

# FRANZ BOPP, “MIT HAAR UND HAUT EIN MENSCH DER BÜCHER”<sup>1</sup>: SEARCHING FOR THE ORIGIN OF INDO-EUROPEAN GRAMMATICAL FORMS

## FRANZ BOPP, “MIT HAAR UND HAUT EIN MENSCH DER BÜCHER”, A LA BÚSQUEDA DEL ORIGEN DE FORMAS GRAMATICALES INDOEUROPEAS

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*Abstract:* Franz Bopp (1791-1867), who is commonly considered one of the founding fathers of Indo-European comparative grammar, was primarily interested in the origin of grammatical forms, a goal he pursued, from 1816 on, through the analytical comparison of formative processes of inflectional word classes in Sanskrit, Greek, Latin, German, and Persian in a first stage (other Indo-European languages were progressively included in his scholarly spectrum). The larger part of Bopp’s work was in the field of Sanskrit, but his interest in the grammatical processes active in the unitary mother language (*Stammsprache*) led him to write the first comparative grammar of Indo-European (published in three volumes over the years 1833-1852); this comprehensive work (of which a second edition appeared in 1857-61, and a third in 1868-71) was preceded and followed by various monograph-sized studies in which Bopp applied an analytical procedure to the segmentation, the classification and the explanation of Indo-European grammatical forms. Combining a chronological overview of Bopp’s scholarly career with a study of his comparative methodology, the present article examines the assumptions or hypotheses underlying Bopp’s work, and the resulting claims (regarding the structure of Indo-European roots, the constitution of grammatical forms, and the content-side of grammatical morphemes), with an eye at Bopp’s intellectual and institutional position as well as at his appraisal by contemporaries and by subsequent generations of scholars.

*Keywords:* analytical comparison (of linguistic forms), Franz Bopp, comparative grammar, Wilhelm von Humboldt, Indo-European, language change, Sanskrit (study of -), Everardus Scheidius, Friedrich Schlegel, Karl Joseph Windischmann.

<sup>1</sup> Literally: “a man (all) of books, with hair and skin”; this apt qualification is Neumann’s (1967, 7). In complying with the invitation of the editorial committee of *Veleia* to contribute an article on Franz Bopp’s life and career, I have tried to focus on the development of his linguistic thought and practice in relation to landmarks in his (‘internal and external’) biography.

Needless to say, various details of Bopp’s life have been left out here; also, his comparative-linguistic practice deserves a detailed study going much beyond the brief analysis presented here (for a discussion of specific issues and problems in Bopp’s work, see the articles in Sternemann (ed.) 1994, and the contributions in this volume).

*Resumen:* Franz Bopp (1791-1867), comúnmente considerado uno de los padres fundadores de la Gramática Comparada Indoeuropea, se interesó en un primer momento por el origen de las formas gramaticales, un objetivo que persiguió desde 1816 en adelante a través de la comparación analítica de los procesos formativos de los tipos flexivos de palabra en sánscrito, griego, latín, alemán y persa en un primer momento (progresivamente incluyó otras lenguas indoeuropeas en su ámbito de estudio). La mayor parte de la obra de Bopp se desarrolló en el campo del sánscrito, pero su interés por los procesos gramaticales del indoeuropeo activos en la lengua madre (Stammsprache) lo condujo a escribir la primera gramática comparada del indoeuropeo (publicada en tres volúmenes entre los años 1833 y 1852); esta obra de conjunto (cuya segunda edición apareció en 1857-61, y la tercera en 1868-71) estaba precedida y seguida por varios estudios monográficos en los que Bopp aplicó un procedimiento analítico para la segmentación, clasificación y explicación de formas gramaticales indoeuropeas. Combinando una visión cronológica de la carrera académica de Bopp con un estudio de su metodología comparativa, este artículo examina las suposiciones o hipótesis que subyacen en la obra de Bopp, y las reivindicaciones resultantes (que atienden a la estructura de las raíces indoeuropeas, la constitución de formas gramaticales y el contenido de morfemas gramaticales), con atención tanto a la posición institucional e intelectual de Bopp como a la valoración por sus contemporáneos y por las siguientes generaciones de investigadores.

*Palabras clave:* comparación analítica (de formas lingüísticas), Franz Bopp, Gramática Comparada, Wilhelm von Humboldt, indoeuropeo, cambio lingüístico, sánscrito (estudio del-), Everardus Scheidius, Friedrich Schlegel, Karl Joseph Windischmann.

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## 1867: RETROSPECT

On November 30, 1867 the English periodical *The Athenaeum* published an obituary of a then recently deceased German scholar. In it we read:

“His life [...] was outwardly uneventful. He published several Sanskrit Grammars, which showed that as he had been first in the field, at least in the great task of conforming that grammar to European ideas, so he advanced with the stream, and was not left behind by the younger scholars who had started from a point which it had taken him many years to reach. Only last year he published the first part of a third edition of his Sanskrit Glossary, which originally appeared in 1829. The episodes from the great Sanskrit Epics, which are well suited to be text-books for beginners, have been already mentioned. His many papers, chiefly monographs on the affinities of various languages, read to the Royal Academy of Sciences at Berlin, must be mentioned as extremely valuable in themselves, and as proving the constant activity of his mind. His ‘Comparative Grammar,’ appeared in six parts in 1833, ’35, ’37, ’42, ’49, ’52. [...] His papers read to the Academy are as well considered and matured treatises as his independent works. He attached himself warmly to his friends, and they were men of intellect, such as A. W. von Schlegel and Baron Wilhelm von Humboldt. The latter was one of his firmest friends. To his remarkable availability of temper and perfect integrity of character, more than to his fortunate position at Berlin, must be ascribed his happy distinction as one who never had nor made an enemy. Yet he was a philologist in a country where the *odium philologicum* is often bitterer than the *odium theologicum*. Asthma had for years oppressed him, and often rendered his speech scarcely intelligible; yet not till six months ago did

he take rest from the duties of his professorship, and he died at the age of seventy-six, October 23, 1867" (*The Athenaeum*, Nov. 30, 1867, n° 2092, p. 728).

The figure receiving this dithyrambic praise, and whose career is aptly summarized in these lines —to a large extent they were almost literally repeated in the short notice published in *The Gentleman's Magazine and Historical Review* of January 1868— was Franz Bopp, born in Mainz (English: *Mentz*) in 1791, and died in Berlin in 1867<sup>2</sup>. During the three-quarters of a century over which his life-span extended, language study in Europe drastically changed, in almost every respect: as to orientation, as to institutional embedding, as to practice. On all three levels, Bopp —a rather introvert character, a man of great modesty, and a very diligent worker— played a crucial role. How did he achieve this? And what was his scientific and personal profile?

#### YOUNG FRANZ BOPP: THE APPEAL OF THE ORIENT

Born in Mainz on September 14, 1791 into a family<sup>3</sup> which was at the service of the Prince-Elector (*Kurfürst*) of Mainz, Friedrich Karl von Erthal, Franz Bopp's youth was marked by the political and ideological context of the French Revolution. In 1797 the treaty of Campo Formio assigned Mainz to the French revolutionary republic, upon which the Bopp family followed the Mainz court in its move to Aschaffenburg, where a new university, the *Karls-Universität*, was founded by Karl Theodor von Dalberg, consisting of the faculties of theology, philosophy and law. Bopp, after studying at the Aschaffenburg gymnasium, enrolled at its university, which had a short life-span (1808-14), largely coinciding with Bopp's academic formation (1809-12). Among the professors at Aschaffenburg the one who left the deepest impression on the mind of young Franz Bopp was Karl Joseph Hieronymus Windischmann [1775-1839], professor of philosophy and of (universal) history (German *Weltgeschichte*). Windischmann, who later published a comprehensive work on Oriental philosophy (*Die Grundlagen der Philosophie im Morgenland*, 1827-34) was a thinker strongly influenced by the Romanticist movement, and an admirer of the ancient Oriental cultures of Egypt, Mesopotamia, Persia, India and China. Windischmann's classes, building on the success of then recently published works on Oriental religion, philosophy and literature, such as Friedrich Schlegel's [1772-1829] *Über die Sprache und Weisheit der Indier* (1808) and Johann Joseph (von) Görres' [1776-1848] *Mythengeschichte der asiatischen Welt* (1810), captivated the mind of Bopp, and determined him to embark on the study of the classical languages of India, Vedic and Sanskrit. No doubt his thorough reading of Schlegel's 1808 book, containing a praise of the Sanskrit language, catalyzed his decision. He was encouraged to study Oriental languages in Paris by Helmine (Wilhelmina) von Chézy (born Freiin von Klencke) [1783-1856], the wife of

