

WHY SIR WILLIAM JONES GOT IT ALL WRONG, OR JONES' ROLE IN HOW TO ESTABLISH LANGUAGE FAMILIES

Lyle Campbell

(University of Canterbury, New Zealand)

1. Introduction

Sir William Jones (1746-1794) is often credited with establishing the Indo-European family of languages and founding comparative linguistics. Since many have argued that there are methodological lessons to be learned from Jones for establishing language relationships, this paper shows why this view of Jones' work is mistaken. Larry Trask contributed much to exposing methodological and other errors in long-range comparisons intent on defending questionable proposals of distant genetic relationship (see for example, Trask 1995). This paper follows his lead in this arena; its goals are to set the record straight with respect to Sir William Jones' ideas, to examine the methods Jones used and to put them in proper perspective, and in so doing to contribute to understanding of appropriate methods for establishing genetic relationships among languages.

Jones' (1786[1789]) famous 'philologist passage' —that most momentous sound-bite of yore— which declared a relationship between Sanskrit and several other Indo-European languages, is often cited as the beginning of Indo-European and of comparative-historical linguistics in general (cited below). Nearly all introductory textbooks on historical linguistics repeat this claim, as do many other linguistic publications. On all sides we see statements such as Bengtson and Ruhlen's (1997: 3) that Sir William Jones "discovered the method of comparative linguistics —and with it the Indo-European family". Murray (1998: 3) reports as general knowledge that Jones "had founded comparative philology, or historical linguistics". Cannon (1990: 246) asserts that Jones' "was the first known printed statement of the fundamental postulate of Indo-European comparative grammar; more than that, of comparative linguistics as a whole". Gray (1999: 116-17) speaks of Jones' "earth-shattering discovering", asserting that "Jones used careful etymological analysis to demonstrate that [here he repeats the philologist passage]... The significance of this statement cannot be overestimated. It rested on an empirical demonstration..."; "Jones stimulated a stampede of philologists". Trautmann (1998: 105), immediately after repeating the famous philologist passage, remarks that "the modernity of the formulation is remarkable ... these are exactly the views historical linguists hold today". (See also Emeneau 2000: 545). Even in his own

day Jones' "reputation was such that intellectuals were literally *expecting* major discoveries in colonial India, since Jones' Persian grammar and his translations from Greek, Persian, and Arabic were well-known" (Cannon 1991: 23). By 1772, Jones had "established himself as the foremost exponent of Oriental studies in England and as a scholar and writer of rare attainments" (Arberry 1946: 10). Nevertheless, with respect to the discovery of Indo-European as a language family and the founding of the comparative method, we will see that such views of Jones' philologist statement are erroneous.

In this paper, the following well-known facts are brought into the picture, facts which gainsay the commonly repeated but mistaken view of Jones' role in the development of Indo-European and comparative linguistics:

- (1) Connections among Indo-European languages had been observed long before Jones (cf. Giraldus Cambrensis 1194, Comenius 1657, Dante 1305, Gelenius 1537, Goropius 1569, Ihre 1769, Jäger 1686, J. J. Scaliger 1599[1610], Stiernhielm 1671, Lhuyd 1707, among others).
- (2) The relationship of Sanskrit with certain other Indo-European languages, especially with Greek and Latin, had also been recognized prior to Jones (for example, Thomas Stephens [1549-1619] 1583 (see Muller 1986: 14-15), Filippo Sassetti [1540-1588] 1585, Jean François Pons 1743, Benjamin Schultze [1715-1790] 1760, Gaston Laurent Coeurdoux 1768, Nathaniel Halhed 1778, Lord Monboddo 1774-1809 (cf. Zeller 1967). Moreover, there were at least 47 published accounts of Sanskrit before Jones' statement on the matter (Muller 1986: 14). Jones was well aware of the views of some of these predecessors.
- (3) Finally, Jones' procedures bear little resemblance to the comparative method practiced by later linguists, and in any case they were not original to him.
- (4) Jones' interpretation of affinity among Asian peoples and their languages reflects not so much the linguistic facts as the biblical framework with Mosaic chronology in which Jones couched his thinking; this interpretation, based on the descendants of Noah, naturally involved a genealogical orientation, and this both reflected and imposed views of how languages could be related to one another —this was Orientalism directed in defense of Christianity (Trautmann 1998: 107, 109).
- (5) Jones' philologist passage is usually read out of context, with its interpretation based on too much of present-day understanding (Mukherjee 1968: 95), with little real understanding of Jones' own intentions or of the intellectual environment in Jones' day.

2. Jones' plan

Jones (1798: 415) declared that his "design" (intent) was to prepare for the annual meetings of the "Asiatick Society of Bengal" (which he founded, later called the Royal Society of Bengal) "a series of short dissertations" (presidential addresses), the theme and purpose of which he specified as:

The *five* principal nations who have in different ages divided among themselves, as a kind of inheritance, the vast continent of *Asia*, with the many islands depending on it, are the *Indians*, the *Chinese*, the *Tartars*, the *Arabs*, and the *Persians*: *who* they severally were, *whence* and *when* they came, *where* they now are settled, and *what advantage* a more perfect knowledge of them all may bring to our *European* world, will be shown, I trust, in *five* distinct essays; the last of which will demonstrate the connexion or diversity between them, and solve the great problem, whether they had *any* common origin, and whether that origin was *the same* which we generally ascribe to them. (Jones 1798: 417-18).

Jones saw his essays delivered before the Society as interconnected parts of a whole, and it is only in treating them as a whole that Jones' methods, claims, and conclusions can be fully apprehended. Jones' grand plan was to write a history of humankind in Asia. These eleven essays were published in *Asiatick Researches*, the journal of the Asiatic Society. Jones' direct interest was not in historical linguistic matters; language was but one source of information relevant to his goals:

We seem to possess only *four* general media of satisfying our curiosity concerning it [(pre-)history]; namely, first, their *Languages* and *Letters*; secondly, their *Philosophy* and *Religion*; thirdly, the actual remains of their old *Sculpture* and *Architecture*; and fourthly, the written memorials of their *Sciences* and *Arts*. (Jones 1798: 421).

Jones maintained that languages were not worth study for their own sake, but only as means to a higher end: "I have ever considered languages as the mere instruments of real learning, and think them improperly confounded with learning itself" (Quoted by Godfrey 1967: 58; cf. also Rocher 1980: 178). As Trautmann (1998: 106) notes, "it is ironic that Jones is best remembered for his contributions to linguistics, given that he said more than once that he did not wish to be considered a mere linguist, and always regarded language as a means to other ends. Restored to its own context, the famous [philologist] passage on the Indo-European languages reveals its extra-linguistic ends very clearly." "The Anniversary Discourses taken together form a wide-ranging essay on Asian ethnology" (Trautmann 1998: 106). The Third through Seventh discourses follow a formula, first, in each discourse, one finds a description of the boundaries of the area in question, followed by sections dedicated to each of the "media", language, religion, monuments, and arts and sciences. In the Third Discourse, the philologist quote comes in section I., the section on language and letters.

