The Past in the Present

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Abstract: The theory-deadness of antiquity under the ideology of modernism, the theory-deadness of Asia under Eurocentrism, and the theory-deadness of the precolonial under post-colonial theory converge to hide the aliveness of ancient Indian phonological analysis in the present. This case study of the hiddenness of the past in the present leads to a consideration of how historians of the ancient world may act to illuminate the present.

Faulkner has said, “The past is not dead, it is not even past.”

The objective of this paper is to show, rigorously and through a particular case, that the ancient past is essential to the understanding of the present, because the past lives in the present. If the argument succeeds it follows that the study of ancient history is not something that comes to an end at some date in the past, but has a continuing life in the present. It also follows that historians of the recent past cannot elucidate their field fully without the help of historians of the ancient past. It is not easy to demonstrate, because contemporary forces actively hide the continuing life of the past in the present. The hiddenness of this history is produced.

There are, to be sure, areas of contemporary life whose pastness is not obscure. Everyday life contains abundant material contrivances and practical routines that we know we owe to the ancestors. Learning from our parents how to button a button or tie a shoe, we set out upon a lifetime of performed routines that reenact techniques and use products of human inventiveness that we vaguely know we owe to some anonymous forebear, transmitted to us by an unbroken chain of teaching and performed iterations. This is certain knowledge even if we cannot give it dates and documents. Learning to say, “Our Father, which art in heaven” or equivalents of it in other religions we learn routines marked out as antique by their obsolete forms, by their distance from everyday life. However, for present purposes the case will be made outside the routines of everyday life and religion where continuity may be evident and history is in plain view. They are, nevertheless, useful to the argument in supplying the idea of the performedness and the iteration of forms from the distant past that make them live in the today. But the sphere in which the case needs to be made is that of theory and science, where the obscurity that hides the past in the present is at its thickest.
The case concerns ancient Indian linguistic analysis, and its effects on Asia and Europe; and more specifically, the science of phonology (pratishakya), from ancient India, and its almost entirely unknown but continuously reiterated life in the contemporary world.

This history is put before readers of *Fragments* not out of a belief that they need to learn certain facts about ancient India but because it is a useful example by which to get at problems common to historians of the ancient world who are its intended readership. The project of *Fragments* is to constitute this readership as an intellectual community and provide it the means to read across the regions. To that end this paper presents what is inescapably technical matter briefly and in as accessible a way as possible. *Fragments* seeks to be a means for the formation of a common consciousness among historians of the ancient world, including a critical understanding of their place in disciplinary history. This aims at a common consciousness that has been widened (across regions) and extended (to the illumination of the present). It may entail critique of the current shrinking of the sphere of ancient history within disciplinary history. For it is a paradox of this moment that while the deep history of the human kind is making rapid advances through prehistoric archaeology, primatology and genomics, ancient history is being compressed within ever more narrow boundaries within its own discipline.

The aptness of the example lies in the triad of the traits just identified: its hiddenness, its scientific status, and its present-day aliveness. It is meant to show, first, that the ancient past is not dead, but on the contrary aspects of it are alive and functioning in the contemporary world on a daily basis, renewed by living persons through repeated enactments; second, that the aliveness of the ancient past includes not just religion and the routines of everyday life but also science and theory; and, third, that certain aspects of the prevailing “regime of historicity,” to use the appealing phrase of François Hartog (2003), fail to illuminate or positively suppress this story and others like it. First the hidden history will be recited as a case of the phenomenon, and then its remedy will be discussed.

It needs to be explained at the outset that the Sanskrit language and Sanskrit grammar play a role in the history of the rise of comparative philology (historical linguistics) and the study of the Indo-European language family that is fairly well known. In this paper, however, we will examine a related but different aspect of this influence: the role of ancient Indian phonology, as distinct from Sanskrit language and grammar. To this end, phonology and grammar (meaning, largely, morphology) will be kept separate, even though the latter presupposes the former.
Indian Language Analysis

The brahmin custodians of the Veda were intensely preoccupied with controlling the language of the Veda so as to reproduce the text exactly, trying to render it immune to change. For this reason, of the Vedic sciences (using the term loosely to indicate subjects of formal teaching and learning), several are concerned with aspects of language: phonology (pratishakya), grammar (vyakarana), metrics (chandas), etymology (nirukta). These, plus ritual (kalpa) and astronomy or calendrics (jyotisha) compose the Vedic sciences in the sense indicated, and all are motivated by the imperatives of the religion of sacrifice. In the post-Vedic period these sciences developed further. We may say that the special strengths of the intellectual tradition coming out of the Veda lie in the three areas of language analysis, the astronomy-astrology-mathematics cluster (from jyotisha), and law (dharma, a branch of kalpa).