<sup>2</sup> Bopp's life and career have been dealt with in great detail by his former student Salomon Lefmann [1831-1912]; this biography (Lefmann 1891-7), at times very personally coloured, remains our principal source of information on Bopp's life and academic career. Shorter biographical overviews can be found in the obituary of Martineau (1867), and the biographical articles of Leskien (1876), Wüst (1955) and Schlerath (1989). Koerner (1984) provides a biographical sketch

and a useful bibliography (which, however, does not include Bopp's shorter pieces in the *Heidelberger Jahrbücher*, the *Göttinger Gelehrten Anzeigen* and the *Berliner Jahrbücher für wissenschaftliche Kritik*; cf. Benfey 1869, 515).

<sup>3</sup> Bopp's father, Andreas Bopp, was a Bavarian civil functionary at the service of the Mainz court; his mother, Regina Linck, descended from a bourgeois family in Mainz.

Antoine Léonard de Chézy [1773-1832], professor of Oriental languages in Paris, when this cosmopolitan woman and literary figure visited the court at Aschaffenburg in 1812<sup>4</sup>. In the autumn of 1812 Bopp, having received a stipend from the Bavarian government<sup>5</sup>, installed himself in Paris, and started taking classes with Chézy and Antoine-Isaac Silvestre de Sacy [1758-1838].

While Chézy's knowledge of the Sanskrit language was, at most, rather limited, he certainly supported Bopp in his study of Indian mythology and literature; according to Bopp's own testimony<sup>6</sup> he largely studied Sanskrit on his own, and while in Paris, he taught Sanskrit to August-Wilhelm Schlegel [1767-1845]. With Sacy Bopp studied Persian and (classical) Arabic, and became acquainted with the principles and terminology of morphological analysis as practiced in the Jewish-Arabic tradition<sup>7</sup>. From Bopp's correspondence with Windischmann during his years in Paris<sup>8</sup> it is clear, however, that his fundamental interest was a philosophical-historical one: "the study of the Veda's is my goal", he writes on February 24, 1815 (*Die Veda's sind mein Ziel*; Lefmann 1891-7: vol. II, Anhang, 18\*); and on November 20, 1815 he sets out his ideas on turning the study of languages into a philosophical and historical subject. In a letter of late May or early June 1816 he is even more explicit:

Mein Plan geht dahin, von allen Sprachen, wovon einige Kenntniss zu erwerben möglich, das eigentliche Wesen aufzufassen und ihr Verhältniss und Beziehung zu andern Sprachen (Lefmann 1891-7: vol. II, Anhang, 41\*)<sup>9</sup> ["My plan consists in capturing, for all the languages of which one can attain some knowledge, their true essence and their relationship to other languages"].

<sup>4</sup> The meeting with Bopp is mentioned in H. von Chézy, *Unvergessenes: Denkwürdigkeiten aus dem Leben der Helmine von Chézy, von ihr selbst erzählt* (Leipzig, 1858), vol. II, p. 64.

<sup>5</sup> The fellowship granted to Bopp was the object of an explicit mention by August-Wilhelm Schlegel in the *Heidelbergische Jahrbücher der Litteratur* fasc. 9 of September 1815, p. 892; this passage is the first reference to Franz Bopp in the scholarly literature: "Für jetzt wäre es noch zu früh, in Deutschland Lehrstellen für die Indische Sprache stiften zu wollen [...] Das nützlichste wird also vor der Hand seyn, junge Männer von Geist und besonders von beharrlichen Eifer zu diesem Behuf reisen zu lassen. Zuerst nach Paris, dann nach England, und wenn sein Muth und seine Mittel so weit tragen, der wallfahrte zu den geheiligten Fluten des Ganges, befrage die Weisen zu Benares! – Wir freuen uns, hier erwähnen zu können, dass dies wirklich durch die Freygebigkeit einer Deutschen Regierung geschieht. Herr Bopp aus Aschaffenburg, ein eben so fleissiger als bescheidener Forscher, hält sich seit mehreren Jahren mit königlich Baierischer Unterstützung in Paris auf und hat neben seiner Kenntniss anderer Morgenländischer Sprachen sehr beträchtliche Fortschritte im Sanskrita gemacht" [„At present it would be premature to create chairs for the study of the Indic language in Germany [...] The most useful thing to do now would be to enable young intelligent men, especially of a per-

severing zeal, to travel abroad for such a purpose. First to Paris, then to England, and when his courage and means reach so far, let the pilgrim travelling to the holy Ganges inquire from the wise men in Benares! – We take pleasure to mention here that such a thing happens through the generosity of the German government. Mr. Bopp, from Aschaffenburg, a diligent and modest scholar, resides since a number of years in Paris, thanks to a subsidy from the royal Bavarian government, and he has made considerable progress in the study of Sanskrit, as well as in other Oriental languages"].

<sup>6</sup> See Bopp's preface to his edition of the Nala episode (Bopp 1819) and cf. his correspondence with Windischmann.

<sup>7</sup> The morphological analysis into roots, modifying elements, endings, as practiced in the Jewish-Arabic tradition and in Sanskrit grammar introduced a new perspective in Bopp's view of grammatical organization, based on the classification into word classes; for the latter aspect, he was indebted to A. F. Bernhardt (*Sprachlehre*, Berlin, 1801-1803, 2 vols; *Anfangsgründe der Sprachwissenschaft*, Berlin, 1805) and G. Hermann (*De emendanda ratione Graecae grammaticae*, Leipzig, 1801).

<sup>8</sup> See Lefmann (1891-7: vol. II, Anhang, 3\*-57\*); in total there are 32 letters for the period between January 1813 and October 1818).

<sup>9</sup> I have respected the orthography of the original.

Around the same time Bopp’s first work, written in German, was published —while he was studying in Paris— by the Andreäische Buchhandlung in Frankfurt. The printing of the book, titled *Über das Conjugationssystem der Sanskritsprache in Vergleichung mit jenem der griechischen, lateinischen, persischen und germanischen Sprache, nebst Episoden des Ramajan und Mahabharat in genauen, metrischen Uebersetzungen aus dem Originaltexte und einigen Abschnitten aus den Veda’s*, had been overseen by Windischmann, who contributed a long, enthusiastic preface (*Vorerinnerungen*, „Preliminary memories“)<sup>10</sup>. Windischmann’s introduction would deserve a close reading, combining techniques of discourse analysis and rhetorical pragmatics, since it reads as the “investiture” of the leader of what can become a German discipline, revolutionizing the current state of language study, and showing the historical-anthropological relevance of the old Germanic language monuments. As a matter of fact, after stressing his own merits in having fostered Bopp’s philosophical and historical interest in the study of languages, and after outlining Bopp’s project to study the character and mindset of Oriental antiquity (*Charakter und Denkart des morgenländischen Altherthums*), Windischmann stresses the importance of the study of Gothic for Bopp and, more generally, for all those interested in the relationships between Sanskrit and German<sup>11</sup>.

With this observation Windischmann touches upon the fundamental aim of Bopp’s 1816 work: its goal is to show the organic workings of language. In order to do this Bopp analyses the most fundamental component in language, viz. the verb (*Zeitwort* ‘time-word’), which is the grammatical bond between subject and predicate, and thus the expression of the essential relation in language. The approach must be comparative, so as to enhance the validity of the resulting conclusions; and the comparison deals with the ‘sacred language of India’ —most apt to express, through inner flexion and building of the stem syllable, the various relations and additional determinations<sup>12</sup>— and its cognate languages, viz. Greek, Latin, German and Persian<sup>13</sup>.