Jones' more general interest in the history of the human races rather than in language per se was not unusual for 18th and 19th century linguistic scholars. It was shared by Leibniz, Hervás y Panduro, Monboddo, Vater, Schlegel, Grimm, von Humboldt, and others. For all of these scholars, linguistic comparisons were seen as part of the means for getting at a broader history of the nations and races of the world (see Campbell and Poser in press).

3. The philologer passage

Jones pursued this grand plan in his anniversary discourses, delivered to the Royal Society of Bengal each February from 1784 to 1794 (see Jones 1798, 1799, 1979a-f). The third to the ninth discourses were dedicated to solving the “common origin of the five principal Asiatic nations: India, Arabia, Tartary, Persia, and China”, with each nation allotted a distinct essay (Teignmouth 1805: 387, Cannon 1952: 44). The ‘philologer’ citation is from the Third Discourse (*On the Hindus*), given in 1786 (Jones 1798). We cite it here “restored to its own context” (Trautmann 1998: 106), that is, in its fuller form including connected material immediately preceding it which is never quoted with the so-often repeated philologer passage itself:

Five words in six, perhaps, of this language [Hindustani (= Hindi)] were derived from the *Sanscrit*... but the basis of the *Hindustani*, particularly the inflexions and the regimen of verbs, differed as widely from both these tongues [Sanskrit and Hindi-Urdu] as *Arabick* differs from *Persian*, or *German* from *Greek*. Now the general effect of conquest is to leave the current language of the conquered people unchanged, or very little altered, in its ground-work, but to blend with it a considerable number of exotick names both for things and for actions... and this analogy might induce us to believe, that the pure *Hindi*, whether of *Tartarian* [Turkic and other central Asian peoples] or *Chaldean* [i.e. Semitic] origin, was primeval in Upper India, into which the *Sanscrit* was introduced into it by conquerors from other kingdoms in some very remote age; for we cannot doubt that the language of the *Véda*'s was used in the great extent of country which has before been delineated, as long as the religion of *Brahmá* has prevailed in it.

[Here begins the “philologer” passage as normally cited] 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 *Gothic* and *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 1798[1786]: 422-23; cf. Teignmouth 1805: 388, Pachori 1993: 175).

This passage is understood accurately only when seen in the context of Jones' overall thought and that of his times.¹ It is to this I now turn.

¹ Scholars point out how soon after his arrival in India, in 1783, and how early in his Sanskrit study Jones made his famous *Third Discourse*. “On February 2, 1786, only about half a year after he [Jones] began to study Sanskrit, he delivered his third ‘anniversary discourse’” (Edgerton 1946: 231; see also Godfrey 1967: 58; Arberry 1946: 21-22).

4. Jones' mistakes

Jones erroneously grouped a number of languages and peoples (Egyptians, Chinese, Japanese, ancient Mexicans and Peruvians, see below) with Sanskrit and other Indo-European languages. Moreover, subsequent historians extol Jones for seeing Sanskrit's connection with other Indo-European languages but neglect his misinterpretation in the immediately preceding paragraph of the Sanskrit-Hindi relationship, which he saw as due to diffusion, to the introduction of Sanskrit into a pre-existing Hindi geographical context. Moreover, even within the famous paragraph, Jones' view of Gothic and Celtic as "blended with a very different idiom" (i.e. mixed with non-Indo-European languages) is passed over without comment, and his leaving open the possibility that the "common source" of these Indo-European languages may still survive is forgotten (cf. Cannon 1990: 245). Also, Slavic was misassigned; Jones believed it belonged with non-Indo-European languages of Central Asia. Historians have also failed to give attention to the concluding paragraph of Jones' *Third Discourse*, where he presents his conclusions, which is much more revealing of his real thinking—and of his errors—than the isolated philologist passage, from which it differs significantly:

Of these cursory observations on the *Hindus*... this is the result; that they had an immemorial affinity with the old *Persians*, *Ethiopians*, and *Egyptians*; the *Phenicians*, *Greeks*, and *Tuscans* [Etruscans]; the *Scythians* or *Goths*, and *Celts*; the *Chinese*, *Japanese*, and *Peruvians*; whence, as no reason appears for believing that they were a colony from any one of those nations, or any of those nations from them, we may fairly conclude that they all proceeded from some *central* country, to investigate which will be the object of my future Discourses. (Jones 1798: 431; cf. Pachori 1983: 178).

As this shows, Jones incorrectly classified many languages, based on his four "media" or sources of evidence. These errors bear further attention, for they are methodologically instructive.

In the famous *Third Discourse*, based on certain similarities between religions, Jones found that "it is very remarkable, that the *Peruvians*, whose *Incas* boasted of the same descent [i.e. the sun]... whence we may suppose that South *America* was peopled by the same race [as the *Hindus*]" (Jones 1798: 426). Jones repeated his assumed Peruvian connection and added Mexico to the picture in his Ninth and Tenth Discourses, for example:

Nor is it unreasonable to believe, that some of them [from India] found their way from the eastern isles into *Mexico* and *Peru*, where traces were discovered of rude literature and mythology analogous to those of *Egypt* and *India*. (Jones 1979e[1792]: 491, 1979f[1793]: xv).

Also in the *Third Discourse*, based on the remains of architecture and sculpture, religion, and "letters on many of those monuments", Jones concluded that "all these indubitable facts may induce no ill-grounded opinion, that *Ethiopia* and *Hindustan* were peopled or colonized by the same extraordinary race" (Jones 1798: 427). Ethiopian languages belong primarily to the Semitic and Cushitic language

families, not to the same Indo-European family as those of “Hindustan” (in the Indian sub-continent) as those with which Jones dealt do.

In the *Fifth Discourse*, on the Tartars, Jones (1979b[1788]: 25) asserted an affinity between “Indian” (Indo-Aryan) and “Arabian” (Semitic) languages:

I will not offend your ears by a dry catalogue of similar words in those different languages; but a careful investigation has convinced me, that, as the *Indian* and *Arabian* tongues are severally descended from a common parent, so those of *Tartary* [all the other languages of Central Asia] might be tracted to one ancient stem essentially differing from the two others.