All these sciences got their start, there is good reason to believe, without benefit of writing, for the Veda does not speak of the acts and implements of writing, and relies on complex methods of memory-work, and prodigious feats of memory, for its transmission. The writing system of the Indus Civilization (2400–1900 BCE) had become extinct before the Aryans entered India and composed the earliest of the Vedic texts, the Rig Veda (c. 1200 BCE). Writing was not re-invented in India until about the time of Ashoka (c. 268–231 BCE). When writing, in the form of the Brahmi script, reappeared in India it was so perfectly suited to the languages it was employed to represent (Sanskrit, Prakrit) that it has the look of having been a sudden invention, not a long, slow evolution. S. R. Goyal (1974) may be right when he argues that Ashoka himself commissioned the making of this script.

The perfection of Brahmi rested upon the prior perfection of Sanskrit phonology in the Vedic tradition, and the invention of a set of signs to give one-to-one correspondence between phonemes and signs. The phonological analysis that went into the making of the script is easy to see from the order of signs in the chart of Brahmi (Figure 1, p. 5). Right at the outset we see that all the vowels come first, and then all the consonants. The set of vowels begins with pairs of short and long vowels (a, ā, i, ī . . .) and ends with diphthongs (e, ai, o, au). Consonants begin with the “group of five” (panchavarga) plosives, consisting of a 5 x 5 grid. Reading across, we see an embedded contrast of voiceless versus voiced (e.g., k, g) and unaspirated versus aspirated (k, kh; g, gh), followed by the corresponding nasal, that is, the nasal that goes with k and g (as in English kink and king). The five rows follow the place of articulation in the mouth, from throat (k) to lips (p). The remaining two rows give semi-vowels (y, r, l, v) and sibilants (ś, s, s, h). Sanskrit phonologists devised a technical vocabulary naming these qualities abstracted from the grouped sounds, a metalanguage for the analysis of language.
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Figure 1: Chart of the Brahmi script
Brahmi appears to have been made out of the conjuncture of Vedic phonology and the Semitic script. A version of the Semitic script was available as an example and a source of signs, through the Aramaic-speaking scribes of the Persian empire, and it is significant that Ashoka used both Aramaic and Greek for his inscriptions on the western edge of his empire. Due to the high state of their phonological analysis, Indians transformed the Semitic script in significant ways to make it suitable for Indian languages: (1) Signs for sounds similar to phonemes of Sanskrit and related languages were selected; other signs were passed over. (2) New signs were created to represent phonemes not served by the Semitic script. (3) The ABC alphabetical order of the Semitic script was replaced by the alphabetical order devised for Sanskrit by the Indian phonologists. One can readily see from the chart of the Brahmi characters how some of the new signs were generated by modifying existing ones. Thus signs for long vowels add modifications to the signs for short vowels, and the same goes for the pairs of consonants c, ch; ṭ, ṭh; p, ph; and others. Above all, we see how the new alphabetical order concretizes and propagates the phonological analysis of Sanskrit, such that learning the Brahmi alphabet, or one of its descendents, is a first lesson in phonology much superior to learning the ABC of Roman.

This matter of the concretization of phonological analysis in the alphabetical order of Brahmi has profound implications for method and conceptualization. Suppose we had no surviving texts of ancient Indian language analysis and its metalanguage showing distinctions of vowels and consonants, unvoiced and voiced, unaspirated and aspirated, and so on. We would still be able to infer the existence of the analysis from the alphabetical order. This hypothetical has a real-world example which we learn in a classic article by Thorkild Jacobson (1974) on grammatical analysis in Old Babylonian texts in cuneiform script. Series of a given word in different inflections allow us to detect the presence of an ancient grammatical analysis from the order, even in the absence of a metalanguage identifying the inflections. Like an invisible planet detected by the gravitational pull upon a visible star, we learn to read an embedded analysis from the series. This leads us to reconceptualize the nature of what we think of as simple objects of study such as the Sanskrit language or the Brahmi script, but which we now see as complex objects, containing and concretizing language analysis.

Before tracking the effects of this phonological analysis it must be added that Indian language analysis attained this high level of achievement early, and built upon it an even more imposing intellectual edifice in the form of Panini’s grammar of Sanskrit. Panini created a set of rules, in the form of extremely short sutras only a few syllables long, not unlike a computer program, which students would memorize. Applied to the stock
of verbal roots, the rules generate the entire universe of Sanskrit words, using the human brain as a central processing unit, the living hardware to Panini’s software. This grammar, and others of a slightly less demanding and more student-friendly kind, became models for the writing of grammars of other languages, in India and beyond. As a result, Sanskrit grammars, including those in European languages, embody aspects of the Indian tradition of language analysis, so that learning Sanskrit is always also a matter of absorbing concretized embodiments of that tradition.