<sup>10</sup> The preface is dated May 16, 1816, but this is probably an anticipatory dating for the actual publication day of the work. As a matter of fact, on May 16, 1866 colleagues and (former) students of Bopp organized a celebration commemorating the 50th anniversary of the publication of the *Conjugationssystem*.

<sup>11</sup> See Windischmann’s statement in Bopp (1816): “Gar erfreulich ist, dass Hr. Bopp während seiner Studien so viele Liebe für das Gothische gefasst hat. Seine vergleichenden Untersuchungen werden uns Deutschen um so werther und wichtiger; denn es kommt hier auf nichts geringeres an, als bei Urstämmen des Menschengeschlechts, welche vielleicht aus einer ursprünglichen Abstossungskraft bis gegen den Pol und Aequator auseinandergewichen, die Spuren ihrer Familien Verwandtschaft sowohl, als der Grundverschiedenheit der Gesinnung, aus welcher die Entfernung im Ausdruck und in der Lebensweise, der Abstand in natürlicher Neigung und Denkart entsprungen ist, zu verfolgen” [„It is quite rejoiceful that Mr. Bopp has conceived so much passion for the Gothic language in the course of his studies. His comparative investigations will be the most worthwhile and important to us Germans; as a matter of fact, what is at stake here, is nothing less than pursuing – when confronted with the original tribes of the human race, which probably have

grown apart through an original repelling power from the pole to the equator – the traces of parental relationship, as well as the fundamental diversity in mental disposition, out of which the differentiation in expression and in the way of life, and the distance in natural inclination and mindset have proceeded”].

<sup>12</sup> For this idea, see Bopp (1816, 6-7): “Die Verbindung des Subjekts mit seinem Prädikate wird nicht immer durch einen besondern Redetheil ausgedrückt, sondern verschwiegen, und die Verhältnisse und Nebenbestimmungen der Bedeutung werden durch die innere Veränderung und Umbiegung des, das Attribut ausdrückenden, Wortes selbst angezeigt” [“The bond of the subject and the predicate is not always expressed by a specific part of speech, but can be left unexpressed, and the relationships and additional determinations of meaning are indicated by internal change and (in)flexion of the word expressing the attribute”].

<sup>13</sup> Cf. Bopp (1816, 137): “mein Streben, den Grund und Ursprung der grammatischen Formen derjenigen Sprachen zu erklären, die mit dem Sanskrit in engster Verwandtschaft stehen” [“[it is] my aim to explain the grounding principle and origin of the grammatical forms of those languages that stand in closest relation to Sanskrit”].

“Unter den Sprachen, die mit dem Sanskrit in engster Verwandtschaft stehen, verstehe ich vorzüglich das Griechische, Lateinische, Germanische und Persische. [...] Um die Wahrheit dieser für die Geschichte der Sprachen äusserst wichtigen Sätze in ihrem vollen Lichte zu zeigen, ist es nothwendig, uns vor allem mit dem Conjugationssystem der altindischen Sprachen bekannt zu machen, sodann die Conjugationen der griechischen und römischen, der germanischen und persischen Sprache vergleichend zu durchgehen, wodurch wir deren Identität einsehen, zugleich aber die allmähliche und stufenweise Zerstörung des einfachen Sprachorganismus erkennen und das Streben beobachten werden, denselben durch mechanische Verbindungen zu ersetzen, woraus, als deren Elemente nicht mehr erkannt wurden, ein Schein von neuem Organismus entstand” [“Among the languages that stand in closest relationship to Sanskrit, I accord a special place to Greek, Latin, Germanic, and Persian. [...] In order to show in full light the truth of these sentences so utterly important for the history of languages it is necessary to become acquainted first of all with the conjugation system of the old Indic languages, in order to deal comparatively with the conjugation of the Greek, Latin, Germanic and Persian languages, so that we can understand their unity, and at the same time the progressive and gradual perturbation of the simple language organism, and so that we can observe the tendency to replace this (organism) with mechanic combinations, out of which the appearance of a new organism arises when their elements are no longer recognized”] (Bopp 1816, 9, 10-11).

Bopp speaks here of affinity or parental relationship (*Verwandtschaft*), and this should be taken in the sense of constitutional, form-organizational relationship, and not in the sense of a generational relationship of descent. As a matter of fact, Bopp notes that Bengali, though more closely linked to Sanskrit, as shown by its lexicon, is grammatically —we could say ‘structurally’— rather distinct from the classical language of India.

Bopp’s *Conjugationssystem* —in which, after all, little use is made of Persian— is an attempt to understand the formation (*Bildung*) of verb forms, as it existed in the “simple language organism” (*einfaches Sprachorganismus*); this simple organism has to be studied primarily through the analysis —in fact a dissection of verb forms— of the verb system in Sanskrit, Greek, and Gothic, since languages such as Latin testify to the introduction of new processes, especially periphrasis (*Umschreibung*); such processes are not new ‘organic’ modifications, but mechanical devices.

In his 1816 work Bopp proceeds by discussing, consecutively, the building of verb forms in Sanskrit (chapter 2, p. 12-60), Greek (ch. 3, p. 61-87), and Latin (ch. 4, p. 88-115); those of German(ic) and Persian are treated together in a single chapter (ch. 5, p. 116-136)<sup>14</sup>. The ideas put forward in the *Conjugationssystem* can be summarized as follows:

1. The analytical comparison of the verb system of the five languages shows a common origin;
2. This common origin appears in the two formative processes, viz.
  - a) internal change of the root (*Ablaut*)
  - b) agglutination or incorporation (*Einverleibung*), which is chronologically posterior<sup>15</sup>.

<sup>14</sup> In an appendix Bopp (1816, 137-57) deals with the past tense verb forms in Germanic.

<sup>15</sup> “Der Ursprung organischer Flexionen [...] muss so wie die Entstehung der bedeutenden Stammsyllben bey dem frühesten Ursprung der Sprache gesucht werden” (Bopp 1816, 95); “[...] es entstehen neue grammatische Formen, wenn die Nebenbestimmungen der Bedeutung, die in der Ursprache durch Umbiegung der

Stammsylbe selbst ausgedrückt wurden, an einem angehängten Worte angezeigt werden, dessen Bestandtheile, wenn die Verbindung nicht mehr erkannt wird, für Endbiegungen der Stammsylbe angesehen werden” (Bopp 1816, 96) [“The origin of organic inflections [...] has to be sought in the early origins of language, just as the creation of the meaningful stem syllables // [...] new grammatical forms arise when the additional

Bopp uses comparison here in order to substantiate a glottogenetic claim, viz. to explain inflection as arising from the fusion of lexical roots or stems with independent (grammatical) elements. In his 1816 work Bopp refrains from elaborating on the theoretical implications of this view, but there can be no doubt that he was well aware of the fact that this view was radically opposed to the one put forward by Friedrich Schlegel, who had clearly separated internal modification of the root (as an organic principle) and external annexing (as a mechanical procedure), assigning these to two radically different types of languages.

#### FROM LONDON TO BERLIN: BOPP AND HUMBOLDT

Determined to penetrate deeper into the structure of Sanskrit, through the study of the original texts, Bopp conceived the idea of studying in England, and of getting in touch with Sanskrit scholars there. He obtained a stipend from the Bavarian government and left for London in October 1818, where he actively studied Sanskrit manuscripts. There Charles Wilkins [1749-1836] put at his disposal Sanskrit letter fonts, so that Bopp's edition, with a Latin translation, of the famous episode in the *Mahābhārata* concerning king Nala could appear in print in 1819 (Bopp 1819). For this edition Bopp used the transcripts he had first made in Paris, and collated these with the new manuscript testimonies he found in London. But through his contacts with Wilhelm von Humboldt [1767-1835] (cf. *infra*) he was encouraged to pursue the ideas outlined in his *Conjugationssystem*. Embarking upon an English translation of his 1816 work, Bopp was led to make explicit his disagreement<sup>16</sup> with Friedrich Schlegel<sup>17</sup>, and to provide a theoretical foundation for his

determinations of meaning, which were expressed in the primeval language through (in)flexion of the stem syllable itself, are indicated on an appended word, the components of which are perceived as the terminating inflections of the stem syllable, when the bond is no longer recognized"]. Bopp identifies this *Einverleibung* specifically in the future forms of Sanskrit and Greek, in the precative forms of Sanskrit, and in the perfect and imperfect forms of Latin.

