1 Saussure and Indo-European linguistics

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Saussure as seen by his contemporaries

In 1908 the Linguistic Society of Paris (Société Linguistique de Paris) dedicated a volume of *Mélanges* to Ferdinand de Saussure, then aged fifty and professor at the University of Geneva (Saussure, 1908). A very brief and unsigned preface stated that, since the few years that he had spent in Paris between 1881 and 1891 had been decisive for the development of French linguistics, the Society was happy to dedicate to him one of the first volumes of its new series. The Society also wished to thank the eminent Swiss linguists who had joined Saussure's earlier pupils in paying their respects to the author of the *Mémoire sur le système primitif des voyelles en indo-européen*. Two things are now striking even if they were not so at the time. First, no attempt was made in the preface or elsewhere to distinguish between the two main activities of Saussure: teaching and research in comparative and historical linguistics (*grammaire comparée*) and teaching and research in general or theoretical linguistics. Secondly the articles collected in the volume were all, with one exception, articles in Indo-European comparative linguistics. They include work by established scholars of considerable fame like Antoine Meillet in Paris or Jacob Wackernagel in Basle, but these were historical and comparative linguists rather than theoretical linguists. The one exception is a paper by one of Saussure's pupils and colleagues, indeed one of the editors of the *Cours*, Albert Sechehaye, who discusses the role of stylistics in the theory of language. Yet Saussure's current fame is tied to his views on theoretical linguistics.

Saussure as a comparativist

If Saussure's contemporaries had been asked, they would have simply called him a linguist since historical and comparative linguistics (often identified with Indo-European studies) was the prevailing form of linguistics at the time. Indeed all the work that Saussure published in his lifetime, and which was collected posthumously in a single volume (Saussure, 1922) concerned problems of Indo-European, and fitted in the tradition of historical and comparative work which

had started at the beginning of the nineteenth century. Saussure, in common with most of his contemporaries, spoke of Franz Bopp's school and of the new science founded by Bopp (Saussure, 2002: 130ff.). The reference was to the German scholar who in 1816 had published a seminal book where he in effect demonstrated that a number of ancient languages (Greek, Latin, Sanskrit, Gothic) descended from a common prehistoric ancestor which had not survived; through comparison of the daughter languages it was possible to identify the common features which belonged to the parent language as well as the innovations which each of the descendants had introduced into the common inheritance. Bopp's more advanced work included a comparative grammar of Sanskrit, Avestan, Greek, Latin, Lithuanian, Gothic and German (1833–52) which in its second edition (1857–61) also discussed Old Slavic, Armenian and other Indo-European languages. In seeing himself in Bopp's tradition, Saussure was in line with most of his contemporaries; however, he went well beyond them in having doubts (which he did not express in his published work) about the exact nature of the 'new science' founded by Bopp and about the continuity between Bopp's work and the work of his contemporaries.[1]

Two Saussures?

A number of questions arise for the modern reader trained to think of Saussure as the founder of general linguistics or, more specifically, as the author of that posthumous *Cours de linguistique générale* (1916) which is often seen as marking the beginning of general or theoretical linguistics. If Saussure was in fact a professor of Sanskrit and Indo-European languages for most of his life, if practically all that he published of his own volition during his lifetime concerned historical and comparative linguistics, what is the link, if any, between these two sorts of activities? Is it true that there were two Saussures, as the title (though not the content) of a famous paper (Redard, 1978a) may suggest?

The *Cours* is well known, but in its published form it was not written by Saussure. We must focus on the work actually published. What was it about? How innovative was it? How important? How much of it, if any, survived? How necessary is it for the current practitioners of the subject to go back to the original publications? And above all, how did it fit with the contemporary beliefs? An answer is not easy because what in Saussure's time was the obvious subject matter of linguistics is currently the preserve of a small and highly specialised group of scholars. Some background is necessary.

Nineteenth-century linguistics

The very concept of linguistics as a university discipline is a novelty of the nineteenth century. In itself this is not surprising. The nineteenth century saw

the beginning of the institutionalisation of academic disciplines as we now know them, as well as the identification and sometimes creation of a number of new disciplines. In most instances the German universities served as a model and trend-setters, not least because they had introduced the concept of a university dedicated to research as well as to teaching. Research involved specialisation. When Saussure started to study at the University of Leipzig in 1876 he either attended or could have attended seminars and lectures by a multitude of specialists: Georg Curtius (1820–85) was in effect teaching Indo-European and the historical grammar of the classical languages; August Leskien (1840–1916) was teaching Slavic and Indo-European; Karl Brugmann (1849–1919), who was to become one of the major Indo-Europeanists, was in Leipzig from 1873, as *Privatdozent* from 1877 and later (1887) returned as a full professor of Indo-European linguistics. The list could continue. Such a concentration of specialists, each one of whom at the time would have been called a *Sprachwissenschaftler* 'linguist' (and now would be labelled Indo-Europeanist), is remarkable and would have been unthinkable fifty years earlier (it is doubtful that at that stage as many 'professional' linguists existed in the whole of Germany). Even in the 1880s it was probably unthinkable outside Germany, though the new concept of research university was beginning to prevail in Europe and the USA. It may be useful to mention that in their specialised field all of these scholars produced work which is still known and used nowadays (see Morpurgo Davies, 1998; Auroux, 2000).