Indian Phonology in Asia

Thus the grammatical tradition presupposed the phonological analysis developed by the Vedic schools, and built upon it. Indian phonology, through the Brahmi script, had an immense influence; and so did the tradition of Sanskrit grammar. For present purposes we will confine ourselves largely to examining the effects of the Brahmi script.

Most of the regional languages of India developed their own version of Brahmi, with the full complement of Sanskrit phonemes, some of them with additions, so that they were capable of expressing both Sanskrit and the regional language. Tamil of South India, though—a Dravidian language, not descended from Sanskrit—followed a different path. Tamil acquired a written grammar at an early stage, called the Tolkappiyam, inspired by the grammars of Sanskrit in form (sutras) and analytic concepts, but very different in substance. The acuity of Vedic phonological analysis when applied to the problem of representing a Dravidian language with its very different phonology caused several modifications to turn the Brahmi script into the Tamil script: (1) Signs of Brahmi were dropped when Tamil phonemes were lacking. Certain vowels were dropped. As voicing of plosives is not phonemic in Tamil, voiced consonants (ɡ, ɟ, ɗ, ɗ, b) were dropped, while signs for unvoiced consonants (k, c, ṭ, t, p) were retained as signs for allophones that varied by position. As aspiration is not phonemic in Tamil, the aspirated consonants (kh, ch, ṭh, th, ph, and their voiced counterparts gh, jh, ḍh, dh, bh) were dropped. (2) Signs were added for Tamil phonemes not provided for by Brahmi (ɿ, й, ɿ, ʩ). Long and short versions of the vowels a, e, not distinguished in Brahmi, were devised for Tamil, in which the distinction is phonemic. (3) The alphabetical order, however, remained substantially the same. The intelligent modification of Brahmi, based on analysis of Tamil phonology, resulted in a script with a similarly high degree of perfection (Figure 2, p. 8). It was, however, made perfectly suitable for Tamil at the cost of making it unsuitable for Sanskrit. In the Tamil country, as a result, Sanskrit had to be rendered in a different Brahmi-derived script, called Grantha.
Within India the Brahmi script was widely used, and developed regional versions connected with regional languages, both those Indo-Aryan languages descended from Sanskrit and the Dravidian languages of South India, such as Tamil, that constitute a separate language family. Most of the scripts currently in use in India, including Devanagari, Gujarati, Gurmukhi, Bengali, Oriya, and Sinhala for Indo-Aryan languages, and Kannada, Telugu, Malayali, and Tamil for Dravidian ones, are descended from the Brahmi script.
Brahmi script, and the phonological analysis that gave rise to it and that is encoded in the alphabetical order, spread widely in Asia, but the way it was received and put to use varied greatly according to the purposes of the receiving societies. The script itself, or rather modified versions of it, propagated widely. K. F. Holle in 1877 compiled charts of 198 different scripts deriving from Brahmi, including those of India and continuing through the Indo-China peninsula (Burmese, Thai, Lao, Khmer) and the islands of Indonesia (abundant different versions) as far as the Philippines at the eastern limit (Kuipers and McDermott 1996). Central Asia has also adopted scripts based on Brahmi, especially the Tibetan script, Khotanese, Mongolian and others. In these cases we may suppose Brahmi furnished the model for first writing systems of these societies, spread by Indian missionaries, Buddhist and Brahmin.

In East Asia, however, the great antiquity and wide spread of the Chinese writing system gave no occasion for the adoption of a Brahmi-based script. The only exception to this generalization is the script devised in 1269 by the Tibetan Buddhist monk ‘Phags pa, national preceptor to the emperor Qubilai (Kublai Khan) who wanted a script in which all the languages of the Chinese empire could be written, including Chinese of course, along with Tibetan, Uighur, and Mongolian. It was based on the Tibetan script, which in turn was based on Brahmi (van der Kuijp 1996: 437–40). Needless to say, it did not displace the Chinese script. But Sir William Jones himself, in the late eighteenth century, had already noticed that the order of sounds in Chinese grammars corresponded nearly with that of Tibet and hardly differed from that of Sanskrit (“Third Anniversary Discourse,” “On the Hindus,” Jones 1788b: 424).