<sup>16</sup> The first traces of (implicit) disagreement appear in the abovementioned [cf. *supra*, note 14] *Nachtrag* of the *Conjugationssystem*.

<sup>17</sup> An extremely interesting testimony concerning Bopp's changing attitude with regard to F. Schlegel's views is offered by his letter of March 5, 1820 to W. von Humboldt: "Ich bin jetzo ganz der Meinung Ew. Excellenz, dass es in allen Sprachen nur wenig eigentliche Flexion gebe und dass das, was man mit Recht so nennen dürfte, in der Sprachbildung nur eine geringe Rolle spiele. Man ist aber gewöhnlich mit dem Namen Flexion zu freygebig, und Ew. Excellenz haben gewiss Recht, dass solche Flexionen ursprünglich Worte für sich gewesen sind, deren Bedeutung mit der Zeit verloren gegangen. Ich erkenne jetzo in der Sanskrit-Sprache nur 2 Flexionen, nämlich Veränderung des Stammvokals und Reduplikation; alles übrige halte ich für Zusammensetzung. [...] Fr. Schlegels Sprach-Eintheilung

in Organische und Mechanische, fällt also ganz zu Boden und ich werde mich stets bestreben das Entgegengesetzte zu beweisen. Dieses thue ich auch in meiner jetzigen Arbeit, wo ich von den Wurzeln ausgehe, zeigend, dass, indem diese einsylbig sind und eine Sylbe nur weniger Umbiegungen fähig ist, man schon *a priori* schliessen könne, die Indische Grammatik müsse sich vorzüglich durch Zusammensetzung bilden" (Lefmann 1891-97: vol. III, 7) ["I now entirely share Your Excellence's view, viz. that there is but little true inflection in all languages, and that what one should rightly call inflection, plays only a reduced role in the formation of languages. People, though, generally use too easily the term "inflection", and Your Excellence is undoubtedly right in saying that these inflections originally were words on themselves, whose meaning went lost over time. I now recognize only two (types of) inflections in Sanskrit, viz. change of the stem vowel and reduplication; all the rest I consider to be compounding. [...] Fr. Schlegel's division of languages into organic and mechanic therefore breaks down and I will always endeavour to prove the contrary. This is what I also do in the present work, in which I proceed from the roots, showing that, since these are monosyllabic and a syllable is capable of only a few (in)flexions, one can already conclude *a priori*, that the grammar of Indic must build itself principally through compounding"].

conception of the constitution of verb forms. In June 1820 the result of his English reworking was published in the *Annals of Oriental Literature* under the title *Analytical Comparison of the Sanskrit, Greek, Latin, and Teutonic Languages, Shewing the Original Identity of their Grammatical Structure* (Bopp 1820)<sup>18</sup>. The 1820 text is strikingly different from Bopp's 1816 work. On the one hand, it leaves out Persian; on the other hand, its organization is commended not by the successive treatment of various ancient languages, but by a theoretical division: after the introduction there are just two chapters, a briefer one dealing with the "roots", a longer one dealing with the "verbs".

Of all of Bopp's works, the *Analytical Comparison* is the one that has most theory in it. There is first of all an explicit statement about the value of the comparative enterprise; the inquiry into the 'analogy' of Sanskrit with Greek, Latin, and Germanic has a threefold relevance:

"It shews the higher or lower degree of affinity by which nations, who in the remotest antiquity wandered from the land of their ancestors into Europe, are connected with the present inhabitants of India.

It shews, secondly, that those refinements of grammatical construction by which the Sanskrit is so advantageously distinguished from all the spoken dialects of the Indian world, already existed in that remote antiquity, when colonies, leaving their Asiatic seats, transplanted into Europe their native tongue [...]

Another and not less important reason, which makes a critical comparison of the Sanskrit with its European sisters, worthy to be undertaken, is the light thrown thereby upon each of the languages compared, and the clearer view we thence obtain of the most ancient forms of each respectively, and probably some conception of the original and primitive signification of a great part of the grammatical inflections common to all" (Bopp 1820, 1-2).

A second important theoretical statement relates to the role of Sanskrit in the comparison: in his 1816 book Bopp had not been very clear on this issue, but here he puts Sanskrit on the same level as the other languages, i.e. as "subsequent variations of one original language". While Sanskrit is said to have best preserved the characteristics of the original language, it also happens that in some instances "grammatical forms lost in Sanskrit have been preserved in Greek or Latin".

Thirdly, in the *Analytical Comparison* Bopp expounds his theory of the Indo-European root, as monosyllabic<sup>19</sup>, segmentally diversified (possible configurations that are mentioned are V, CV, CVC, VC [V = vowel; C = consonant]), and not defined by the number of "letters".

Fourthly —and here Bopp assumes a stand radically opposed to that of Friedrich Schlegel<sup>20</sup>— the grammatical forms of Indo-European<sup>21</sup> can consist of inflection and of affixing (= addition).

<sup>18</sup> The work was reedited by Friedrich Techmer in his *Internationale Zeitschrift für allgemeine Sprachwissenschaft* 4 (1889), 14-60, together with a letter by W. von Humboldt. This reedition was reprinted in 1974 (= Bopp 1974). A German translation of the *Analytical Comparison* appeared in the *Neues Archiv für Philologie und Pädagogik* 2, fasc. 3 (1827), 1-30. On Bopp's *Analytical Comparison*, see Sternemann (1994).

<sup>19</sup> Bopp may have found inspiration for this view of monosyllabic roots in J.C. Adelung's *Über den Ursprung der Sprache und den Bau der Wörter, besonders des Deutschen* (Leipzig, 1781). The claim of monosyllabic roots entailed two consequences: (a) the rejection of

F. Schlegel's theory; (b) the analysis (supported by data from the Semitic languages) of personal affixes as deriving from pronouns.

<sup>20</sup> Bopp's departure from F. Schlegel's views also separated him from Friedrich's brother, Bopp's former fellow-student August-Wilhelm Schlegel (cf. Timpanaro 1973); the latter may have encouraged his student Christian Lassen to write a long, and rather critical review of Bopp's Sanskrit grammar (*Indische Bibliothek* 3, 1828-30, 1-113).

<sup>21</sup> Bopp mostly speaks of *Stammsprache*, or of *Ursprache* (or *Periode der Spracheinheit*) with reference to what we call today (common or proto-)



Bopp also redefines "grammatical inflection" as it was used by Schlegel: he distinguishes (a) genuine inflection<sup>22</sup>, which is either a change of vowels (= *Ablaut*) or a (consonantal) reduplication, a process which does not involve a "modification of the sense", and (b) the process (erroneously labelled 'grammatical inflection' by F. Schlegel) of adding "particles" to a (verbo-nominal) root, a formative process which entails a modification of the sense.

The fifth theoretical statement, underlying Bopp's view of the build-up of grammatical forms, has a philosophical basis: referring to the ideas of Everardus Scheidius [1742-1795]<sup>23</sup>, Bopp (1820, 11) defends the thesis—ultimately reaching back to Aristotle, and revived by the tradition of general grammar—that verb forms fundamentally have the (underlying) structure <[Subject] is (...)ing> (e.g. *John sings* = 'John-is-singing')<sup>24</sup>. On the basis of such a view verb forms are analysed as consisting of

- a) the root + a person-marking particle (a pronoun, often in a shortened form): this happens, e.g., in the present tense
- b) the root (possibly in a modified form) + a mood-indicating element + a person-marking particle: this formation is attested for the potential
- c) a "foreign addition" + the root + a person-marking particle: this formation is attested for preterit forms
- d) a reduplicated root + a person-marking particle, as we find in the second preterit forms
- e) the root + a form of the verb 'to be' + person-marking particle: the form of the verb 'to be' may be a present tense verb form or a potential mood verb form.