In Jones’ (1979c[1789]) *Sixth Discourse*, on the Persians, we find that even Jones’ more linguistic methods led him astray in several cases, since he failed to distinguish loans, basing his conclusions on a fairly superficial comparison of the languages involved. For example, Jones misidentified Pahlavi, an Indo-European language of the Iranian branch, as Semitic:

[I, Jones, and my friend Bahman, were] convinced after full consideration, that the *Zend* [Avestan] bore a strong resemblance to *Sanscrit*, and the *Pahlavi* to *Arabic*... This examination gave me perfect conviction, that the *Pahlavi* was a dialect of the *Chaldaic* [Semitic family, especially Aramaic]; and of this curious fact I will exhibit a short proof. By the nature of the *Chaldean* tongue most words ended in the first long vowel, like *shemià*, heaven; and that very word, unaltered in a single letter, we find in the *Pazend*, together with *lailia*, night; *mejd*, water; *nira*, fire; *matra*, rain; and a multitude of others, all *Arabic* or *Hebrew*, with a *Chaldean* termination; so *zamar*, by a beautiful metaphor, from *pruning trees*, means in *Hebrew* to *compose verses*, and thence, by an easy transition, to *sing* them; and in *Pahlavi* we see the verb *zamrúniten*, to *sing*, with its forms *zamrúnemi*, I *sing*, and *zamrúnid*, he *sang*; the verbal terminations of the *Persian* being added to the *Chaldaic* root. Now all those words are integral parts of the language, not adventitious to it like the *Arabic* nouns and verbals engrafted on modern *Persian*; and this distinction convinces me, that the dialect of the *Gabrs*, which they pretend to be that of *Zerátusht*... is a late invention of their priests, or subsequent at least to the *Muselman* invasion. (Jones 1979c[1789]: 41-42).

Thus it has been proved by clear evidence and plain reasoning ... that the language of the first *Persian* empire was the mother of the *Sanscrit*, and consequently of the *Zend*, and *Parsi*, as well as of *Greek*, *Latin*, and *Gothic*; that the language of the *Assyrians* was the parent of *Chaldaic* and *Pahlavi*. (Jones 1979c[1789]: 51).

Of his *Pahlavi* no more need be said, than that it strongly confirms my opinion concerning the *Chaldaic* origin of that language. (1979c[1789]: 43).²

² Cannon (1990: 299) seems to suggest that Jones’ *Chaldaic* was Old Persian; however, Jones clearly intended it in the sense that “Semitic” is used today. This is clear both from the various contexts in which Jones used the term and from other common usage of the times. *Chaldaic* (or *Chaldean*) was synonymous with Aramaic in its narrower uses and Semitic in its broader utilization. For example, Jones (1979[1791]: 4) says “Abyssinian” (also called “Ethiopic”) is “a dialect of old *Chaldean*, and sister of *Arabick* and *Hebrew*.”

In the *Seventh Anniversary Discourse*, on the Chinese, Jones concluded:

All the circumstances, which have been mentioned under the two heads of *Literature* and *Religion*, seem collectively to prove (as far as such questions admit of proof) that the *Chinese* and *Hindus* were originally the same people. (Jones 1799: 378).

It is very true that the *Chinese* differ widely from the natives of *Japan* in their vernacular dialects, in external matters, and perhaps in the strength of their mental facilities; but as wide a difference is observable among all the nations of the *Gothic* family; and we might account even for a greater dissimilarity, by considering the number of ages during which the several swarms have been separated from the great *Indian* hive, to which they primarily belonged. The modern *Japanese* gave *Kaempfer* the idea of polished *Tartars*; and it is reasonable to believe, that the people of *Japan*, who were originally *Hindus* of the martial class, and advanced farther eastward than the *Chinas*, have, like them, insensibly changed their features and characteristics by intermarriages with various *Tartarian* tribes, whom they found loosely scattered over their isles, or who afterwards fixed their abode in them. (Jones 1799: 380-81).

Jones concludes this discourse with a statement of his belief that he has “now shown in five discourses, that the *Arabs* and *Tartars* were originally distinct races, while the *Hindus*, *Chinese*, and *Japanese* proceeded from another ancient stem” (Jones 1799: 381; cf. also Mukherjee 1968: 98; Teignmouth 1805: 395).

Jones' *Eighth Discourse* is on the “borderers, mountaineers, and islanders” of Asia. In it he arrived at several classifications known today to be erroneous. Repeating from his *Sixth Discourse*, Jones (1799c: 5) “believe[d] on the whole, that the *Ethiops* of *Meroë* were the same people with the first *Egyptians*, and consequently, as it might easily be shown, with the original *Hindus*”. He also mistakenly classified other Iranian languages as Semitic, in addition to Pahlavi (seen above): “there is very solid ground for believing, that the *Afghans* [identified by Jones as *Patans* (Pashtos ?) and *Balójas* (Baluch), i.e. speakers of Iranian languages] descended from the *Jews*; ...principally, because their language is evidently a dialect of the scriptural *Chaldaick*” [Aramaic] (Jones 1979d[1791]: 4, cf. also p. 7). Jones (1979d[1791]: 8) also mistook Malay as Semitic: “As to the *Moplas*, in the Western parts of the *Indian* empire, I have seen their books in *Arabick*, and am persuaded, that, like the people called *Malays*, they descended from *Arabian* traders and mariners after the age of Muhammed”. Jones also mistakenly regarded other Austronesian languages as connected with Sanskrit (Indo-European):

If Mr. Marsden has proved (as he firmly believes, and as we, from our knowledge of his accuracy, may fairly presume) that clear vestiges of one ancient language are discernible in all the insular dialects of the southern seas from *Madagascar* to the *Phillipines*, and even to the remotest islands, lately discovered, we may infer from the specimens in his account of *Sumatra*, that *the parent of them all was no other than the Sanscrit*. [My emphasis, L.C.] (Jones 1979d[1791]: 10).

Jones also wrongly regarded Tibetan as Sanskrit (Indo-European):

for, although it [Tibetan] was anciently *Sanscrit*, and polysyllabick, it seems at present, from the influence of *Chinese* manners, to consist of monosyllables, to form which, with some regard to grammatical derivation, it has become necessary to suppress in common discourse many letters, which we see in their books, and thus we are enabled to trace in their writing a number of *Sanscrit* words and phrases, which, in their spoken dialect are quite undistinguishable. (Jones 1979d[1791]: 13).

Jones began his *Ninth Discourse* with a “short review of the propositions, to which we have gradually been led”:

that the first race of *Persians* and *Indians*, to whom we may add the *Romans* and *Greeks*, the *Goths*, and the old *Egyptians* or *Ethiops*, originally spoke the same language and professed the same popular faith, is capable, in my humble opinion, of incontestible proof; that the *Jews* and *Arabs*, the *Assyrians*, or second *Persian* race, the people who spoke *Syriack*, and a numerous tribe of *Abyssinians*, used one primitive dialect, wholly distinct from the idiom just mentioned, is, I believe, undisputed, and, I am sure, indisputable; but that the settlers in *China* and *Japan* had a common origin with the *Hindus*, is no more than highly probable; and, that all the *Tartars*, as they are inaccurately called were primarily of a third separate branch, totally differing from the two others in language, manners, and features, may indeed be plausibly conjectured; but cannot from the reasons alledged in the former essay, be perspicuously shown, and for the present, therefore, must be merely assumed. (Jones 1979e[1792]: 479-80).