Textual and linguistic studies

The linguists of the time were not theoreticians but had to have erudition and scholarship. As well as linguists they could be medievalists like Braune and his contemporary Eduard Sievers (1850–1932), who were more than capable of editing Old English or Old High German or Old Norse texts, or they could be classicists like Georg Curtius, who also lectured on Greek and Latin literature. All of them knew Greek, Latin and sometimes Hebrew from their school days and most of them had studied Sanskrit at university as well as the ancient Germanic languages. All of them had to be competent textual and literary scholars because the data that they needed were found in ancient texts (inscriptions, papyri, manuscripts) which made sense only within certain cultural frameworks which the reader had to understand. The study and understanding of these texts could be, and often was, an end in itself, but Saussure's teachers or colleagues in Leipzig mainly wanted to use them as a source of linguistic data. The aim was to understand and explain the development of an ancient language from the period of the first evidence to the period in which it was best known. To explain, in this context, mostly meant to account for the irregularities in the later phases of the language through the reconstruction of sound changes and

morphological innovations which had altered the earlier state of affairs. To take the simplest possible example: in classical Latin an accusative like *oratōr-em* 'orator' belonged with the nominative *orator*, but if so why did an accusative like *honōr-em* 'honour' correspond to a nominative *honōs*? This question was answered pointing out that *honōr-em* derived from an earlier unattested **honōs-em* which was the original accusative corresponding to the nominative *honōs*. But why had **honōs-em* been replaced by *honorem*? Here the answer was that in Latin at some stage (which could be documented) all intervocalic *s*-sounds had been replaced by [r] (the so called rhotacism).[2] In other words, the original forms *orator*, *oratōrem*; *honōs, *honōsem* had a degree of morphological regularity which their later descendants had lost, because of sound change. Somewhat later the regularity was reintroduced through the creation of a new nominative *honor*, formed in order to match the indirect cases and the regularity of the *orator: oratōrem* pattern. This assumption also allowed the linguist to link the newly formed *honor* with the adjective *honestus* (the original *-s-* of *honōs-* was preserved before a consonant) and in its turn the etymological link between 'honest' and 'honour', which was in this way not guessed at but demonstrated, could lead to a series of assumptions which were important for an understanding of Roman culture and its development. But for most linguists, and particularly for those of the earlier generations, the aim was mainly comparative: to compare the ancient phases reached through this sort of analysis with the earliest phases of related languages and try to define the position of the language in the family to which it belonged, while at the same time reconstructing, thanks to comparison, both its immediate antecedents and the more remote parent language.

The comparative method

In the last decades of the nineteenth century few linguists would have hesitated to say that the great discovery of their discipline was what we now call the comparative method. Through its application it was possible to demonstrate (rather than guess) that some languages belonged to the same linguistic family and to define their degree of kinship. The linguistic family tree was meant to indicate which languages belonged to the same family but also marked the type of relationship as defined by the different ways in which the tree's branches were drawn. In the third quarter of the century it had became possible to reconstruct – obviously with a high degree of approximation – some of the actual forms of the parent language, even if this belonged to a period earlier than the invention of writing. This is the stage at which we begin to find forms like **akvāsas* which was taken to be the closest possible approximation to the Indo-European for 'horses' (nominative plural) and the antecedent of Sanskrit *aśvās*, Gr. *hippoi*, Lat. *equī*. In the first part of the century it had been assumed that

comparison permitted distinction in individual languages between innovations and preservations, and the emphasis had been on morphological analysis and segmentation but not on phonology. By the time the actual forms began to be reconstructed (eventually with an asterisk which indicated that they were not attested) it became imperative to make hypotheses about (a) the structure of the phonological system of the reconstructed parent language, (b) the phonological development which accounted for the differences between the reconstructed system and the attested systems. These may seem parochial problems – why should we worry whether Indo-European had a vocalic system which included five short vowels [a, e, o, i, u] like Latin or just three [a, i, u] like Sanskrit? Or given that nobody disputed that Latin *sequitur*, 'he follows' Greek *hepetai* and Sanskrit *sacate* all came from the same original root, was it worthwhile to discuss whether originally the second consonant was [k], [p] or a different consonant? In fact the problem was more substantial than it would appear at first sight and there were a number of points at stake. Suppose for instance that the verb 'to follow' was reconstructed with an internal [p] as in Greek. This would automatically speak against the older view that all these related languages were derived from Sanskrit since the <-c-> of Sanskrit would then reflect an innovation; the same could be said for Latin <-qu->. On the other hand, the initial [s] shared by Sanskrit and Latin was likely to be inherited and spoke against Greek [h] being original and in its turn against Greek being the parent language. Latin could then best represent the original form, if we accepted that a sound like [k^w] yielded [p] in Greek and <c>, i.e. [$t\int$] in Sanskrit. But in other instances (e.g. Sanskrit *bhar-* 'to carry', Greek *pher-*, Latin *fer-*) there were very good reasons to assume that the original form of the first consonant was not like that of Latin and was more likely to be like that of Sanskrit.

This type of discussion, if conducted seriously, eventually provided a demonstration of what had been argued mainly on morphological evidence, namely that the parent language could not be identified with any of the attested languages. The historical consequences were important; if the parent language had to be identified with Sanskrit we would have had to assume movements of people from India to the West; if it was identified with Latin, from the West to India.