Indo-European; although he used *indisch-europäisch* in his *Vergleichende Grammatik* (cf. Bopp 1833: V: "indisch-europäischer Sprachstamm") and, in the later editions, *indoeuropäisch* (cf. Bopp 1857, XXIV: "Ich nenne den Sprachstamm, dessen wichtigste Glieder in diesem Buche zu einem Ganzen vereinigt werden, den indoeuropäische, wozu der Umstand, dass mit Ausnahme des finnischen Sprachzweigs, sowie des ganz vereinzelt stehenden Baskischen und des von den Arabern uns hinterlassenen semitischen Idioms der Insel Maltha alle übrigen europäischen Sprachen [...] ihm angehören") ["The language family whose principal members have been united into a single whole in this work, I call "Indo-European", given the fact that, with the exception of the Finnic branch, as well as the totally isolated Basque, and the Semitic language, left by the Arabs, of the isle of Malta, all the remaining European languages belong to it"], he did not make systematic use of these terms in order to refer to the ancestor language. In Germany the term *indogermanisch* (introduced by Julius Heinrich von Klaproth [1783-1835], and also used, next to *Sanskritisch*, by Wilhelm von Humboldt), was widely diffused due to its use by August Friedrich Pott [1802-1887].

<sup>22</sup> "The only real inflections which I consider possible in a language, whose elements are monosyllables, are the change of their vowels and the repetition of

their radical consonants, otherwise called reduplication" (Bopp 1820, 12).

<sup>23</sup> Scheidius' views are quoted by Bopp (1820, 11). The issue of the sources for Bopp's ideas on the glottogenetic analysis of verb forms is a matter of dispute. Verburg (1950) offers an extensive, but rather chaotic overview of possible sources, and does not substantiate his final inclination towards a Leibnizian influence on Bopp; cf. Timpanaro (1973, 575) and Morpurgo-Davies (1996, 212). On the one hand, the (direct or indirect) role of the Dutch Hemsterhusian doctrine, expounded by, among others, Scheidius, can hardly be dismissed [for information on the *Schola Hemsterhusiana*, see Verburg (1950, footnotes 13 and 23)], but neither should the possible influence of (French) general grammar (which Bopp must have been acquainted with through the teachings and writings of Silvestre de Sacy) be discarded: the decomposition of (attributive) verb forms into subject + copula + present tense participle of the attributive verb was a central component of the *grammaire générale*. Interestingly, Bopp reactivated this doctrine while he was studying in England, and he may have felt supported in his theorizing by the use of the present continuous forms in English.

<sup>24</sup> Bopp finds direct evidence for this analysis in the Latin verb *posse* (e.g., *pos-sum; pot-es; pot-est*, etc.).

This “segmentational”<sup>25</sup> view of verb forms in Indo-European has a direct bearing on Bopp’s view of language structure. The borderline between ‘organic’ and ‘mechanic’, while neat in principle, breaks down when it comes to linguistic reality: the Indo-European languages combine ‘organic’ and ‘mechanic’ principles, and in the course of history the latter have grown more diversified and more pervasive. Also, the affixing of particles is the crucial method for making language an instrument of interpersonal communication, in which it is essential to make utterances, viz. sentences linking a subject to a predicate.

All this forms part of Bopp’s comparative technique, which consists of segmenting forms, so as to separate (i) roots (liable to undergo an organic change), (ii) ‘particles’ that can be added to the root and which have a definable grammatical meaning, (iii) ‘letters’, not reducible to one or the other particle, but responsible for an added grammatical value (e.g., potential or preterit). What about the historical reconstruction of this? Here, Bopp falls back on three principles:

- a) a psychological-historical one, offering a genetic account of verb forms as a synthesis of a lexical root (expressing an attribute) and a (specifying) particle;
- b) the analogy with attested historical phenomena, e.g. the building of the Romance future with auxiliary verbs (most prominently the verb ‘to have’)
- c) a general principle of loss of autonomy (or ‘disconnectedness’).

Bopp’s stay in London, which extended to October 1820, was fruitful in many respects: he was able to pursue his study of Sanskrit, availing himself of the possibility of consulting manuscripts of literary and religious texts deposited in British libraries, and of receiving help from leading Sanskritists such as Charles Wilkins. In addition, he became a close friend of Wilhelm von Humboldt, the Prussian ambassador in London, with whom he read Sanskrit texts and discussed linguistic themes. The extensive correspondence<sup>26</sup> between Bopp and Humboldt testifies to their friendly relationship, and to their common interest in language classification, the nature of grammatical categories, and the constitution of grammatical forms.

Upon his return to Germany Bopp tried to obtain a chair at a Bavarian university, but —maybe because of the hostility of Classicists towards comparative grammar— no chair was created for him. In 1820 he received an honorary doctoral degree from the university of Göttingen, in recognition of his merits. Finally, in 1821, with the support of the two Humboldt brothers, he was appointed extraordinary professor at Berlin university, replacing Georg Heinrich Bernstein [1787-1860], a specialist of Semitic languages. In 1822 he became a member of the Berlin academy of sciences, and in 1825 he was promoted to the rank of ordinary professor. His chair was of one “Oriental literature and general linguistics” (*Orientalische Litteratur und allgemeine Sprachkunde*). The decision of the Berlin philosophical faculty was justified as follows<sup>27</sup>:

“Der Doctor Bopp ist nach dem Urtheil aller Sachkenner nicht nur einer der gründlichsten Kenner der indischen Sprache, vielleicht der gründlichste unter allen, welche auf dem festen Lande

<sup>25</sup> *Zergliederung*, i.e. “dis-membering” or “segmentation” is a key term in Bopp’s approach.

<sup>26</sup> The correspondence between Bopp and Humboldt is published in Lefmann (1891-7: vol. III, ‘Nachtrag’). All in all there are 115 letters, between September 5, 1819 (letter from Bopp to Humboldt) and March 16, 1825 (letter by Humboldt). The letters testify to Humboldt’s reliance on Bopp’s authority

in Sanskrit studies and in comparative grammar. Humboldt had sound intuitions about accentuation (and its impact on stem alternations), but did not develop his ideas in view of Bopp’s rather dogmatic stand; cf. Benfey (1869) and Verburg (1950).

<sup>27</sup> Archiv der Humboldt-Universität Berlin, Ifd. Nr. 1454, Bl. 128/9.

von Europa mit dieser schweren Sprache sich beschäftigen, sondern auch zugleich ein philosophischer Sprachforscher, welcher seine speziellen Forschungen über die indische Sprache benutzt zur Ergründung der Natur und Beschaffenheit der menschlichen Sprache im Allgemeinen" ["Dr. Bopp is, according to all experts, not only one of the most thorough connoisseurs of the Indic language, maybe the most thorough of all those who on the continent occupy themselves with this difficult language, but also at the same time a philosophically minded language scholar who uses his specialized investigations on the Indic language in order to elucidate the nature and the disposition of human language in general"].

Bopp was to stay for the rest of his life in Berlin, teaching courses till 1867. During 45 years of teaching he first taught Oriental languages (including Semitic languages) and a general course on the history of languages, and from the 1830s on basically Sanskrit (literature and grammar), and the comparative grammar of the Indo-European languages. There are no indications that he conceived his teaching of general linguistics otherwise than a comparative analysis of the (ancient) Indo-European languages.

For Bopp, who married in 1825, Berlin proved to be an appropriate setting in order to realize his life-time project: the (morphological) comparison of the languages related to Sanskrit. His reduced teaching (and examination) load, the facilities offered by the Berlin university library, the protection of the Humboldt brothers living in nearby Tegel, and the availability of the Berlin academy as a forum, created the ideal environment to conduct, in his study-room, analytical work, based on the linguistic dissection of texts and the perusal of grammars and dictionaries.

Preparing a comprehensive work on the comparison of Sanskrit, Persian, Greek, Latin, Lithuanian, Gothic and German, Bopp judiciously elaborated academic memoirs, in which he could offer a first treatment of the material. Between 1825 and 1832 he presented five memoirs which were to form part of his comparative grammar: they appeared under the general title "Vergleichende Zergliederung des Sanskrit und der mit ihm verwandten Sprachen"<sup>28</sup>.