This summary of Jones’ conclusions from his interconnected discourses is strikingly different from the image usually derived from the philologist passage. We concur with Rocher (1980: 179-80):

Linguistic evidence led him [Jones] to postulate a common source for Sanskrit and other languages later known as Indo-European, but extra-linguistic arguments made him expand to non-Indo-European speaking peoples the list of nations with which the Hindus “had an immemorial affinity”. It was the same term “affinity” which he used to describe the linguistic kinship of Sanskrit, Latin, and Greek, and it is evident that he did not consider linguistic factors as qualitatively different from others he used. What Jones summed up as the “result” of the observations made in the discourse, was that the Hindus had a common origin with a vast array of nations, including the Egyptians, Phoenicians, Chinese, Japanese, even Peruvians... *This was a far cry from the method of linguistic reconstruction which Bopp and later scholars were to develop.* [My emphasis, L.C.] (See also Koerner’s 1990: 255).

His *Ninth Discourse* is quite different from the previous ones; it is almost wholly an attempt to accommodate Jones’ conclusions about the nations of Asia within a biblical framework, one influenced heavily by the writings of his friend, Jacob Bryant (1774-1776), to whom Jones made occasional reference throughout his discourses and whom Jones praised highly in the beginning of the Third, where

Jones began his treatises on the five principal Asian nations. Here Jones seems to abandon the better part of the comparative linguistics of the day in favor of a very long-standing biblical account, speculating about descent from the sons of Noah and about Mosaic chronology:

Three sons of the just and virtuous man, whose lineage was preserved from the general inundation, travelled, we are told, as they began to multiply, in *three* large divisions variously subdivided: the children of Ya'fet [Japhet] seem, from the traces of *Slavonian* names, and the mention of their being *enlarged*, to have spread themselves far and wide, and to have produced the race, which, for want of a correct appellation, we call *Tartarian*: the colonies, formed by the sons of Ham and Shem, appear to have been nearly simultaneous; and, among those of the latter branch, we find so so [sic] many names incontestably preserved at this hour in *Arabia*, that we cannot hesitate in pronouncing them the same people whom hitherto we have denominated *Arabs*; while the former branch, the most powerful and adventurous of whom were the progeny of Cush, Misr, and Rama (names remaining unchanged in *Sanscrit*, and highly revered by the *Hindus*), were, in all probability, the race which I call *Indian*. (Jones 1979e[1792]: 485-86).

From testimonies adduced in the six last annual discourses ... it seems to follow that, the only human family after the flood established themselves in the northern parts of *Iran*; as they multiplied, they were divided into three distinct branches, each retaining little at first, and losing the whole by degrees, of their common primary language ...; that the branch of YA'FET was *enlarged* in many scattered shoots over the north of *Europe* and *Asia* ... and had no use of letters, but formed a variety of dialects [languages], as their tribes were variously ramified; that, secondly, the children of HAM, Who founded in *Iran* itself the monarchy of the first Chaldeans, invented letters ... they were dispersed at various intervals, and in various colonies, over land and ocean; that the tribes of MISR, CUSH, and RAMA, settled in *Africk* and *India*; while some of them, having improved the art of sailing, passed from *Egypt*, *Phenice*, and *Phrygia*, into *Italy* and *Greece* ... whilst a swarm from the same hive moved by a northerly course into *Scandinavia*, and another, by the head of *Oxus*, and through the passes ... as far as the territories of *Chin* and *Tancut* ... nor is it unreasonable to believe that some of them found their way from the eastern isles into *Mexico* and *Peru*, where traces were discovered of rude literature and mythology analogous to those of *Egypt* and *India*; that thirdly, the old *Chaldean* empire being overthrown by the *Assyrians* ... other migrations took place ... while the rest of Shem's progeny, some of whom before had settled on the Red Sea, peopled the whole *Arabian* peninsula. (Jones 1979e[1792]: 490-91).

In the *Tenth Discourse*, this is reaffirmed:

we cannot surely deem it an inconsiderable advantage that all our historical researches have confirmed the Mosaic accounts of the primitive world ... Three families migrate in different courses from one region, and, in about four centuries, establish very distant governments and various modes of society: Egyptians, Indians, Goths, Phenicians, Celts, Greeks, Latians, Chinese, Peruvians, Mexicans, all sprung from the same immediate stem. (Jones 1979f[1793]: xv).

It must be asked how such a mistaken classification, forced to conform to preconceived biblical interpretations, could have been so misunderstood by generations of scholars as the foundation of comparative linguistics, how it could have had such a monumental impact in the linguistic literature?

5. Jones' methods

Let us look closer at Jones' linguistic methods, particularly with the claims in mind made by some scholars who attempt to justify their own methodological beliefs by calling upon Jones' authority.

It may be helpful at the outset to recall Max Müller's (1861: 162) assessment, that "it was impossible to look, even in the most cursory manner, at the declensions and conjugations, without being struck by the extraordinary similarity, or, in some cases, by the absolute identity, of the grammatical forms in Sanskrit, Greek, and Latin". Because the relationship of Sanskrit to these other Indo-European languages was so unmistakable, it was obvious to Jones (and others who looked at it) without the application of any particularly sophisticated historical linguistic method. This being the case, Jones' methods (or lack of method) may, in fact, not be particularly instructive when it comes to looking at more challenging cases of potentially related languages where the relationship may not be so obvious.

In assessing Jones' historical linguistic methods, it is important to bear in mind not only the cases in which he mistakenly grouped unrelated languages (mentioned above), but also the cases of related languages which his methods led him to dismiss (for example Hindi and Sanskrit, or Pahlavi and other Iranian languages), and even cases he correctly grouped together but for the wrong reasons.

In this regard, it is instructive to contrast Jones' view of the role of grammar for showing language relationships with that of his contemporary Nathaniel Brassey Halhed (1778). Halhed had remarked in the preface of his Bengali grammar:

I have been astonished to find this similitude of Sanskrit words with those of Persian and Arabic, and even of Latin and Greek; and these not in technical and metaphorical terms, which the mutation of refined arts and improved manners might have occasionally introduced; but in the main groundwork of language, in monosyllables, in the names of numbers, and the appellations of such things as could be first discriminated on the immediate dawn of civilization. (Cited in Müller 1861: 162-63).

Both Halhed and Jones recognized "the same facts about Sanskrit and the modern languages of northern India" (Robins 1990: 93), but drew diametrically opposite conclusions from them:

Both saw the etymological links between Sanskrit and the modern vocabularies, and both noted the structural differences exhibited by the verbal inflexions and the verbal phrases. Halhed (1778: ix) declared that on the evidence of the etymologies the Hindustani language(s) were 'indubitably derived from the Sanskrit' although 'the inflexions by which the words are affected and the modes of grammatical regimen are widely different'. But Jones [1798: 422], despite his admission that

'five words in six' in Hindi are derived from Sanskrit, argued that the typological diversity of the languages in 'the inflexions and regimen of verbs' precluded any relation of descent, asserting that Hindi was a surviving original language of India which had been heavily invaded by Sanskrit loanwords. (Robins 1990: 92).