In China, then, because of its highly developed script and the advancement of its sciences, Indian phonological analysis was differently consumed than in other parts of Asia. In effect, Indian phonology was applied as a tool for the phonological analysis of the Chinese language, making use of Indian techniques and Buddhist scholars for a purely Chinese and non-Buddhist purpose.

The great purpose to which this phonological analysis was put in China was to assist in the formation of a new philology for the study of literature in Middle Chinese. The new philology was built upon a new way of rendering in writing the sounds of written words, using logographic characters as signs of sounds and ignoring their sense, in this context. The sound of a word was broken down into two parts, the opening consonant and the closing sound, and each was rendered by a sound-alike character. This system of spelling, called fanqie, led to the grouping of words into rhyming sets (that is, words having the same closing sound) in dictionaries, called rhyming dictionaries or rhyme books. Rhyme books were known as early as the Wei-Jin period (220–420 CE), but the early
ones were eclipsed by the *Qieyun* of Lu Fayan, written in 601 CE, which became the standard work ever after. Because this is the period in which Indian, Central Asian and Chinese Buddhist monks were translating Buddhist scriptures from Sanskrit into Chinese, with all the challenges that entailed of representing foreign words in Chinese among other things that would stimulate the application of Indian Sanskrit-based language analysis to Chinese, many scholars think it likely that Indian philology was influential in the formation of the *fanqie* spelling and the rhyme books. Thus Baxter (1992: 33) says of this system that it was “possibly influenced by knowledge of Indian phonology,” and this seems to be the majority view. Pulleyblank (1999: 106) is doubtful and thinks the influence began later, for reasons that need not detain us. In any case it is a matter of probabilities that vary between the possibly and the doubtful. However that may be, there is general agreement that the next stage of the development of this tradition was clearly influenced by Indian phonology. This stage begins with the rhyme table of Yunjin, available to us in an edition of the Song period (1161 is the earliest date we have) but written before the Song. In the rhyme tables (not to be confused with the rhyme books of the previous period) the order of columns replicates the order of consonants in the Brahmi alphabetical order pretty closely, but in reverse: *p, ph, b, m, t, th, d, n, ts, tsh, dz, s, z, k, kh, g, ng, glottal stop, x, γ, ny, n* (Baxter 1992: 41–44; Pulleyblank 1999: 113–23). Thus in China, Brahmi and the intellectual tradition which was its matrix was appropriated, not at the ground level of script adoption but as a very high-order form of intellectual analysis serving a specific cultural project that was itself external to the phonological tradition in question—a completely unanticipated conjunction of different traditions of language analysis leading to a new form of Chinese philology, via the *fanqie* spelling system, the rhyme books and the rhyme tables. These tools continue to serve the phonological analysis of Chinese, as the fundamental resources for modern linguistics, from Karlgren (1929, 1963) to Baxter (1992), that is, to the present day. As the *Book of odes* (*Shijing*) among the ancient classics makes use of rhyme, the methods of historical linguistics built from this philological tradition are able, through it, to extend their reach back to Old Chinese.

In Japan and Korea, where the Chinese writing system also prevailed and served languages of different origins, Brahmi and Indian phonology were consumed in yet different ways. The Japanese script is a composite of the Chinese-derived logographic Kanji, plus the phonetic Kana, better suited to the multisyllabic character of Japanese. Kana could not be called a descendent of Brahmi, but like Brahmi it is a syllabary and the dictionary order of signs follows the alphabetical order of Sanskrit and Brahmi. This gives reason to suppose that Kana was formed under the influence of Sanskrit and Indian scripts through Buddhism (Smith 1996). In Korea,
King Seycong invented the Hankul script in 1444 CE. It shows an acute analysis of the phonology of Korean, and the shapes of the signs are highly original and rational, depicting the shapes of the mouth and places of articulation for the sounds. It was an admirable invention in every way, likely to have been inspired by knowledge of Indic scripts, again, through Buddhism, possibly through the ‘Phags pa script (King 1996).

**Indian Phonology in Europe**

Indian phonology and the influence of Indian grammars in promoting the writing of grammars elsewhere is evident in Central Asia, East Asia, and Southeast Asia, borne by the cultivation of Indian languages, especially Sanskrit and Pali, propagated through Indian religions, especially Buddhism and Hinduism. The special connection of Indian language analysis and religion is evident when we look in the other direction from India, to the west. Indian language analysis did not spread further westward than Indian religions did, due to the spread of Christianity and Islam. By contrast, Indian sciences did spread to the west without the assist of religion, in respect of the astronomy-astrology-mathematics cluster, or rather, Indians participated with the cultures of the Middle East in a vigorous interchange of ideas in which India was both a giver and a taker. Elements of algebra and trigonometry from India went into the international circulation of ideas; and of course there is the Indian number system with place-notation and use of the zero, which ultimately spread to Europe and, indeed, the world.