In 1833 the first volume of the *Vergleichende Grammatik* appeared; all in all the work would comprise 3 volumes in its first edition, spread over twenty years (Bopp 1833-52)<sup>29</sup>. It was Bopp's lifework, and in the next decades he was to revise the work, of which a second and third edition appeared<sup>30</sup>.

Bopp's *Vergleichende Grammatik* brings to their logical conclusion the views put forward in his early works (of 1816 and 1820). The result can be summarized as follows (cf. Delbrück 1884, 13-4; 1905, 61-3): 1° Indo-European words are derived from monosyllabic roots (of which there exist two types: verbo-nominal and pronominal); 2° case-endings are, as a general rule, originally

<sup>28</sup> The five memoirs are: I. Von den Wurzeln und Pronomina erster und zweiter Person [*Abhandlungen der Königlich-Preussischen Akademie der Wissenschaften zu Berlin, Philosophisch-historische Klasse*, 1825, 117-148]; II. Über das Reflexiv [1826, 191-200]; III. Über das Demonstrativum und den Ursprung der Casuszeichen [1827, 65-102]; IV. Über einige Demonstrativ-Stämme und ihren Zusammenhang mit verschiedenen Präpositionen und Conjunctionen [1830, 27-47]; V. Über den Einfluss der Pronomina auf die Wortbildung [1832, 1-28]. Bopp also presented memoirs on the position of Celtic (1839, 187-272; published separately as Bopp 1839), Old Prussian (published

separately as Bopp 1853) and Albanian (Bopp 1855) in the Indo-European family. The papers read by Bopp before the Berlin academy are gathered in Bopp (1972).

<sup>29</sup> The *Vergleichende Grammatik* basically consists of two parts: a shorter phonetic part (§§ 1-104), followed by paragraphs on root structure (§§ 105-111), and an extensive morphological part, dealing with inflection (§§ 112-777) and word-formation (§§ 778-1016).

<sup>30</sup> The second edition of the *Vergleichende Grammatik* appeared between 1857 and 1861, the third, based on Bopp's annotations, was published posthumously between 1868 and 1871.

pronouns; 3° personal endings of verb forms stem from pronouns; 4° the verbal augment is identical with the *a privativum*; 5° the causative suffix contains the verb “to go”, and the desiderative suffix contains the verb “to be”; 6° stem-building suffixes are either of verbal or pronominal origin.

When on October 23, 1867 Bopp dies —having taught his classes up to a few months before—, he is recognized for his outstanding merits in the field of Sanskrit studies and Indo-European comparative grammar, to which he had contributed by his teaching and his writings, and by his active participation in the activities of the Berlin academy.

#### BOPP'S WORK: ACHIEVEMENTS AND AMBIVALENCE

Historical-comparative grammar of Indo-European linguistics today is highly indebted to Bopp, but owes hardly anything specific to him. Paradoxical as this may seem, this retrospective judgment is appropriate. On the one hand, Bopp —together with other scholars, such as Rasmus Kristian Rask [1787-1832], Jacob Grimm [1785-1863], and also August Wilhelm Schlegel and Lorenz Diefenbach [1806-1883]— established a field of research<sup>31</sup>. Bopp also laid down a style of research and, at least for some time, a style of writing and formulating. In addition, he produced extremely useful manuals and textbooks, and an authoritative compendium, viz. his *Vergleichende Grammatik*. But Bopp —who explicitly refrained from (historical) etymology— did not go beyond the analytical comparison of forms (yielding at times valuable hypotheses): his view on the historical relationship of the languages he compared was meagre<sup>32</sup>, and his grasp of historical processes very limited. His talent lay in connecting segmented grammatical forms, but he did not engage in a study of the (morpho)phonemic processes affecting these forms.

It would be unfair to level against him a neglect of phonetic detail, but his inflexible belief in the non-grammatical nature of apophony —a view which he dogmatically maintained against Grimm<sup>33</sup> and, in correspondence, against Humboldt— made him miss the essential distinction between phonically triggered changes and grammatically relevant alternations (which may have the same “surface” realization).

<sup>31</sup> Cf. Saussure (ed. 1968-74, vol. I, 3-4): «La troisième période commença lorsqu'on découvrit qu'on pouvait comparer les langues entre elles. Ce fut l'origine de la philologie comparative ou «grammaire comparée». En 1816, dans un ouvrage intitulé *Système de la conjugaison du sanscrit*, Franz Bopp étudie les rapports qui unissent le sanscrit avec le germanique, le grec, le latin, etc. Bopp [...] a compris que les relations entre langues parentes pouvaient devenir la matière d'une science autonome. Éclairer une langue par une autre, expliquer les formes de l'une par les formes de l'autre, voilà ce qui n'avait pas encore été fait». Saussure's statement should be nuanced and even corrected: Bopp was not a pioneer in the comparison of (ancient) Indo-European languages, and in the study of the origin of (Indo-European) grammatical forms. Apart from having been influenced by contemporaries such as the Schlegel brothers and W. von Humboldt, and apart from having been able to profit from insights obtained in the field

of Semitic and Finno-Ugric comparative linguistics, he could build on a long, though not cumulative, tradition of glottogenetic research and language comparison; cf. e.g. Orlandi (1962), Hiersche (1975), Van Hal (2010).

<sup>32</sup> This appears from the fact that he did not go into a thorough discussion of intergroup-relationships, nor into the chronology of Indo-European (cf. Morpurgo-Davies 1994). Bopp's terminology concerning linguistic descent within Indo-European is also poor and very vague; he speaks of *Sprachtrennung* (language separation) and *Individualisierung* (individualization of a language), but does not provide a linguistic content for these terms.

<sup>33</sup> In his review of Grimm's German(ic) grammar, Bopp defends the view of a phonically, i.e. 'mechanically', induced alternation of root vowels; see his “Besprechung der Deutschen Grammatik von Dr. Jacob Grimm” (Bopp 1827), which was expanded in Bopp (1836). On this controversy, see Schlerath (1982).

Bopp's general approach to language has been the object of diverging interpretations<sup>34</sup>. There are at least three reasons to that: (a) first, Bopp was not really a 'language theorist', and he never reached the level of abstraction and/or generalization attained by W. von Humboldt or the Schlegel brothers; (b) second, Bopp's general pronouncements are not very numerous<sup>35</sup> and, when they occur, they are wrapped in metaphorical phrasing<sup>36</sup>; (c) third, Bopp's approach was—at least in our modern view—an ambivalent one, in that it was defined as a contribution to natural history, thus participating to both 'naturalistic' and 'historical' research. In Bopp's mind, such an approach (parallel to comparative anatomy as the road towards a natural history of species) was (probably) felt as unproblematic (cf. Bologna 1992). It remains, however, a fact that Bopp's notion of 'organism' (*Organismus*) is undefined<sup>37</sup>. Likewise, Bopp's concepts of 'physical' and 'mechanical' laws are rather vague; when the French translation of the *Vergleichende Grammatik* was being prepared, he was asked by Michel Bréal [1832-1915] to provide a definition of the terms<sup>38</sup>. As a more general observation, one can say that Bopp, although he was also a practitioner of phil-

<sup>34</sup> For an overview see Bologna (1992), who lends most support to Terracini's (1949) interpretation of Bopp.

<sup>35</sup> The passages in question invariably turn up in the secondary literature; they come from the beginning of the *Vergleichende Grammatik* and from the first pages of Bopp's *Vocalismus*.

<sup>36</sup> On Bopp's use of metaphors, see Delbrück (1884; 1904), Wells (1987) and especially Panagl (1994).