But the linguistic consequences of the correct reconstructions were important too. Through the reconstruction of Indo-European, their parent language, languages like Greek or the Indic languages or the Romance languages became languages with a history of more than 4,000 years. It was now becoming possible to dispel some of the old preconceptions: for instance, the view cherished by the Enlightenment that languages improved in rationality with time, but also the opposite view, supported by Romanticism, that the earliest phases of some languages had a level of perfection which was later followed by decay and that change (i.e. decay) did not belong to the early phases. In other words, a correct

reconstruction of Indo-European, by now taken as pilot study for similar analyses of other language families, was not mere pastime or pedantry; it could add on the one hand to our knowledge of history, on the other to our understanding of the main features of language development. It also became possible to recognise patterns of development which could not have been identified before. One of the assumptions which was acquiring credibility in the 1870s concerned the regularity of sound change. As Saussure was to note at a later stage ([1903] 1960: 25), it was astonishing that if a sound [x] changed into [y] in a certain word and in a certain period, in the same period that sound [x] would also change into [y] in all other words where it occurred in the same environment. And yet it was becoming clear in the midst of violent academic disagreements that the whole of comparative and historical linguistics was founded on that assumption.[3]

The young Saussure

So much for the background. When the young Saussure arrived in Leipzig to pursue his doctoral studies in October 1876 he was not yet nineteen but he was not ignorant of linguistic work. In his very early teens he had been seduced by the 'paleontological' reconstructions of a neighbour and family friend, Adolphe Pictet, the author of two volumes of *Origines indo-européennes* (1859–63): 'The idea that with the help of one or two Sanskrit syllables – since that was the main idea of the book and of all contemporary linguistics – one could reconstruct the life of people who had disappeared, inflamed me with an enthusiasm unequalled in its naïveté' (Saussure, [1903] 1960: 16). At the age of fourteen and a half he had written and given to Pictet a lengthy essay (Saussure, [1872] 1978) in which he tried to demonstrate that it was possible to bring back all basic Greek, Latin and German roots to a pattern of the type Consonant + Vowel + Consonant where the consonants are defined as either labials, or dentals or gutturals. A striking character of the essay, in spite of the naïveté and, one may even say, absurdity of its assumptions and conclusions, is the immense clarity of argumentation and the professional style in which it is written. In 1874 Saussure started to teach himself Sanskrit using Bopp's Sanskrit grammar and began to read some technical literature (works by Bopp and Curtius); one year at the University of Geneva also gave him the experience of attending a course by someone who was de facto repeating what he had heard from Georg Curtius in Leipzig the previous year (Saussure, [1903] 1960: 20). Round that time he also joined the *Société de linguistique de Paris* (founded in 1866) and began to send in short articles. In other words, the Leipzig years were preceded by extensive self-teaching. Even before entering the Gymnasium in Geneva he had noticed that the contrast between forms like Greek *tetag-metha* 'we are arrayed' and Greek *tetakh-atai* 'they are arrayed', if compared to that between *lego-metha*

'we say' and *lego-ntai* 'they say', led to the conclusion that after a consonant *-ntai* had been replaced by *-atai* and to the assumption that in that position Greek *-a-* could be a replacement for the *-n-* of earlier Greek or Proto-Greek (Saussure, [1903] 1960: 18).

Saussure in Leipzig and the *Mémoire*

Saussure was in Leipzig for less than two years before moving for a short while to Berlin. During this period and in the previous year he wrote a number of things including four articles on Indo-European, Greek and Latin matters, all published in the *Mémoires de la Société de linguistique de Paris* (vol. 3, 1977), and a lengthy account of Pictet's work for the *Journal de Genève* 1878 (Saussure, 1922: 391–402). In December 1878 his masterpiece appeared, the 300-page monograph entitled *Mémoire sur le système primitif des voyelles dans les langues indo-européennes* (published by Teubner and dated Leipsick [sic] 1879).[4] One of the greatest French linguists, Antoine Meillet, later on called it the most beautiful book of comparative grammar ever written (Meillet, [1913–14] 1938: 183); the judgement is still valid. It remained the only full book that Saussure ever published. Louis Havet, professor of Latin in Paris, who had agreed to write a brief review, ended taking a full page of the *Tribune de Genève* and explained in a letter to the author that once he had read and understood the book he was bowled over by its novelty and its importance (cf. Redard, 1978a: 30). The review ended by stating that the book was likely to lead to a renewal of part of the discipline and that much could be expected of its author who was still only twenty-one years of age. (See Havet [25/2/1879] in Redard, 1978b.) The Indo-Europeanist who rereads the book today experiences a series of difficulties because of different terminology and different conventions, but finds the task much easier because most of the conclusions have become part of the acquired knowledge in the field; the first reaction is still stunned admiration.

Is this masterpiece the result of the training that Saussure had received in Leipzig? Saussure himself ([1903] 1960: 15f.) explained that, though everyone would normally assume that his work, written and published in Leipzig by a Leipzig student, was the product of the Leipzig school, in fact it was written in semi-isolation without help and without visible signs of influence by his teachers or contemporaries. This statement will have to be reconsidered, but first we must mention what Leipzig meant at the time for people in the subject.