There is methodological irony in this: the same structural criteria which allowed Jones to group Sanskrit with the other Indo-European languages—as well as with several unrelated languages—prevented him from accepting the correct genetic relationship between Sanskrit and Hindi, i.e. the relationship between Sanskrit and the Indo-Aryan languages which Halhed had postulated and "conveyed to Europe" (Trautmann 1998: 97-98).

This should constitute sufficient warning to anyone who would praise the methods Jones used to propose linguistic families too enthusiastically. For example, Joseph Greenberg claims Sir William Jones as a historical precursor; he claims, in effect, that, Jones practiced 'multilateral comparison', that is, Greenberg's own method:

With Jones's background knowledge of Arabic and, no doubt, Hebrew, on the one hand, and Latin, Greek, Germanic, and so forth, on the other, the addition of Sanskrit to his repertoire enabled him to see a valid grouping based on differential resemblances. In later work he accurately outlined the Semitic and Finno-Ugric families... In other words, even though he did not state it explicitly, he was in effect applying what I called earlier the method of mass comparison and more recently multilateral comparison. (Greenberg 1991: 127). (See also Greenberg 1949: 79, repeated in Greenberg 1955: 1).

Contrary to Greenberg's claim, Jones relied on notions about typology which led him to misinterpret the Hindi-Sanskrit relationship. Jones relied on grammatical evidence when speaking of the "affinity... in the roots of verbs and in the forms of grammar". However, the criterion of grammatical evidence for family relationships was already widely employed in historical linguistic studies before Jones and was accepted by almost all practitioners (see Campbell and Poser in press). In Jones' case, we need to recall the influences which oriented him to think as he did. As Cannon points out, Jones was influenced by William Robertson's typology with its view of social evolution from savagery to barbarism to (European ethnocentric) civilization. Such views of social evolution later strongly influenced views of language classification and genetic relationship (see Campbell and Poser in press). The following, then, are, I believe, some of the underlying reasons for why Jones spoke of "roots" and "forms of grammar":

- (1) Jones studied Sanskrit with natives of India and they taught him using the Hindu grammatical tradition. This tradition held that the language was composed of amalgamations of lexical roots and derivations.
- (2) His British associates in India who had studied before him and had influenced his thinking had also obtained this orientation to the structure of Sanskrit from the pundits with whom they studied.
- (3) There was a well-established tradition in European linguistics (derived from Semitic grammars), with which Jones was familiar, which saw roots as older

and basic. It is certainly not the case that Jones wrote about “roots” and “grammatical form” in this way because he had somehow discovered this aspect of comparative grammar on his own. (Cf. Hoenigswald 1985: 65).

Jones was already familiar with the claims made by his predecessors and contemporaries concerning historical linguistics in general. He corresponded with and associated with David Ruhnkenius, Everardus Scheidius, Hendrik Albert Schultens, Henry Thomas Colebrooke, Anne Robert Jacques Turgot, Sir Charles Wilkins, and others concerning such matters and about Sanskrit’s relationship to various Indo-European languages, even before he left England for India in 1783. Lord Monboddo (1774), with whom Jones had a well-known association, speculated about Greek and Sanskrit relations (though claiming they both got their language and other arts from Egypt) (Cannon 1991: 25). Jones had read the Jesuit missionary sources with their occasional report of similarities between Sanskrit, Greek, and Latin (cf. Pons, Coeurdoux, Sasseti; Cannon 1990: 243, Cannon 1991: 25). Jones also was versed in the Scythian hypothesis from his readings of Leibniz and others (Fellman 1975), and he mentioned Scythians several times in his anniversary discourses (e.g. 1798: 418, 425, 430; 1799b[1788]: 19-20, 30; 1799: 368). In these instances Jones’ reference for Scythians is not always clear; he sometimes speaks of “Indoscythians”, sometimes seeming to equate Scythians directly with ‘Goths’. However, in a letter answering queries from Prince Adam Czartoryski (Polish general), dated 17 February, 1779 —before his posting to India in 1783—, Jones gave a more direct report of what he understood by ‘Scythian’, i.e. essentially the Scythian hypothesis, predecessor to the Indo-European classification (see Campbell and Poser in press):

How so many European words crept into the Persian language, I know not with certainty. Procopius, I think, mentions the great intercourse, both in war and peace, between the Persians and the nations in the north of Europe and Asia, whom the ancients knew by the name of Scythians. *Many learned investigators of antiquity are fully persuaded, that a very old and almost primeval language was in use among these northern nations, from which not only the Celtic dialects, but even the Greek and Latin, are derived* [my emphasis, L.C]; in fact we find pater and mêtêr in Persian, nor is thugatêr so far removed from dockter [daughter], or even onoma and nomen from nam, as to make it ridiculous to suppose, *that they sprang from the same root* [emphasis Muller’s]. We must confess that these researches are very obscure and uncertain. (Quoted in Muller 1986: 17).

One citation in the long tradition before Jones leading up to the recognition of the Indo-European family is well worth citing, for it shows how unoriginal the philologist passage was. Jones’ celebrated quotation is remarkably similar to Andreas Jäger’s statement of 1686, of a hundred years earlier:

An ancient language, once spoken in the distant past in the area of the Caucasus mountains and spreading by waves of migration throughout Europe and Asia, had itself ceased to be spoken and had left no linguistic monuments behind, but had as a “mother” generated a host of “daughter languages”, many of which in turn had become “mothers” to further “daughters”. (For a language

tends to develop dialects, and these dialects in the course of time become independent, mutually unintelligible languages). Descendants of the ancestral languages include Persian, Greek, Italic (whence Latin and in time the modern Romance tongues), the Slavonic languages, Celtic, and finally Gothic and the other Germanic tongues. (Quoted in Metcalf 1974: 233).³

Returning to influences upon Jones, Jones' good friend, Dr. Samuel Johnson—a linguistic luminary of his day—, should also be mentioned. Johnson's (1755) famous dictionary of English contained an abbreviated genealogical chart of the Germanic languages on the first page of the prefatory "History of the English language", which gives as one possibility that Saxon and Gothic were "descended from some common parent" (Cannon 1991: 27; cf. Cannon 1990: 59, 242, 245).

Jones knew Nathaniel Halhed, read his books, quoted from them, and was probably influenced by Halhed's Sanskrit-Latin-Greek comparisons (cf. Rocher 1980). Halhed's (1778) grammar of Bengali, which he sent to Jones, spoke of Sanskrit as the parent of Greek and Latin, and it contained a list of Sanskrit roots and infinitives which, as already mentioned, may have had some impact on Jones' idea of "affinity in the verb roots" (Cannon 1991: 26). Jones accepted the grounds on which Halhed established the kinship of Sanskrit with Greek and Latin; he accepted Halhed's view that Sanskrit was very ancient; but he did not accept Halhed's suggestion that Sanskrit might be the parent language (Rocher 1980: 178; cf. also Teignmouth 1805: 172; Mukherjee 1968: 93).