<sup>37</sup> Bopp's use of 'organism' and 'organic' has been carefully studied by Morpurgo-Davies (1987); on organicist thinking in 19th-century linguistics, see Kucharczik (1998). According to Delbrück (1884, 18; 1904, 66), 'organic' in Bopp boils down to 'original; primitive'; this, however, is a very reductionist interpretation which leaves little content for the notion *Sprachorganismus* (or *Organismus der Sprache*). Cf. Bopp (1833-52: vol. I, p. III): "Ich beabsichtige in diesem Buche eine vergleichende, alles Verwandte zusammenfassende Beschreibung des Organismus der auf dem Titel genannten Sprachen, eine Erforschung ihrer physischen und mechanischen Gesetze und des Ursprungs der die grammatischen Verhältnisse bezeichnenden Formen"; Bopp (1836, 1, 3): "Die Sprachen sind nämlich als organische Naturkörper anzusehen, die nach bestimmten Gesetzen sich bilden, ein inneres Lebensprinzip in sich tragend sich entwickeln, und nach und nach absterben, indem sie, sich selber nicht mehr begreifend, die ursprünglich bedeutsamen, aber nach und nach zu einer mehr äusserlichen Masse gewordenen Glieder oder Formen ablegen, oder verstümmeln oder missbrauchen, d.h. zu Zwecken verwenden, wozu sie ihrem Ursprunge nach nicht geeignet waren"; "Eine Grammatik in höherem, wissenschaftlichem Sinne soll eine Geschichte und Naturbeschreibung der Sprache sein; sie soll, so weit es möglich ist, geschichtlich den Weg ausmitteln, wodurch sie zu ihrer Höhe empor-

gestiegen oder zu ihrer Dürftigkeit herabgesunken ist; besonders aber naturhistorisch die Gesetze verfolgen, nach welchen ihre Entwicklung oder Zerrüttung oder die Wiedergeburt aus früherer Zerstörung vor sich gegangen" ["In this book I plan to offer a comparative description, comprehending everything that is related, of the organism of the languages mentioned on the title page, an investigation of their physical and mechanical laws, and of the origin of the forms that indicate grammatical relationships; Languages are, as a matter of fact, to be viewed as organic natural bodies, which form themselves according to certain laws, which develop while carrying in themselves an inner vital principle, and which gradually die out, and this happens while they no longer understand themselves (= their proper formative principle), and they throw off their members or forms that were originally meaningful but gradually turned into a more external substance, or they mutilate them or abuse them, i.e. they use them for purposes for which they were originally not qualified; A grammar in a higher, scientific sense should be a history and natural description of the language; it should, as far as possible, historically unravel the path through which the language has risen to its height, or has sunk to its poorness; it should, more particularly, trace, in a natural-historical way, the laws through which its development or disruption or rebirth out of a preceding destruction have proceeded"].

<sup>38</sup> Bopp's clarification (quoted from a letter to Bréal) is given in the French translation of the *Vergleichende Grammatik: Grammaire comparée des langues indo-européennes [...]*, vol. I (Paris, 1866), p. 1. The information provided there shows that for Bopp 'mechanical laws' (or 'gravitation laws') are linked to the weight of endings and their impact on the preceding root syllable; 'physical laws' are laws related to articulatory processes (e.g. assimilation).

ological methods, viewed languages as massive formations, of which the origin and development could be analytically traced; within the history of languages, he hardly provided room for linguistic communities, let alone for the speaking subject.

As to the basic manifestation of the historicity of language —viz. linguistic change— Bopp seems to have understood the nature of change in a rather static way: static, because he frequently appeals to an explanation in terms of euphony. Initially, his view of change was also rather asystemic: in 1816, he speaks of arbitrariness, chance, hazard, but later he adopted a more nuanced view, recognizing, at least to some extent, regularity<sup>39</sup> in the modification of sounds<sup>40</sup>.

Starting with the following generation of Indo-European scholarship the fundamental shortcomings of Bopp's approach were superseded, and his naturalistic-organicist view of language was abandoned by the Neogrammarians and their followers.

An indisputable merit of Bopp was his willingness to extend the comparative frame: in his reworking of the *Vergleichende Grammatik*, he successively included Celtic<sup>41</sup>, Armenian<sup>42</sup> and Albanian (cf. also Bopp 1855)<sup>43</sup>. Unfortunately, his focus on morphological segments, in isolation from thorough historical-etymological investigation, led him to posit links between the Indo-European languages and Caucasian languages (Bopp 1847) and even Malayo-Polynesian (Bopp 1841).

#### LOOKING BACK: ASSESSING BOPP'S CONTRIBUTION

Retrospective accounts of Bopp abound: they mostly stress Bopp's foundational role in the establishment of historical-comparative linguistics (*historisch-vergleichende Sprachwissenschaft*)<sup>44</sup>. The recognition of Bopp's role goes back to the 19th century: already in 1866, upon the 50th anniversary of the *Conjugationssystem* a “Franz Bopp-Stiftung” was founded, promoting the scientific study of languages. In 1891, a century after Bopp's birth, the journal *Indogermanische Forschungen* was created, with explicit reference to Bopp's pioneering role, and in the same year the first volume of Lefmann's biography came out (Lefmann 1891-7). Bopp's life and work are also well

<sup>39</sup> In 1825 Bopp used for the first time the term *Laut-Gesetz* [sound law] (in the second academy memoir [cf. *supra*, note 28] on reflexive forms).

<sup>40</sup> See, e.g., the following passage in Bopp (1833, 236), where two types of “euphonic” changes are recognized: “Es gibt zwei Arten von euphonischen Veränderungen in allen Sprachen, die eine, zum allgemeinen Gesetz erhoben, kommt bei jeder Veranlassung und gleicher Gestalt zum Vorschein, während andere, nicht zum Gesetz gewordene, nur gelegentlich hervortreten“ [“There are two kinds of euphonic changes in all languages: the first (kind), having received the status of a general law, manifests itself on every occasion and in the same shape; other changes, which have not risen to the status of laws, occur only sporadically”].

<sup>41</sup> Here Bopp followed in the lead of J. C. Prichard (*The Eastern Origin of the Celtic Nations proved by a comparison of their dialects with the Sanskrit, Greek, Latin, and Teutonic Languages*, London, 1831) and A. Pictet (*De l'affinité des langues celtiques avec le sanscrit*, Paris, 1837).

<sup>42</sup> For his study of Armenian, Bopp was indebted to J. H. Petermann's grammar (*Grammatica linguae Armenicae*, Berlin, 1837).

<sup>43</sup> The Slavic languages were incorporated in the course of the first edition (1833-52), viz. in the second fascicle (1835). For his study of the Slavic languages, Bopp relied on J. Dobrovský's *Institutiones linguae Slavicae dialecti veteris* (Prague, 1822); for the second edition of his *Vergleichende Grammatik*, Bopp could rely on the then partially published comparative grammar of the Slavic languages by F. (von) Miklosich (*Vergleichende Grammatik der slavischen Sprachen*, Wien, 1852-75).

<sup>44</sup> Bopp's achievements in comparative linguistics are discussed by Delbrück (1884, 1-26; 1904, 55-74), Terracini (1949, 61-9), Pätsch (1960), Neumann (1967 —focusing on Bopp's early work), Sternemann (1984a, 1984b), Morpurgo-Davies (1996, 187-97); on Bopp's foundational role for ‘modern linguistics’, see Desnickaja (1969).

documented in Kuhn (1868), Benfey (1869), Leskien (1876) and Delbrück (1880; 1904). 20th-century accounts<sup>45</sup> coincide in assigning to Bopp a prominent place in the foundation of "Indo-European linguistics" (*indogermanische Sprachwissenschaft*) and in recognizing the important 'codifying' function of his *Vergleichende Grammatik*, the impact of which was multiplied through translations into English<sup>46</sup> and French<sup>47</sup>.