Indian phonology, then, did not reach the Middle East and Europe in antiquity, and European exposure came much later, through the mercantile and imperial expansion of Europe to India, bypassing the Muslim countries of the Middle East, and the formation of British India through the military successes of the East India Company in the mid-eighteenth century. This exposure was preceded by a series of encounters of European missionaries, mostly Catholic, but the results were comparatively limited and tentative, whereas the philological accomplishments of British-Indian Orientalists were substantial and enduring (Lorenzen 2006; Trautmann 2008). Through the imperial relation Europe came into contact with Sanskrit and its Brahmi-derived scripts, and Indian language analysis generally. It consumed this tradition much as the Chinese had, as a resource for the formation of a new philology, Comparative Philology as it was called, or historical linguistics. Here again the Indian tradition was appropriated to serve a cultural project that was external to it—another unanticipated conjuncture by different traditions of language analysis leading to a new form of philology. These two different outcomes come together in the present, in the work of Baxter and others on Chinese historical phonology.
By the start of the eighteenth century Europeans had a well-formed collective intellectual project of mastering the languages of the world through the collection of word lists and the construction of grammars and dictionaries, with the object of constructing a family tree of languages that would reveal the hidden history of the human kind. Leibniz was its most articulate theorist and promoter, and it was taken up by his admirer, Catherine of Russia, and also by Thomas Jefferson in America and Sir William Jones in British India, more or less simultaneously. The result was an utterly new deep history of the world, with unexpected groupings of peoples that greatly changed previous beliefs, starting with the Indo-European language family that linked the deep history of India and Persia with Europe.

It is well to keep the worldwide, and imperial, character of this project of language comparison in mind, as it helps us see the particular effects of Indian phonology upon it. It is well to keep in mind also that this project, since universalized and by no means limited to Europeans, is still underway and has amassed a large literature—a veritable explosion in the grammar factory—epitomized by the title of one of its famous products, Meillet’s *Les Langues du Monde* (1952). Recent researches make it clear that the branching, tree-like image of the historical relations among languages at which this project aims is the application in the eighteenth century to language-history of the Tree of Nations model that stems from the Bible and that governed universal histories produced by Jews, Christians and Muslims for a thousand years and more (Trautmann 1997: 37–52; Trautmann 2006: 1–41). Thus the ways of interpreting the historical relations among previously unknown languages were preconditioned by the model of the family tree.

This is the context for the famous pronouncement of Sir William Jones, brilliant linguist who had been sent to Calcutta as a judge of the supreme court in the East India Company territories, and president-founder of the Asiatic Society, about the Sanskrit language which he had recently begun to learn:

The *Sanscrit* language, whatever be its antiquity, is of a wonderful structure; more perfect than the *Greek*, more copious than the *Latin*, and more exquisitely refined than either, yet bearing to both of them a stronger affinity, both in the roots of verbs and in the forms of grammar, than could possibly have been produced by accident; so strong indeed, that no philologer could examine them all three, without believing them to have sprung from some common source, which, perhaps, no longer exists; there is a similar reason, though not quite so forcible, for supposing that both the *Gothick* and the *Celtick*, though blended with a very different idiom, had the same origin with the *Sanscrit*; and the old *Persian* might be added to the same family, if this were the place for discussing any question concerning the antiquities of Persia. (Jones 1788b: 422–23)

The passage sets out the conception of what came to be called the Indo-European language family, and correctly names six of its ancient lan-
guages, corresponding to branches of the family; and, again correctly, conceptualizes their relation as co-descendants of an ancestral language, “which, perhaps, no longer exists,” that is, the hypothesized lost ancestor-language, now called Proto-Indo-European.

On the way to learning Sanskrit and adumbrating the Indo-European conception, however, Jones had first to encounter Indian phonology in the form of the Brahmī-derived alphabet. In the Harry Ransome Library at the University of Texas in Austin one can see a notebook of Jones at the beginning of that process (Jones n.d.). In it we find renderings in Roman of Sanskrit words, such as “tobo” for tava, the second person singular genitive pronoun, “of thee,” in a Bengali pronunciation that he must have heard from his teacher. Jones soon learned the original values of the letters, and used them as the basis of a roman transliteration of Sanskrit. On the way to mastering Sanskrit and, through it, coming to recognize the similarity with Greek, Latin, Gothic, Celtic and Old Persian and to interpret the similarity in terms of a branching family tree, he seized upon the Brahmī-derived pattern of Indian scripts as a basis for a uniform system of roman transliteration for Sanskrit, Persian and Arabic, and published it as the very first article of the Asiatic Society’s journal, Asiatic researches, under the title, “A dissertation on the orthography of Asiatick words in roman characters” (Jones 1788a).