Leipzig and the neogrammarians

The university was justly famous in a number of fields. In comparative linguistics it was in the forefront. Georg Curtius had more or less single-handedly persuaded the classicists that they had much to learn from serious historical

studies of both Greek and Latin; a group of young scholars had congregated round him and his courses were attended by more than 200 students. In the mid 1870s, however, things were changing and there was excitement all round. The Slavist August Leskien, much younger than Curtius, had persuaded a number of advanced students, young assistants and *Privat-Dozenten* that a new methodology was needed; the title of *Junggrammatiker* given to this group (partly in jest) stuck as also did the mistranslation 'neogrammarians', which missed the point of the joke. They argued – vociferously – that the Indo-Europeanists had to learn from those working on more modern languages and that the study of language change took priority over that of language comparison. They adopted a dualistic approach to language change: phonetic change happened unconsciously, independently of the will of the speakers, and according to regular 'laws' which admitted of no exceptions; morphological change was heavily influenced by 'analogy': the speakers reintroduced regularity in the grammar, remodelling forms on each other. These two types of change applied to all periods and not, as previously supposed, only to the period of linguistic decay which followed the perfection of the reconstructed parent language. In other words the linguist had to adopt a uniformitarian approach and study the motivation of change on the basis of modern data in order to reconstruct what had happened in the past. All these assumptions and beliefs – uniformitarianism, exceptionless sound laws, importance of what had previously been called false analogy, priority of history over comparison, concern for recent phases of language, extensive methodological discussions – added as they were to extensive claims of novelty and criticism of the past, were bound to irritate. Curtius and most scholars of the previous generation did not react favourably. In Leipzig, some of the brightest young scholars – Brugmann, Osthoff, Hermann Paul (1846–1921) – became the leaders of the new movement. Their manifesto did not appear until 1878, when Osthoff and Brugmann, after a quarrel with Curtius, founded a new periodical which was prefaced with a lengthy methodological statement (Osthoff and Brugman, 1878),[5] but between 1875 and 1876 a number of books and articles appeared which, even when they were not by card-carrying neogrammarians, altered considerably some of the previously accepted reconstructions while at the same time contributing to define the new method (Verner, 1875; Hübschmann, 1875; Leskien, 1876; Brugman, 1876a, 1876b, etc.; cf. Hoenigswald 1978).

Saussure was too young to count as one of the neogrammarians, even if he had wished to, but in any case he kept himself separate from a set-up – 'le cénacle des docteurs' – which he did not find sympathetic. However, in spite of this latent hostility, it is likely that he would have approved of the substance of the intellectual shift, even if not of the form that it took. At the time when he wrote the *Mémoire* he was completely au fait with the concrete results reached by Leskien and his followers in their work about Indo-European

and largely accepted their conclusions. If so, what is the originality of the *Mémoire*?

Scope and novelty of the *Mémoire*

The book concerns the vocalism of Indo-European; on the one hand this refers to the vowels that we can reconstruct for the parent language, on the other to the phenomena of vocalic alternation which mark grammatical contrasts, the so-called Ablaut or vocalic apophony (see below), its function and its origin. Anachronistically it could be stated that the book concerns the phonology and morphophonology of reconstructed Indo-European and the derived languages. Saussure states at the outset that his main concern is what is called the Indo-European *a*, but the discussion gradually makes clear that the whole vocalic system has been the focus of attention. In other words it is not one sound which is discussed but a whole phonological system, its contrasts, its hierarchies and its morphophonemic functioning.

The novelty is manifold. At that moment in time the whole subject was in a state of complete flux. Odd beliefs had been inherited from the beginning of the century and from the previous century and were occasionally fought against but in a desultory way. (On Ablaut and on the history of the reconstruction of Indo-European vocalism see Morpurgo Davies, 1998; Pedersen, 1962; Benware, 1974; Mayrhofer, 1981, 1983.) A few of these beliefs are now listed in no particular order, mixing technical and less technical assumptions:

(a) The 'perfect' or fundamental vowels, it was sometimes argued, were [a, i, u]; it seemed to follow that the parent language, which was taken to be more perfect than its descendants, could only have [a, i, u].
(b) The vocalic system of Sanskrit was based on [a, i, u]; consequently it was all too easy to assume that the parent language only had [a, i, u]. If so, the more complex system [a, e, o, i, u] of some European languages, including Greek and Latin, was due to an innovation, i.e. to a split of [a] into [a, e, o]. It was not clear how this innovation could have occurred; or what forms of conditioning had determined the split.
(c) It was often stated that the consonants changed according to recognisable patterns but the development of vowels was entirely arbitrary; consequently while languages derived from the same parent showed regular consonantal correspondences between related words (cf. Latin *tū* vs. English *thou*, Latin *trēs* vs. English *three*, etc.), the correspondences between vowels seemed to be unpredictable (cf. Latin *pēs* vs. E. *foot*, Latin *sē-men* vs. E. *seed*).
(d) The Indo-European languages showed traces of vocalic alternations used to indicate grammatical distinctions as in English *drive/drove* or in Greek *eleipon* 'I was leaving', *elipon* 'I left'. This so-called Ablaut (the technical term which Jacob Grimm made standard) was more prominent in the earlier

phases of the Indo-European languages and was treated in the work of the early comparativists as a hallmark of perfection. Some scholars had even argued that it had a direct link with meaning: weakening of the vowel (as in Greek *-lip-* vs. *-leip-*) meant weakening of meaning.