All this is indisputable; what still remains to be researched are the various factors, personal, interpersonal, and 'contextual', that were at play in the institutionalization (or 'discipline-formation')<sup>48</sup> of Indo-European comparative grammar. Here Bopp's role was certainly a more subordinate one. On the one hand, he was more a man of works than of words: even at the summit of his university career, he had very few students in Berlin<sup>49</sup>, and in the almost half a century of his academic career he supervised only a handful of doctoral dissertations<sup>50</sup>. On the other hand, it must be stressed that Bopp was, after all, primarily a scholar of Sanskrit, as can be gathered from his teaching topics<sup>51</sup>, and from his many indological publications<sup>52</sup>, which constitute the bulk of his output. And in the field of Sanskrit his contribution lay not so much in tracing new paths, in launching innovative ideas, but in achieving a synthesis for the study of the language, in preparing manuals and text editions, in facilitating the road from Sanskrit to Indo-European. Although he did not succeed in having Sanskrit studies recognized as an integrated part of Classical scholarship<sup>53</sup>, Bopp had a major impact on scholarship in the field of Sanskrit (and Vedic), through his

<sup>45</sup> See, e.g., Pedersen (1931, 254-8, though critical of Bopp's early work), Zeller (1967, 79-86).

<sup>46</sup> *A Comparative Grammar of the Sanscrit, Zend, Greek, Latin, Lithuanian, Gothic, German, and Slavonic Languages* by Professor F. Bopp. Translated from the German principally by Lieutenant Eastwick M.R.A.S., Conducted through the Press by H. H. Wilson, London, 1845-53 (3 vols.) [1858<sup>2</sup>; 1862<sup>3</sup>; 1885<sup>4</sup>].

<sup>47</sup> *Grammaire comparée des langues indo-européennes*. Traduite sur la deuxième édition et précédée d'une introduction par M. Michel Bréal, Paris, 1866-72 (4 vols) [1875-8<sup>2</sup>; 1884-9<sup>3</sup>].

<sup>48</sup> For an approach of Bopp's work from the point of view of discipline formation and institutionalization, see Amsterdamska (1987) and Karstens (2012).

<sup>49</sup> See, e.g., Martineau (1867, 305): "I had the great pleasure and advantage of commencing the study of Sanskrit under his guidance in the years 1848 and 1849; when [...] my only fellow-student in his class was [...] Professor Siegfried, who there and then commenced the studies which he afterwards prosecuted with so much zeal and to so high a point".

<sup>50</sup> Between 1826 and 1867 Bopp supervised or co-supervised the doctoral dissertations of Friedrich Rosen, Adolf Friedrich Stenzler, Anton Wolheim, Adalbert Kuhn, Wilhelm Pertsch, Frans Johaentgen, Wilhelm Storck, and Ernest Siecke. The latter four were co-supervised by the Sanskritist Albrecht Weber [1825-1901]. Cf. Morgenroth (1994, 171).

<sup>51</sup> For surveys of the classes taught by Bopp in Berlin, see Sternemann (1984, 41-52); for a list of the in-

dological courses offered by Bopp, see Morgenroth (1994, 170).

<sup>52</sup> His book publications in the field of Sanskrit include: *Nalus, carmen Sanscritum e Mahābhārato* (1819); *Nalus, Mahā-Bhārati episodium. Textus Sanscritus cum interpretatione Latina et annotationibus criticis* (1830-2); *Arschunas Reise zu Indras Himmel, nebst anderen Episoden des Mahā-Bhārata* (1824); *Diluvium cum tribus aliis Mahā-Bhārata episodiis. I. Textus Sanscritus* (1829); *Die Sündflut nebst drei anderen wichtigen Episoden des Mahā-Bhārata* (1829); *Nala und Damajanti* (1838); *Ausführliches Lehrgebäude der Sanskrit-Sprache* (1829); *Grammatica critica linguae Sanscritae* (1832); *Kritische Grammatik der Sanskrita-Sprache in kürzerer Fassung* (1834; 1845<sup>2</sup>, 1863<sup>3</sup>, 1868<sup>4</sup>); *Glossarium Sanscritum* (1830, 1847<sup>2</sup>); *Glossarium comparativum linguae Sanscritae* (1867).

<sup>53</sup> Cf. in this respect Bopp's letter of November 14, 1856 to A. F. Stenzler, published in Lefmann (1907). Bopp conceived of his grammars (*Ausführliches Lehrgebäude [...]*; *Grammatica critica [...]*; *Kritische Grammatik [...]*; cf. note 52) as tools for the teaching of Sanskrit in a (German) university context; his grammars are based on the grammars produced by British scholars in the first decade of the 19th century: W. Carey, *A Grammar of the Sungskrit Language* (Serampore, 1804 [second edition, 1806]; Ch. Wilkins, *A Grammar of the Sanskrita Language* (London, 1808); H. P. Forster, *An Essay on the Principles of Sanskrit Grammar* (Calcutta, 1810).

editions and translations, and especially through his Sanskrit grammar (which went through several revisions and adaptations) and dictionary<sup>54</sup>.

In the opinion of two prominent representatives of 20th-century general and historical-comparative linguistics, viz. Otto Jespersen [1860-1943] (1922, 55) and Antoine Meillet [1866-1936] (1937, 458-9), Franz Bopp “discovered” comparative grammar while in search for another goal. Although it is true that Bopp’s ultimate objective was to unravel the origin of grammatical forms (*Ursprung der grammatischen Formen*), and to lay down the original shape of the language from which Sanskrit and its kindred languages had sprung, the statement that Bopp discovered comparative grammar needs to be qualified. First, the “comparative method” as we understand and use it today<sup>55</sup>, is crucially dependent on the notion of serial correspondences, on the principle of triangulation, and on the determination of conditioning factors in order to explain patterns of change. All this is absent from Bopp’s “methodology”<sup>56</sup>. Also, Bopp was not the first to compare languages, nor the first to compare them morphologically and/or phonologically. Thirdly, as Benfey (1869, 476) and Delbrück (1884, 2; 1904, 56) rightly pointed out, comparison for Bopp was always a ‘means’ (*Mittel*), not even a very sophisticated means. And this ‘means’ was not his discovery, but an application of a well-established analytical procedure in grammatical description.

But Bopp’s greatness lies in what both Benfey and Delbrück repeatedly call his “geniality” and his “combinatory talent” (cf. Benfey 1869, 477, 505, 506, 507, 510; Delbrück 1884, 26; 1904, 71, 74): in applying, straightforwardly, analytical comparison he was able to show the formative processes that tie together Sanskrit, Persian<sup>57</sup>, and their European cognates, and to shed light on how grammatical forms in Indo-European came about and how they developed. In retrospect<sup>58</sup> it would be too easy to speak of errors, misfires<sup>59</sup>, and unjustified hypotheses; we should first of all recognize the greatness, the momentum and the internal ‘drift’ of Bopp’s accomplishment.

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<sup>54</sup> Bopp published a *Glossarium Sanscritum* in 1828-30, of which a second edition, integrating comparative materials, appeared in 1847 (cf. *supra*, note 52). The glossary was meant to serve as a didactical tool and a more convenient instrument than the voluminous 1819 dictionary of Horace H. Wilson (*A Dictionary, Sanscrit and English*, Calcutta [second edition, 1832]). The dictionary was reworked as a tool for Indo-Europeanists and appeared just before Bopp’s death: *Glossarium comparativum linguae Sanscritae*. Bopp’s lexicographical production was superseded by the 7-volume *Sanskrit Wörterbuch* of O. Böhtlingk (a former student of Bopp) and R. Roth, which appeared between 1852 and 1875 in Saint-Petersburg. On Bopp’s contribution to Sanskrit scholarship, see Benfey (1869) and Windisch (1917-20).

<sup>55</sup> See, e.g., Hoenigswald (1960) and, for a historical perspective, Wells (1979).

<sup>56</sup> Morpurgo-Davies (1996, 191-3) speaks of Bopp’s method (cf. also Orlandi 1962, 531); Delbrück (1884, 23, 25; 1904, 74) notes the lack of method.

<sup>57</sup> Bopp first used modern Persian materials; profiting from advances made in the access to Avestan texts and, later, in the decipherment of the Old Persian inscriptions, he integrated Avestan (Zend) and Old Persian in his comparative work.

<sup>58</sup> For an interesting retrospective appraisal of Bopp’s contribution to Indo-European comparative grammar, see Eichner (1994).

<sup>59</sup> Benfey (1869, 511-4) pinpoints factual errors and conceptual misgivings in Bopp’s approach; he is highly critical of Bopp’s theory of accentuation (Bopp 1854).

<sup>60</sup> See also *supra*, note 52.



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