This transliteration scheme, which rendered Sanskrit available to Europeans for comparisons with other languages, remains little changed in the current romanization of Sanskrit. But the influence did not stop there. The Jonesean scheme was much used by missionaries writing grammars of languages having no scripts of their own; and by stages it evolved into the International Phonetic Alphabet used today by linguists. Through this means Indian phonology is embedded in the current practices of cosmopolitan linguistics, kept living through countless iterations in daily use.

While the role of Sanskrit language and grammar in the consolidation and success of comparative philology or historical linguistics is well known, the role of Indian phonology in relation to Sanskrit and other languages is little known and appreciated. British India at the end of the eighteenth and beginning of the nineteenth centuries was an extraordinarily fruitful site for the production of new and unprecedented discoveries in language history. The Jonesean enunciation of the Indo-European conception is famous because Indo-European is the great success and model for historical-linguistic comparison elsewhere in the world. But in addition to that there were three other discoveries connected with British India and employees of the East India Company learning languages from Indian scholars: that of the Dravidian language family of South India, filled with Sanskrit loanwards but nevertheless constituting an unrelated language family of its own; that of the Indo-Aryan derivation of the
Roma or Gypsy languages of Europe; and that of the Malayo-Polynesian language family comprehending languages as distant from one another as Madagascar and Hawaii (Trautmann 2006: 1–2).

This special fruitfulness of British India for the consolidation of comparative philology and the execution of its languages-and-nations project is due to the interactions of Indian and European scholars and their language analysis traditions on Indian soil. The languages-and-nations project of Europe needed a method of etymology for identifying cognate words in related languages, and to discriminate them from accidental similarities. Prior to the colonial connection there was a veritable chaos of competing systems of etymology in Europe, each at war with the other; because of the colonial connection, comparative philology quickly came to a new etymology guided by exact phonological assessment, leading to the formulation of “laws” of sound-shifts. This new, scientific etymological method put an end to the warfare among etymological systems of the eighteenth century and formed a unitary scientific standard. The sudden onset of a more exact phonological assessment coincided with European access to the Sanskrit language and the Indian phonological analysis concretized in the alphabetical order of Indian scripts descended from Brahmi.

Discussion

The hiddenness of the story is the result of a conjuncture, at this moment of history, of quite different causes: the theory-deadness of antiquity under the ideology of modernism; the theory-deadness of Asia under Eurocentrism; and the theory-deadness of the pre-colonial under post-colonial theory.

Let us begin by contrasting the obscurity of this story with the well-known, indeed iconic, story of how first European knowledge of Sanskrit led to the discovery of its relation to the languages of Europe—the discovery, that is, of the Indo-European language family. The similarity of Sanskrit, Greek and Latin is such that, as Sir William Jones put it, “no philologer could examine them all three, without believing them to have sprung from some common source, which, perhaps, no longer exists.” The passage is famous for laying down the concept of what comes to be called Proto-Indo-European, but it is also noteworthy for suggesting that this concept follows from mere inspection of the three languages. Contrary to this characterization, however, the emergence of the Indo-European was pre-shaped by the tree-like conception of the historical relations among languages, itself shaped by the prevailing Tree of Nations model of human history deriving from the Book of Genesis; and the conception of an inner core, native and ancient, of languages constituting the matter for the construction of valid trees of language history through comparative study. (Internal to the frame supplied by the tree model, the comparative
method in linguistics in Bopp and his successors owes a great deal to the comparative anatomy of Cuvier, as Baxter 2002 shows.) What matters here, is that in the naïve empiricism of the Jonesian formulation, we have in effect a statement that Sanskrit serves as mere content for the emerging idea of Indo-European, an inert source among others, for the synthesizing inspection. This way of putting things has been many times quoted as a kind of charter myth of the emergence of scientific linguistics, especially important as the Indo-European field becomes the model and standard for scientific study of language history in other language families. India appears in this story as a “content provider,” not a provider of phonological theory. While the Jones passage about Sanskrit is recited in virtually every history of historical linguistics, the story of Indian phonology is obscure and received as a detail, not a central part of the emergence of the science.

This is a telling difference, one that is doubly determined. The newness of historical linguistics, expressed in the story of its miraculous emergence from a non-science past, is only another instance of the over-valuation of the new and the concomitant undervaluation of precedents in the ideology of modernity, the idea, that is, of the modern appearing as a deep rupture in history.