While Jones' methods and proposals were for the most part not original with him, nor were they particularly linguistic, he did, nevertheless, leave us with some direct indications of what he considered important for historical linguistic methods. For example, concerning what he regarded as the wrong way to go about things, he was particularly critical of poorly constrained etymological practices. Jones began his essays with a discussion of some methodological issues, as we read in the second paragraph of the famous *Third Discourse*:

Etymology has, no doubt, some use in historical researches; but it is a medium of proof so very fallacious, that, where it elucidates one fact, it obscures a thousand; and the more frequently borders on the ridiculous, than leads to any solid conclusions. It rarely carries with it any *internal* power or conviction from a resemblance of sounds or similarity of letters; yet often, where is wholly unassisted by those advantages, it may be indisputably proved by *extrinsic* evidence. We know *à posteriori*, that both *fitz* and *hijo*, by the nature of two several dialects [sic], are derived from *filius*; that *uncle* comes from *avus*... which etymologies, though they could not have been demonstrated *à priori*, might serve to confirm, if any such confirmation were necessary, the proofs of a connection between the members of

³ Note also that Jäger included Slavic, which Jones thought was connected with non-Indo-European Central Asian languages, and unlike Jones, for whom Celtic and "Gothic" (Germanic) were "mixed" with non-Indo-European languages, Jäger accurately classified them as members of the same family without the assumed admixture.

one great empire; but when we derive our *hanger*, or *short pendant sword*, from the *Persian* because ignorant travellers thus mis-spell the word *khanjar*, which, in truth, means a different weapon, or *sandalwood* from the *Greek*, because we suppose that *Sandals* were sometimes made of it, we gain no ground in proving the affinity of nations, and only weaken arguments which might otherwise be firmly supported. (Jones 1798: 416).

And later, in other essays:

... etymological conjecture, than which no mode of reasoning is in general weaker or more delusive. He who professes to derive the words of any one language from those of another, must expose himself to the danger of perpetual errors, unless he be perfectly acquainted with both. (Jones 1979e[1792]: 488).

I beg leave, as a philologist, to enter my protest against conjectural etymology in historical researches, and principally against the licentiousness of etymologists in transposing letters, in substituting, at pleasure, any consonant for another of the same order, and in totally disregarding the vowels: for such permutations few radical words would be more convenient than CUS or CUSH, since dentals being changed for dentals, and palatials for palatials, it instantly becomes *coot*, *goose*, and, by transposition, *duck*, all water-birds, and evidently symbolically; it next is the *goat* worshipped in *Egypt*, and by a metathesis, the *dog* adored as an emblem of Sirius, or, more obviously, a *cat*, not the domestick animal, but a sort of ship, and the *Catos*, or great sea fish of the *Doriens*. It will hardly be imagined, that I mean by this irony to insult an author, whom I respect and esteem [Jacob Bryant]; but... I contend, that almost any word or nation, might be derived from any other, if such licenses as I am opposing, were permitted in etymological histories. (Jones 1979e[1792]: 489).

Cannon (1990: 244) summarizes the criteria which Jones “specified”: (1) The analyst must be “perfectly acquainted” with the relevant languages; (2) the meaning of possible cognates must be identical or nearly identical; (3) vowels cannot be disregarded; (4) there can be no metathesis or consonantal insertions; and (5) phonetic correspondence cannot be postulated solely on articulatory position.

From these observations, we must conclude that phonology also played a role, if somewhat indirectly, among the criteria Jones advocated, and this involved some notion of more tightly constrained phonological correspondences than some others at the time might have applied in their etymological proposals.

Jones also relied on basic vocabulary: “material elements, parts of the body, natural objects and relations, affections of the mind, and other ideas common to the whole race of man” (Jones 1979c[1789]: 51-52; cf. Cannon 1991: 39-40). However, Jones’ use of vocabulary as evidence of family connections was far from modern. Jones was aware of the possibility of borrowing, and that borrowing is especially likely in cultural and technical vocabulary and unlikely in basic vocabulary. However, as revealed in the following quote, he did not recognize that extensive borrowing was possible nor the extent to which even basic vocabulary can sometimes be borrowed:

No supposition of a mere political or commercial intercourse between the different nations, will account for the *Sanscrit* and *Chaldaic* words, which we find

in the old *Persian* tongues; because they are, in the first place, too numerous to have been introduced by such means; and secondly, are not the names of exotic animals, commodities, or arts, but those of material elements, parts of the body, natural objects and relations, affections of the mind, and other ideas common to the whole race of man. (Jones 1979c[1789]: 45).

Here, Jones misperceived the nature of the lexical similarities he found in “Persian” (Iranian) languages with Sanskrit (genetically related languages, of the Indo-Iranian branch of Indo-European) and with “Chaldaic” (Semitic), where “Persian” and “Chaldaic” are not genetically related, though several modern Persian languages have borrowed extensively from Arabic. As Pierce (1965: 31) pointed out, approximately 15% of the 3,000 most common words in Persian are Arabic in origin. As a result, Jones was ready to postulate a genetic relationship on the basis of large numbers of similar words (similar to Greenberg’s practice), which would have been wrong in the case of Persian and “Chaldaic” [Semitic]. On the other hand, this sort of vocabulary comparison was the basis for his conclusion that the language of the “Gypsies” (Romani) is descended from Sanskrit (Jones 1799c: 8), which happens to be in the right direction, since Romani is an Indic language, but comparison of large numbers of similar words was not sufficient to keep Jones from erring in other cases, as we have seen.

Jones also addressed the relative weights of grammatical versus lexical evidence, in connection with his discussion of Semitic relationships:

That the written *Abyssinian* language, which we call *Ethiopick*, is a dialect of old *Chaldean*, and sister of *Arabick* and *Hebrew*, we know with certainty, not only from the great multitude of identical words, but (which is a far stronger proof) from the similar grammatical arrangement of the several idioms. (Jones 1979d[1791]: 4).

Jones’ reliance on grammatical evidence for family relationships is seen also in the following:

very many *Persian* imperatives are the roots of *Sanscrit* verbs; and that even the moods and tenses of the *Persian* verb substantive... are deducible from the *Sanscrit* by an easy and clear analogy: we may hence conclude, that the *Parsi* was derived, like the various *Indian* dialects, from the language of the *Brahmans*; and I must add, that in the pure *Persian* I find no trace of any *Arabian* tongue, except what proceeded from the known intercourse between the *Persians* and *Arabs*... without having recourse to other arguments, *the composition of words*, in which the genius of the *Persian* delights, and which that of the *Arabic* abhors, is a decisive proof that the *Parsi* sprang from an *Indian*, and not from an *Arabian* stock. (Jones 1979c[1789]: 41).