(e) The Indian grammarians, followed by the European scholars, had understood the Sanskrit Ablaut as based on successive additions of an *-a-* vowel to the root (the root of the verb 'to make' could appear as *kr-*, *kar-*, *kār-*). If this was also the Indo-European pattern, alternations like those of Greek *lip-, leip-, loip-* for the verb meaning 'to leave' could not go back to the parent language. Moreover, even in Sanskrit there were other types of alternations. In forms like Sanskrit *punā-mi* 'I purify' / *pavi-tum* 'to purify' / *pū-ta-* 'purified' all sorts of vocalic alternations occurred. This was often ignored.

Each one of these assumptions, and there were numerous others, carried a heavy ideological baggage. Each could be tackled from a purely technical viewpoint provided that the linguist was not mesmerised by the earlier beliefs, but each also added to the general confusion. Which vowels could be attributed to Indo-European and how these vowels were exploited to indicate grammatical contrasts remained obscure. The question of the nature, role and origin of Ablaut was also controversial.

The mid 1870s saw some new developments. The assumption that Sanskrit [a] as contrasted with [e, o, a] of the European languages was original was no longer taken for granted but there was no agreement about the correct reconstruction. At the same time the range of reconstructed vowels increased. It was first suggested – by Hermann Osthoff – that Indo-European like Sanskrit had a vocalic [r] (cf. the first syllable of *Brno*) and possibly a vocalic [l] (cf. the final syllable of English *people*), even if most daughter languages had developed a supporting vowel next to it (Gr. *ar/ra*, Lat. *or/ur*, etc.). In a daring article published in 1876, which was the main cause of the quarrel with Curtius, Karl Brugmann (1876a), argued that Indo-European also had vocalic [n] and [m] (cf. the final syllables of German *leben*, etc.) which in most languages had developed supporting vowels and sometimes lost the nasal element (cf. the last syllable of Sanskrit *sapta* '7', Greek *hepta*, Latin *septem*, Gothic *sibun*). On his arrival in Leipzig the young Saussure was asked his views about Brugmann's discovery. He was forcefully reminded that he had made the same observation while still at school and found it difficult to accept Brugmann's priority, though he had no publication which supported his claim (Saussure, [1903] 1960).

The discovery of vocalic liquids and nasals [r, (l), m, n] was important not only because it added to the number of reconstructed phonemes but also because it accounted for some of the odd correspondences. If we found Latin [e] corresponding to Greek [e] in Lat. *ferō* 'I carry' vs. Gr. *pherō*, why did the ending *-em* of accusative singular in e.g. Latin *patr-em* 'father' correspond to Greek *-a*

in the accusative singular *pater-a*? Brugmann (and Saussure before him) reconstructed a vocalic nasal which turned into *-em* in Latin and into *-a* in Greek. The older view was that the development of vowels was unpredictable, but in this manner the way was open to establishing regular correspondences between vowels as well as between consonants. However, a number of problems were still not solved.

The striking character of the *Mémoire* is that the twenty-year-old Saussure tackles all these difficulties at once as well as a number of more substantial problems which had not yet emerged in the discussion. There is sureness of touch and both willingness and ability to integrate into a new system separate conclusions which had just been reached and were deemed to be tentative even by their authors. The articles quoted and on which part of the argument is built are often no more than one or two years old. Havet complained that the book was difficult to follow and required too much of its readers. But this is not because of lack of clarity (on the contrary); it is simply because the reader must be au fait with the state of the art, with what was known and what was being discussed. That is why modern Indo-Europeanists, once they have learned to recognise symbols and terminology which are now obsolete, find the argumentation so clear. They have a better knowledge of the starting point than Saussure's contemporaries could have had.

The results of the *Mémoire*

The conclusions of the *Mémoire* may be summarised briefly, once again at the cost of some anachronism. For Saussure the Indo-European parent language had an [e] and an [o] vowel (following Brugmann, he used the symbols a_1 and a_2) which merged in Sanskrit but were mostly preserved in Greek and Latin; in addition it had a number of *coefficients sonantiques*, i.e. resonants [i, u, r, (l), m, n] which functioned as vowels between consonants and elsewhere and as consonants between vowels and in other environments. A study of the basic form of each root established that this normally included an [e] vowel followed by a consonant or resonant; the [e] vowel regularly alternated with [o] in different grammatical forms and with no [e] or [o] vowel in other forms (cf. Greek *leip-, loip-, lip-* 'leave'). In contrast with earlier assumptions, Saussure accepts the view that the basic form of the root has [e] and that [e] is lost when the accent is deplaced. If so, Ablaut (i.e. loss of [e]) is the result of pure sound change and has no symbolic and semantic value. So far, Saussure is building on individual conclusions which had in one way or the other been stated or hinted at by other contemporary authors, though never in the context of a comprehensive study of roots, accentuation and Ablaut.