Over-valuation of the new at the expense of precedent is connected with the over-valuation of Europe at the expense of Asia. Hegel is an especially useful resource in elucidating this effect, for his life project was concerned both to express and theorize the vast expansion of European historical consciousness in the age of the expansion of European imperial power, and at the same time to contain and tame its decentering and destructive tendencies. Hegel’s project was summed in the palindromic pair, history of philosophy and philosophy of history. The history of philosophy side of the project is especially germane here, as he insists that theory (or philosophy, or science)—the very word theoria and therefore also the thing—is originally and essentially Greek, and that there is no theory outside Greece-Rome-Europe (Hegel 1878, 1892–1896). Much of the cultural work Hegel’s history of philosophy does, therefore, is to establish and fortify a boundary between this deep Europe and the rest of the world. As Roger-Pol Droit (1989) shows, Hegel ends the early nineteenth-century European enthusiasm for Indian philosophy, causing it to be reclassified as religion and expelling it from the philosophy syllabus in Europe. Hegel’s heirs, from the right to the left of the political spectrum, accepted this result and elaborated upon it.

Finally, specific not to Asia as a whole but to the part of it subject to European imperial rule (India in this instance) there is the effect of the postcolonial theorists, especially the “Orientalism” concept of Edward Said (1978). This is a modification of Michel Foucault’s concept of power/knowledge, that is, the mutual entailment of power and knowledge, the
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necessity of power to produce knowledge and the necessity of knowledge to maintain power. Said’s modification was to make an analytic tool directed at the study of Europe amenable to the study of European colonial rule and knowledge-formation outside of Europe. Substituting terms, \textit{power} became \textit{colonial rule}, and \textit{knowledge} became colonial knowledge or \textit{Orientalism}. The concept, then, posits a close relation, a relation of mutual entailment, between colonialism and Orientalist knowledge. Said’s book fomented a huge revolution in the study of Orientalism, by insisting on this connection between a form of rule and a form of knowledge. But its peculiar angle of illumination threw other aspects of the colonial connection into the shadows, and as we begin to reach the limits of what we may yet find that is new and unexpected from this particular light-source we increasingly feel the presence of what is left obscure. Upon reflection, what the Saidian reformulation of Foucault’s power/knowledge leaves out is India, Indians and Indian knowledge, and the processes by which Europeans acquired knowledge of Indian languages. It is a “White men in the tropics” kind of story, and Indians figure in it largely as victims, not as agents. Moreover, its constant tendency is to identify Europe with theory and India with content. In doing so it reinscribes the way of looking that it condemns. At the last, modernism, Eurocentrism and colonial theory, acting in their different ways, converge in the making of an interpretative machinery that turns non-European theory into content, and produces the miraculous virgin birth of European theory.

This machinery produces another effect, which is the hiddenness of the history we have been examining. It is a question of a history that is hidden in plain sight. Much of the continued life of Indian phonology in Europe has been told in a splendid book by W. S. Allen, in \textit{Phonetics in Ancient India}, written as long ago as 1953, and the influence of Indian phonology on China is explicit in Baxter (1992) and Pulleyblank (1999) on the Chinese rhyming dictionaries and rhyme tables. Pulleyblank rightly says (1999: 101), “The Paninean system of Sanskrit grammar was much the most sophisticated analysis of any language before modern times and associated with it was an analysis of the production of the sounds of Sanskrit designed to ensure the preservation of correct pronunciation of the Vedic hymns.” But what gets remembered is not the tradition of language analysis but the role of Sanskrit language, conceived as a simple object, a content, in provoking the apprehension of a historical relatedness among languages we call Indo-European, and with it the (European) leap into scientific linguistics. The hiddenness of Indian theory was actively made.

What is lost from this angle of illumination is, in the example in hand, the way in which the colonial connection brought European and Indian intellectual traditions together in India and directed them to Indian objects of study. The interactions between European and Indian intellectuals, to
be sure, were colonial relations which put Europeans in directing roles and Indians in assisting ones. But the colonial connection, for all that it was a disaster for Indians, formed a zone of interaction between the two traditions of language analysis that proved immensely fruitful. The durability of the result is impressive. Two and a half centuries after Sir William Jones adumbrated the Indo-European concept it continues to be used and elaborated upon by historical linguistics and to be its model for the analysis of other language families. The other three language families also continue to be considered valid historical constructs among linguists today.

These results are effects of the Indian language analysis, of which the Indian phonological analysis was the foundation and, concretized in the alphabetical order of Brahmi script and its descendants, was in practice a first lesson in the kind of exact phonological analysis that was needed to carry out the European project of creating grammars and dictionaries and discerning historical relations among the languages of the world.

