachers, with a group of students studying the same topic living with the teacher that taught that subject. In another place the *Astadhyayi* clarifies that students lived with their teachers, together with the other members of their cohort (4.4.107), studying these specific topics. Subjects could be as specific as “texts dealing with the ritual sacrifice of Agnistoma” (4.2.60), “treatises similar to the Brahmanas” (4.2.62), “the Nirukta” (4.2.59), “the recitation of certain hymns in the order of two at a time” (4.2.61), a treatise dealing with spring (4.2.63), the teachings of Panini or Apisala (4.2.64), the Astaka, “a body of sutras arranged in eight chapters which Panini taught,” the Dasaka taught by Vyaghrapada (4.2.65), or Brahmana and Vedic recensions taught by various sages (4.2.66). However, the subject matter could also be as broad as general grammar (4.2.59, 3.3.161). There may also have been courses of study, where students studied certain sets of texts for a fixed period. One finds references to students having “completed the study of Parayana” (a set of texts) as well as having “completed the study of Guna,” which appears to have something to do with the recitation of various texts (7.2.26). One also sees references to students finishing the study of the Vedas or the study of grammatical topics (5.1.112), which may refer to completing courses of some kind.

There are subtle religious overtones to being a scholar, as students seem to have made vows in connection with their studies, such as vowing to study a certain branch of the Vedas (6.3.86). It has similar resonances when it refers to “one who has been initiated to study” (5.2.134). Students also apparently gave offerings when they finished a

course in the Vedas (5.1.111), and had to fulfill various ritual requirements over the course of their studies (1.4.29).

The *Astadhyayi* also gives some indication of what life was like for students in Taxila in the Achaemenid period. Students and celibate guards are sometimes conflated (4.3.130), suggesting that students may have been celibate. This is strengthened by a definition in the *Astadhyayi* that refers with contempt to a student who gets married without completing his studies or getting his teacher's permission (2.1.26). Students were expected to obey their teacher's advice, and not doing so is considered an act of defiance (1.3.53). Students may sometimes have come from poor families and attended school to survive. The *Astadhyayi* mentions students "who study Panini's grammar so they can get rice to eat," or who are "students of Panini only for food" (1.1.73), as well as a reference to those who teach orphans (8.1.67). One also finds a reference to "a young initiate who becomes a celibate, boasting, 'I can survive on alms'" (6.2.69). Because the word for "young initiate" and "boy" is the same (6.2.69), it is difficult to know the ages of the students. They may be called "boys" because they are young, but it is possible a student may be called "boy" regardless of age. In this regard, one must think of the mention in the Persepolis Fortification Archive (PF 871; 1137) of rations for the "boys who copy texts," which the modern editor, Richard Hallock, thought meant not literal youths but scholars.⁵⁷

Despite becoming a student to get rice to eat, they may not have been given much, since the *Astadhyayi* warns, "the students filled up with rice jump idly" (1.3.35). School was difficult enough that students were

⁵⁷ Richard T. Hallock, trans., *Persepolis Fortification Tablets* (University of Chicago Oriental Institute Publications 92; Chicago: University of Chicago Press, 1969) 30; Pierre Briant, *From Cyrus to Alexander: a history of the Persian Empire* (Winona Lake: Eisenbrauns, 2002) 436.



sometimes “overcome by studies” (1.4.26), sometimes even hiding from their teachers (1.4.28). One finds laments like, “the study of grammar is painful” (7.2.22), and there may even be a reference to a student who vowed to sleep on the hard floor (4.2.15). Women also studied Panini, but there are not enough details to know what schooling might have looked like for them (4.2.65).

Although the schedule seems to have been grueling, the students did not have to go to school on the fourteenth and fifteenth days of the month because there were certain days on which one was not supposed to study. One was also not supposed to study at a crematorium or a crossroads (4.4.71). This suggests that some people studied outside, and may even have had class outside. This may explain the story in Arrian about Alexander of Macedon meeting people outdoors in some kind of an educational setting (*Anabasis* 7.1-2).

We might note at this point that this reconstruction matches very well the image of Persian period scribal schools in Judea proposed by David Carr, Seth Sanders, and others: oral recitation supported by, and at times from, written texts;⁵⁸ the role of memorization;⁵⁹ and the residential mentor-student apprenticeship.⁶⁰

Conclusions

Persian education was oral-and-written. Written texts formed the basis of the curriculum, but texts were meant to be read aloud. They

⁵⁸ Seth L. Sanders, *Margins of Writing, Origins of Cultures* (Chicago: Oriental Institute of the University of Chicago, 2006) 173; David M. Carr, *Writing on the Tablet of the Heart: Origins of Scripture and Literature* (Oxford: Oxford University Press, 2005) 73, 94–95; David McLain Carr, *The Formation of the Hebrew Bible: A New Reconstruction* (New York: Oxford University Press, 2011) 19–20, 232.

⁵⁹ Sanders, *Margins of Writing, Origins of Cultures*, 173; Carr, *The Formation of the Hebrew Bible*, 13.

⁶⁰ Carr, *Writing on the Tablet of the Heart*, 12, 21, 58, 76.

were memorized, and then performed in pedagogical settings. Perhaps the written texts were almost a “cloud backup” for texts conceived as living primarily orally. The pedagogical settings were residential mentorships, male students intentionally—perhaps avowedly—entering into group apprenticeships with scholars specifically focused on discrete subjects. Those courses of study may have included milestones and examinations. It is from schools like these that much of the Hebrew Bible emerged.