We have seen, then, that in one way or another, Jones addressed basic vocabulary, grammatical evidence, and sounds in his discussion of his methods. However, in this he was not original, but rather followed a long tradition. Throughout the history of linguistics the criteria employed in both pronouncements about method and in actual practice for establishing linguistic families consistently included evidence

from these three sources: basic vocabulary,⁴ grammatical evidence (especially morphological), and sound correspondences. Hoenigswald's summary of the points upon which 17th —and 18th— century linguistic scholars agreed is helpful. Hoenigswald (1990: 119-20) quotes from Metcalf's (1974: 251) similar summary:

First, ... there was “the concept of a no longer spoken parent language which in turn produced the major linguistic groups of Asia and Europe”. Then there was... “a concept of the development of languages into dialects and of dialects into new independent languages”. Third came “certain minimum standards for determining what words are borrowed and what words are ancestral in a language”, and, fourth, “an insistence that not a few random items, but a large number of words from the basic vocabulary should form the basis of comparison”... fifth, the doctrine that ‘grammar’ is even more important than words; sixth, the idea that for an etymology to be valid the differences in sound —or in ‘letters’— must recur, under a principle sometimes referred to as ‘analogia’.

It is appropriate to end this discussion of Jones' methods with a citation which reveals just how very different his views of language relationships were from those of today:

Any small family detached in an early age from the parent stock, without letters, with few ideas beyond objects of the first necessity, and consequently with few words, and fixing their abode on a range of mountains, in an island, or even in a wide region before uninhabited, might, in four or five centuries, people their new country, and would necessarily form a new language, with no perceptible traces, perhaps, of that spoken by their ancestors. (Jones 1979d[1791]: 2).

Today it is generally accepted that there are no languages “with few words”, and that languages do not change so rapidly as to lose all “perceptible traces” of their ancestry in only 400 or 500 years —typically only dialect differences develop in 500 years, and even with 1,000 years separation, often the question remains of whether one is dealing with divergent dialects of a single language or with separate but very closely related languages.

6. Conclusions

In sum, in spite of Jones' relative lack of direct linguistic interest and of the numerous mistakes among his proposed language classifications and his failure to recognize other linguistic relationships, he did, nevertheless, in his discussions of methods, deal in some way with the three primary criteria for linguistic genealogy which were common in his day: basic vocabulary, correspondences among sounds (if only tangentially), and grammatical agreements. Jones was generally recognized as “one of the greatest polymaths in history” (Murray 1998: 3) and “supremely gifted” (Trautmann 1998: 93), and “played a significant role in the formation of

⁴ For a general discussion of the importance which basic vocabulary as a criterion for comparing languages has had throughout the history of linguistics, see Muller (1984).

English Romanticism” (Trautmann 1998: 101). Nevertheless, Jones was far from being the initial discoverer of Indo-European relationships or the founder of methods for linguistic comparison. Rather, Jones' thinking was on the whole consistent with trends up to and including his day, weaker than some, better than others. His several errors make it necessary to be extremely cautious concerning the methods which led him to these conclusions. Nevertheless, the success cases —Jones' and others'— relied on three sources of evidence, basic vocabulary, grammatical evidence (especially morphological), and some notion of sound correspondences. Definitively, superficial lexical comparisons led to no successful cases and indeed in some instances led Jones astray. These three criteria are still today the foundation of methods for investigating possible distant genetic relationships among languages (see Campbell 2003).

References

- Arberry, A. J., 1946, *Asiatic Jones: the life and influence of Sir William Jones (1746-1794): pioneer of Indian studies*. London: Longmans, Green, and Co., published for The British Council.
- Bengtson, J. D. and M. Ruhlen, 1997, “In defense of multilateral comparison”, *California Linguistic Notes* 25.3-4, 57.
- Cambrensis, G. [Gerald of Wales], 1194, *Descriptio Kambriae*. [London, British Library].
- Campbell, L., 2003, “How to show languages are related: methods for distant genetic relationship”, *Handbook of historical linguistics*, ed. by B. D. Joseph and R. D. Janda, 262-82. Oxford: Blackwell.
- and W. Poser, In press, *Language classification: history and method*. Cambridge: Cambridge U.P.
- Cannon, G. H., Jr., 1952, *Sir William Jones, orientalist: an annotated bibliography of his works*. Honolulu: University of Hawaii Press.
- , 1990, *The life and mind of oriental Jones: Sir William Jones, the father of modern linguistics*. Cambridge: Cambridge U.P.
- , 1991, «Jones's “sprung from some common source”: 1786-1986». In Lamb and Mitchell (eds.), 23-47.
- Coeurdoux, G. L., 1784-93[1767], “[Letter to Abbé Barthélémy published in]”, *Mémoires de littérature de [...] l'Académie Royale des Inscriptions et Belles-Lettres* 49, 647-67, by A. Duperron. Paris.
- Comenius [Komenský], J. A., 1657, *Opera didactica omnia. Variis hucusque occasionibus scripta, diversisque locis edita: nunc autem non tantum in unum, ut simul sint, collecta, sed & ultimò conatu in systema unum mechanicè constructum, redacta*. Amsterdam. (Reprinted 1952, Prague: Academiae Scientiarum Bohemoslovenicae, 3 vols.).
- Dante, A., c.1305, *De vulgari eloquentia* (English translation 1981, *Dante in hell: the De vulgari eloquentia, introduction, translation, and commentary* by W. Welliver. Ravenna: Longo Editore).
- Edgerton, F., 1946, “Sir William Jones: 1746-94”, *JAOS* 66, 230-39.
- Emeneau, M. B., 2000, “Linguistics in India: past and future”. *Functional approaches to language, culture, and cognition: papers in honor of Sydney B. Lamb*, ed. by D. G. Lockwood, P. H. Fries, and J. E. Copeland, 545-54. Amsterdam: John Benjamins.