If this argument is acceptable, it follows that a different paradigm is needed to capture the processes of knowledge-formation that went on under British rule of India, and by implication elsewhere as well. It is up to historians of the ancient period to construct an alternative paradigm that will illuminate this hitherto obscure terrain. Historians of the modern and of European colonialism have evidently been unable to frame their study of knowledge systems in ways that capture the phenomena of convergence this case instantiates. Historians of the ancient period—the readers of *Fragments*—will have to be critics of prevailing views and makers of alternative approaches.

A new approach, to be valid, cannot be the mirror image of modernism, Eurocentrism and postcolonialism. An equal and opposite reaction will result in a standstill, not a way forward. Overvaluing the past, the indigenous, the traditional and the local are the pitfalls that it would be all too easy to fall into. Indeed, if the history I have recited here tells us anything it is that ideas propagate unevenly, at rates and with effects that vary in relation to the perceived uses on the part of the receiving societies. There are failures as well as successes to be accounted for, and some kinds of knowledge remain stubbornly local, unable to grow, or even held secret by their makers.

Any venture along these lines takes up the comparative method, and the comparative method, as it rests on grouping phenomena on the basis of similarity, confronts the problem of how so inexact a procedure can produce certain knowledge. The question of method is always, how much similarity is enough? Even historical linguistics, which operates by finding cognate words and forms among languages as evidence of historical co-descent, and which has achieved a great deal of exactness—thanks
in part, we have seen, to the timely appearance of Indian phonology on
the European horizon and its being folded into an emerging historical
linguistics—has its internal differences of detail over the question of how
much similarity is enough to settle a given issue of historical relatedness.
How much greater will be the problem of deciding the question of degree
when there is no evident way of calibrating them. This is a problem which
dogs all comparison across regions or across the longue durée.

One notable proposal for dealing with this problem has come, not from
historical linguistics, but from the comparative study of The Exact sciences
in antiquity, to invoke the title of a splendid book on the subject by Otto
Neugebauer (1957). His argument is that when it comes to questions of
cultural contact among the civilizations, in the absence of direct evidence,
the best circumstantial evidence comes from the exact sciences, because
they contain parameters whose appearance in two different civilizations
cannot be attributed to chance because of their particularity and precision.
By exact sciences Neugebauer meant mainly mathematics and astronomy.
He should have included astrology as well, which was certainly an exact
science to the ancients if not to us, and was in a sense the glue holding
together the scientific triad of astronomy-astrology-mathematics which
developed together and traveled freely across political, regional, linguistic
and religious boundaries in ancient times.

David Pingree extended Neugebauer’s program from its focus on Meso-
potamia, Egypt and the Hellenistic sphere to India and beyond, through
a lifetime of brilliant contributions. In the course of his studies, we come
to see an increasing recognition that astrology and divination generally
is a huge preoccupation of ancient states and their peoples, from Europe
to Southeast Asia and beyond, which has left a massive archive for com-
parative study. An example is the system of lunar asterisms (nakshatras)
in the Veda, that preceded the adoption of the twelve signs of the zodiac.
For a long time the scheme of lunar asterisms was thought to be unique to
India, but Pingree has shown that the Mesopotamian omen texts contain
a list of lunar asterisms the same in number and largely in name as those
of India, which seems to have been the borrower (Pingree 1963, 1978).
The alphabetical order of the Brahmi script acts in an analogous way as
an index of civilizational interactions. There are other spheres in which
ideas and precious objects readily spread across regions, languages and
religions, notably ideals of kingship and forms of refinement, luxury,
taste and comportment, though they are often attended by the problem
degree.

The existence of an international sphere, including ideas of science,
kingship and refinement, in the ancient world, all across Eurasia, helps
to undermine the deep boundary between the West and the Rest which
it was Hegel’s project to produce and defend. It makes historians of the
ancient world better fitted for the kind of work that is needed to make sense of the field of knowledge production beyond the obvious effects of power and enable us to learn what we do not already know.

The spread of higher-order effects of human mind across regions, and of the perpetuation of the past in the present, is a phenomenon that is systematically obscured by modernism, by Eurocentrism and by postcolonial theory. They are not friends of ancient history, and act to distance the past from the present, to minimize its significance for the present and to throw doubt upon the very possibility of untainted knowledge of the past. To reveal the true relation of the past to the present falls to ancient historians, and to do so they must recognize the effects of these wide-spread tendencies and work out alternatives. It will not suffice to be experts of a limited slice of history that comes to an end at some date in the past.

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Works Cited


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