If Saussure had stopped here in 1878, his book would still have been an exceptional achievement, but there was more to come. One of the fundamental

steps is the observation that a Greek root of the type *Cei-, Ceu-, Cer-*, etc. (C = any consonant) alternates with *Ci-, Cu-, Cr-*, etc. in exactly the same circumstances in which a root of the type *Cā-* alternates with *Ca-* (Greek *phā-mi* 'I say', *pha-men* 'we say' vs. Greek *ei-mi* 'I (shall) go', *i-men* 'we (shall) go'). Through skilful use of Ablaut alternations and comparative evidence, Saussure shows that we have to reconstruct for Indo-European another *coefficient sonantique*, *A*, which was dropped after a preceding vowel lengthening it (and sometimes changing its quality), was lost before another vowel and in Greek, Italic and Germanic became [a] between consonants. In Sanskrit *A* was reduced to a sound which eventually emerged as [i]. Hence a root such as Indo-European **steA-* 'stand', appears in Sanskrit as *sthā-* and in both Greek and Italic as *stā-*, but the participle/verbal adjective is **stA-tós* which yields Greek *statós*, Latin *status*, Sanskrit *sthitá-*. On similar grounds, Saussure also identified another *coefficient sonantique*, *O*, which between consonants appeared as [o] in Greek and in Greek and Italic changed a preceding [e] or [o] into [ō]. The list of *coefficients sonantiques* now included *A* and *O* as well as [i, u, r, (l,) m, n]. The question of the phonetic value of *A* and *O* is still debated. Also, it is not clear whether Saussure thought of them as vowels (see Szemerényi, 1973) or resonants.

Some further developments should also be mentioned. First, Saussure could now explain Sanskrit alternations such as that of the infinitive *pavi-tum* 'to purify' vs. the verbal adjective *pū-ta-* as deriving from **peuA- > pavi-* vs. **puA- > pū-*, with the standard vocalic alternation between [e] and absence of [e]. He could go even further, assuming that the Sanskrit infinitive *pari-tum* 'to fill' derived from **perA-* and the verbal adjective *pūr-ta-* derived from **prA- > pṝ- > pūr*. In other words, *A* (and *O*) lengthened a preceding [e] and [o] but also a preceding vocalic [i, u, r, l, m, n] and a long resonant like **ṝ* yielded *ūr* in Sanskrit.

Secondly, some of the apparently different formations of Sanskrit verbal presents could be brought back to the same basic type. The Indian grammarians distinguished a class of presents of the *yunakti* 'he joins' type (class VII) from a class of the *punāti* 'he purifies' type (class IX). The roots they quoted for these verbs were *yug-* 'join' and *pū-* 'purify'. Saussure showed that the formations had identical origins. An original root **yeug-* / **yug-* forms the present from a stem * *yu-ne-g-* (-> *yunak-ti*) with a nasal infix, an original root **peuA-/ *puA-* also forms a present with a *-ne-* infix, *pu-ne-A-* (-> *punā-ti*). Everything becomes clear; the short [u] of *punāti* vs. the long [ū] of *pū-* (< **puA-*), the long *a* of *punāti* (< **eA*) vs. the short *a* in *yunakti.* From the point of view of present formation, *-A-* and *-g-* fulfil parallel functions and instead of two different types of Ablaut and two different verbal classes we are dealing with a much simplified morphology. It is worth pointing out that Saussure's reconstructions

were not based on any phonetic consideration and no attempt was made to define phonetically *A* and *O*.

Reception and impact of the *Mémoire*

The later history of Saussure's achievements is well known and has often been related. The conclusions had partial acceptance by the contemporaries who nevertheless thought that they were all too mathematical and too abstract to carry full conviction. There were some firm rejections, particularly by one of the leading neogrammarians, Hermann Osthoff, there was also here and there a conspiracy of silence and some tacit taking over of a number of conclusions sometimes without acknowledgement. The silence and the rejection have perhaps been exaggerated (see Redard, 1978a; Mayrhofer, 1981: 26 ff.; Gmür, 1986); however, the unpublished documents which became available over the years (letters, notes, etc.) made clear that Saussure felt that German scholarship had been hostile and his work had not been fully understood. The latter is indeed true. In 1898 Wilhelm Streitberg (1864–1925), a second-generation neogrammarian, wrote as much to Brugmann regretting that it had taken him so long to understand Saussure (Villani, 1990: 5). Of course there were flaws even in Saussure's argument and slowly these came to the fore. A list, and a correct list, is offered by Streitberg in the very sympathetic memoire of Saussure written after his death (Streitberg, 1915; cf. Szemerényi, 1973: 4f.), but solutions were available and were indeed found. The first real confirmation that Saussure was on the right track came in 1927, well after his death, when Jerzy Kuryłowicz recognised that the newly deciphered Hittite, the oldest attested IE language, had a consonantal phoneme (<h>) which was etymologically derived from Saussure's *A*. Conclusions reached largely on the basis of internal reconstruction were convalidated by newly found comparative data. At the same time a number of followers, Möller, Kuryłowicz, Benveniste and Cuny continued Saussure's work (Szemerényi, 1973; Mayrhofer, 1981). What is now called laryngeal theory has its foundations in the theories about vocalic alternations demonstrated in Saussure's *Mémoire*, but the theory's definitive form is not yet settled and it has not yet won total acceptance. Nevertheless, in the last twenty or thirty years few serious scholars have disputed its basic tenets. (On the reception of the *Mémoire* see Saussure, 1972; Szemerényi, 1973; Redard, 1978a; Mayrhofer, 1981; Gmür, 1986.)