- Fellman, J., 1975, "On Sir William Jones and the Scythian language", *Language Science* 34, 37-38.
- Gelenius, S., [Hrubyè z Jelení, Z./Gelen, Sigmund], 1537, *Lexicum symphonum quo quatuor linguarum Europae familiarium, Graecae scilicet, Latinae, Germanicae ac Sclauinicae concordia consonatitiae' indicatur*. Basil.
- Godrey, J. J., 1967, "Sir William Jones and Père Coeurdoux: a philological footnote", *JAOS* 87, 57-59.
- Goropius Becanus, J. (Jan van Gorp), 1569, *Origines Antwerpianae*. Antwerp: C. Plantin.
- Gray, E. G., 1999, *New World Babel: Languages and Nations in early America*. Princeton: Princeton U.P.
- Greenberg, J. H., 1949, "Studies in African linguistic classification I: the Niger-Congo family", *Southwestern Journal of Anthropology* 5, 79-100.
- , 1955, *Studies in African linguistic classification*. Bradford, CT: The Compass Publishing Company.
- , 1991, "Some problems of Indo-European in historical perspective". In Lamb and Mitchell (eds.), 125-40.
- Halhèd, N. B., 1778, *A grammar of the Bengal language*. Bengal: Hoogly. (Reprinted 1969, Menston, England: The Scholar Press).
- Hoenigswald, H. M., 1985, "Sir William Jones and historiography". In *For Gordon H. Fairbanks*, ed. by V. Z. Acson and R. L. Leed, 64-66. (Oceanic Linguistics Special Publication, 20). Honolulu: University of Hawaii Press.
- , 1990, "Is the "comparative" method general or family specific?". In *Linguistic change and reconstruction methodology*, ed. by Ph. Baldi, 375-83. Berlin: Mouton de Gruyter.
- Ihre, J., 1769, *Glossarium Sviogothicum*. Uppsala: Typis Edmannianis.
- Jäger, A., 1686, *De lingua vetustissima Europae, Scytho-Celtica et Gothica*. Wittenberg.
- Jones, Sir W., 1798 [1786], "The third anniversary discourse, delivered 2d February, 1786: on the Hindus", *Asiatick Researches* 1, 415-31.
- , 1799 [1790], "The seventh anniversary discourse, delivered 25th February 1790: on the Chinese", *Asiatick Researches* 2, 365-81.
- , 1799a [1787], "The fourth anniversary discourse, delivered 15th February 1787: on the Arabs", *Asiatick Researches* 1. New Delhi: Cosmo Publications, 5-17.
- , 1799b [1788], "The fifth anniversary discourse, delivered 21st February 1788: on the Tartars", *Asiatick Researches* 2. New Delhi: Cosmo Publications, 18-34.
- , 1799c [1789], "The sixth anniversary discourse, delivered 19th February 1789: on the Persians", *Asiatick Researches* 2.43-66. New Delhi: Cosmo Publications, 35-53.
- , 1799d [1791], "The eighth anniversary discourse, delivered 24th February 1791: on the borderers, mountaineers, and islanders of Asia", *Asiatick Researches* 3, 1-20. New Delhi: Cosmo Publications, 1-17.
- , 1799e [1792], "The ninth anniversary discourse, delivered 23rd February 1792: on the origin and families of nations", *Asiatick Researches* 3, 418-35. New Delhi: Cosmo Publications, 479-92.
- , 1799f [1793], "The tenth anniversary discourse, delivered 28 February 1793: on Asiatic history, civil and natural", *Asiatick Researches* 4, i-xxxv. New Delhi: Cosmo Publications, i-xxxv.
- Koerner, K., 1990, "The place of Friedrich Schlegel in the development of historical-comparative linguistics". In de Mauro and Formigari (eds.), 239-61.

- Lamb, S. M. and E. D. Mitchell, 1991, *Sprung from some common source: investigations into the prehistory of languages*, Stanford: Stanford U.P.
- Lhuys, E., 1707, *Archaeologia Britannica. Archaeologia Britannica, giving some account additional to what has been hitherto publish'd, of the languages, histories and customs of the original inhabitants of Great Britain: from collections and observations in travels through Wales, Cornwall, Bas-Bretagne, Ireland and Scotland*. Oxford: Printed at the Theater for the Author. (Reprinted, 1969, [English Linguistics 1500-1800, no. 136, a collection of facsimile reprints selected and edited by R. C. Alston]. Menston, England: The Scholar Press Limited.)
- Marcucci, E. M., 1855, *Lettere edite e inedite di Pilippo Sassetti raccolte e annotate*. Firenze. [See Muller 1986, p. 6].
- de Mauro, T. and L. Formigari (eds.), 1990, *Leibniz, Humboldt, and the origins of comparativism*, Amsterdam: John Benjamins.
- Metcalf, G. J., 1974, "The Indo-European hypothesis in the sixteenth and seventeenth centuries". *Studies in the history of linguistics: traditions and paradigms*, ed. by D. Hymes, 233-57. Bloomington: Indiana U.P.
- Monboddo, Lord [J. Burnet], 1774-1809, *Of the origin and progress of language*. Edinburgh: J. Balfour, and London: T. Caldwell.
- Mukherjee, S. N., 1968, *Sir William Jones: a study in eighteenth-century British attitudes to India*. Cambridge: Cambridge U.P.
- Muller, J.-Cl., 1986, "Early stages of language comparison from Sassetti to Sir William Jones (1786)", *Kratylos* 31, 1-31.
- Murray, A. (ed.), 1998, *Sir William Jones, 1746-1794: a commemoration*. Oxford: Oxford U.P. on behalf of University College, Oxford.
- Pachori, S. A. (ed.), 1993, *Sir William Jones: a reader*. Delhi: Oxford U.P.
- Pierce, J. E., 1965, "The validity of genetic linguistics", *Linguistics* 13, 25-33.
- Pons, J. F., 1743, "[Letter to Du Halde]". *Lettres edifiantes et curieuses*, 224-66. [Cited in Rocher 1980a, Muller 1986].
- Robins, R. H., 1990, "Leibniz and Wilhem von Humboldt and the history of comparative linguistics". In de Mauro and Formigari (eds.), 85-102.
- Rocher, R., 1980, "Nathaniel Brassey Halhed, Sir William Jones, and comparative Indo-European linguistics". *Recherches de linguistique: Hommages à Maurice Leroy*, ed. by J. Bingen, A. Coupez, and F. Mawet, 173-80. Bruxelles; Éditions de l'Université de Bruxelles.
- Sassetti, P., 1585, See Marcucci 1855.
- Scaliger, J. J., 1610[1599], "Diatriba de Europaeorum linguis", 119-22; "Diatriba de varia literarum aliquot pronuntiatione", 127-32. *Opuscula varia antehac non edita*. Paris.
- Schul[t]ze, B., 1760, [Cited in Benfey 1869: 261, 336-38].
- Stephens, Th., 1583. See Muller 1986: 14-15.
- Stiernhielm, G., 1670, *Glossarium Ulphila-Gothicum, Linguis affinis, per Fr. Junium, nunc etiam Sveo-Gothica auctum & illustratum*. Holm.
- Teignmouth, Lord [J. Shore], 1804, *Memoirs of the life, writings, and correspondence of Sir William Jones*. London: John Hachard. (1805, Philadelphia: William Poyntell).
- Trask, R. L., 1995, "Origin and relatives of the Basque language: review of the evidence". *Towards a history of the Basque language*, ed. by J. I. Hualde, J. A. Lakarra, and R. L. Trask, 65-99. Amsterdam: John Benjamins.

- Trautman, Th. R., 1998, "The lives of Sir William Jones". In Murray (ed.), 93-121.
- Zeller, O., 1967, *Problemggeschichte der vergleichenden (indogermanischen) Sprachwissenschaft*.
Osnabrück: Biblio Verlag.