Comparative method and internal reconstruction

The *Mémoire* is full of unbelievable riches – most of which, sometimes in an altered form, have become part of what we now find in our basic handbooks;

some are still to be rediscovered. Even now, or perhaps more now than before, the beauty of the way in which the argument develops is overpowering. There is a constant interplay between two different methods of linguistic comparison and reconstruction: on the one hand, the standard comparative method which was reaching at that stage its most advanced form and was based on the phonological comparison of semantically similar words in a number of related languages and the identification of regular sound correspondences; on the other hand, internal reconstruction, the method that did not really receive a name or was not formalised until after the Second World War (Morpurgo Davies, 1994). Apparent grammatical irregularities can be explained postulating earlier sound changes or the alteration of an earlier phonological system. Saussure as a schoolboy had naturally used that method when he had decided that the parallelism between Greek *lego-metha* and *lego-ntai*, on the one hand, and *tetag-metha* and *tetakh-atai*, on the other, spoke for a derivation of *-atai* from *-ntai* (see above). The identification of *A* and *Q* as *coefficient sonantiques* is based on the parallelism between formations which end in a resonant [i, u, r, m, n] and formations which end in A or O. The term 'internal reconstruction' is much later than Saussure but the method had been used before, even if sporadically; nowhere else, however, are the two methods so explicitly and so clearly linked and to such good effect.

Before and after the *Mémoire*

Apart from unpublished papers, Saussure had published four articles and two short notes before the *Mémoire* as well as Pictet's review; they were all strictly technical articles about very specific problems of Indo-European comparison and historical linguistics. One of these (Saussure [1877] 1922: 379ff.) gives us a preview of the *Mémoire* and comes close to one of the great discoveries, made at the same time by a number of scholars, the so-called *Palatalgesetz*, i.e. the observation that the alternation between <*k*> and <*c*> in Sanskrit words like *ka-* 'who', *ca* 'and' and *cid* 'what' proved that Sanskrit [a] reflected two different original phonemes, one of which was capable of palatalising a preceding [*k*] (Mayrhofer, 1983: 137–42). After the *Mémoire, S*aussure concentrated on his doctoral dissertation on the use of the genitive absolute in Sanskrit which he submitted in 1880 and published in 1881; again Meillet notices the contrast between a narrow exercise on a limited subject and the broad views of the *Mémoire*, but de Mauro (Saussure, 1972: 330f.) stresses the importance of the work on syntax and of the synchronic and contrastive approach. The brief interlude in Berlin had allowed Saussure to learn more Sanskrit and to have a brief meeting with Whitney (Joseph, 1988), but it is doubtful that it had much influence on him. After Leipzig, the publication of the *Mémoire* and the doctorate, Saussure moved to Paris (see Sanders, this volume) where his classes in Germanic, in the comparative grammar of Greek and Latin, and in

Indo-European linguistics in general had an immense influence (see Meillet's testimonial in Saussure, 1972: 334ff.). Even when he returned to Geneva in 1891 his teaching activity mostly concerned Sanskrit and other Indo-European languages. It is only in 1906 that he was also entrusted with teaching general linguistics and began his three courses in the subject. If we look at the work published after the *Mémoire* and the doctoral dissertation, we find a very large number of short notes in the *Mémoires de la Société de linguistique de Paris*, mostly dedicated to individual etymologies (see Bouquet, 2003: 506ff). There are a few longer articles either in the same periodical or in volumes in honour of scholars to whom in some way Saussure felt indebted. Between 1894 and 1896 three long papers, one dedicated to Leskien, are concerned with Lithuanian declensions and accentuation and establish the law on accent shift which goes under the name of *lex Saussure* (Collinge, 1985:149 ff.). Some, indeed most, of this work has again the same lucidity, learning and originality of the *Mémoire*, but there is not the breathless excitement of discovery which the twenty-year-old had managed to convey. In the last fifteen years of his life, just when he was giving the general courses which provided the material for the *Cours*, Saussure published only three papers (for the last three *Festschriften* mentioned above). (See Saussure, 1972; Streitberg, 1915; Meillet, 1938; Gmür, 1990 and Vallini, 1978.)

The historiographical problems

Let us now reformulate and sharpen the questions that we were asking. How different was Saussure's historical and comparative work from that of his contemporaries? Did he really reach all his conclusions on his own without being influenced by his Leipzig teachers? More specifically, should he count as one of the neogrammarians? What continuity, if any, is there between the comparative-historical work and Saussure's theoretical work, once we allow for the fact that this was not published by the author? Less important in my view is a much (perhaps too much) debated question. Why did someone who, like Saussure, had published two books by the time he was twenty-four 'dry up' so significantly at a later stage? The question will be returned to at the end, not in the hope to settle it but because it is relevant to another and more important historiographical question.

Saussure, his teachers and contemporaries

Modern discussion about the *Cours de linguistique générale* has often turned to the question of the sources of its main tenets: the concept of sign, the contrast between synchrony and diachrony, *l'arbitraire du signe*, etc. An analysis of the

comparative and historical work also raises the question of sources, though in a different context. Writing to Streitberg in 1903, Saussure ([1903] 1960) was eager to underline that most of the conclusions reached in the *Mémoire* were his own. In a letter to Streitberg of 28 November 1914 (Villani, 1990: 29f.), Karl Brugmann pointed out that to his knowledge Saussure had never openly acknowledged any dependence on his Leipzig teachers and noted that in the review by Havet, Saussure's teachers in Leipzig were not mentioned, as they would have been for any young German scholar. According to both Brugmann and Saussure [1903]1960: 22ff.), the latter had given up Bruckmann's classes in Leipzig because all too often he heard points which overlapped with what he wanted to say in his book and felt awkward in deciding what was his and what was Brugmann's.

However, when Saussure was making his point about the independence of his thought from the Leipzig scholars in general, and the *Junggrammatiker* in particular, he was in all instances speaking about some specific individual results (the role of *A*, the vocalic nasals, etc.) – he justifies his attitude saying that he did not want to be accused of plagiarism and relates an episode that shows that Brugmann had never seriously thought about the Ablaut alternation of the *-ā / ă* type, which was the linchpin of Saussure's own discoveries. For the rest, he is endlessly scrupulous in referring to German scholars; Villani (1990: 9) follows Vallini (1969) in counting in the *Mémoire* 67 references to Brugmann and 90 scholars quoted, out of whom 83 were German. This fact perhaps explains the misunderstanding. Brugmann was of course right in saying that Saussure had learned much from him and from the other Leipzig scholars; so much is more than acknowledged in the bibliographical references of the *Mémoire* and it emerges clearly from the contrast between the information (or lack of information) contained in the first papers published in the *Mémoires de la Société de linguistique* and the later ones. Yet whether Saussure had learned the new data and new techniques from written works or from word of mouth remains obscure. On the other hand, Saussure was obsessed by the idea of priority and by the fear of being accused of plagiarism, all the more so since he knew full well that most of his new views in the *Mémoire* were his own even when, as in the case of vocalic nasals, they had already been published by others. Brugmann in his turn was right in noting the difference between Saussure's silence and the standard system of acknowledgements to teachers and colleagues which appeared in all German dissertations. And indeed in a hierarchical set up such as that of German universities, this lack of conventional propriety must have looked arrogant and perhaps irritating. But the important point is that neither Saussure nor Brugmann are talking about theoretical or methodological divergences; Saussure and Osthoff violently disagreed about Ablaut, but as late as 1914 Brugmann clearly believed that in the great neogrammarians' controversy which saw Curtius and the older generation attacked by himself as

well as Leskien, Osthoff and others, Saussure was on their side. The question is whether in fact he was.

Saussure as a neogrammarian?

A few principles which formed the main tenets of the neogrammarians have been listed above, and the list may perhaps be repeated with some additions, albeit in telegraphic style: uniformitarianism, i.e. the assumption that the same causes determined language change at all stages; antiorganicism, i.e. rejection of the views held by August Schleicher (1821–68), and partially shared by Georg Curtius, according to which language was an independent organism which developed according to laws of its own independently of the speakers; priority of linguistic history over comparison; the need to test the historical method on attested rather than reconstructed languages; the regularity of sound change; the importance of analogy. Paradoxically the 'mechanical' sound laws, strongly proposed by the neogrammarians in their fight against their predecessors answered to the same need as was served by Schleicher's organicism. Both the sound laws and Schleicher's organicism were meant to account for those regular forms of linguistic change which happened without the speakers being aware of them. (On the neogrammarians see e.g. Jankowsky, 1972, Einhauser, 1989 and Graffi, 1988.)

As has been seen, there is no reason to suppose that Saussure disagreed with any of these views; indeed Saussure ([1903] 1960: 15) praises Leipzig as a major centre of Indo-European linguistics. Later on in the same text Saussure stated that he did not consider analogy as a German methodological novelty, since it was something which he had always known about. For him 'le fait étonnant' was the phonetic fact, i.e. the regularity principle. 'One must approach linguistics, without the shadow of an observation or a thought to put on the same footing a phenomenon such as phonetic laws – which cannot be observed by individual experience – and the analogical action which everyone has experienced since childhood on his own behalf. *Montre moutonnièreté des Allemands*' (1960: 24f.). In spite of the outburst this is enough to confirm that Saussure accepted both phonetic laws and analogy. It also shows, incidentally, that Saussure, largely self-taught as he was, at that stage had not grasped the importance of the fight for analogy, which was in essence a uniformitarian and anti-organicistic fight by those who had been brought up to believe that 'false analogy' did not apply to the earliest stages of language or, more correctly, of Indo-European, and that all language change was unconscious and predetermined. The conclusion must be that Saussure shared most of the neogrammarians' assumptions but presumably, as in everything else, he had reached most of them on his own. There is one difference, however, which must be stressed. The *Junggrammatiker* seemed convinced that their set of principles amounted to a

fully fledged linguistic theory, whereas Saussure did not delude himself that their set of principles provided anything even vaguely similar to a full theory of how language (*langage*) works.

Forms of continuity: Saussure as 'l'homme des fondements' and language as a system

We asked above whether there is a link between the historical comparative work of the *Mémoire* and related papers on the one hand and the theoretical work which is summarised in the *Cours* on the other. In other words, were there one or two Saussures?

Emile Benveniste, perhaps the only linguist who came nearer to Saussure in his ability to rethink everything afresh and to move between theory, history and reconstruction, called Saussure 'l'homme des fondements' who looked for the general characteristics underlying the diversity of empirical data (Benveniste, 1963: 8). It is indeed true that the *Mémoire* tackles the fundamental questions: what are the basic distinctive phonological elements? How do they function in the phonological and morphological system? Kuryłowicz (1978: 7f.), one of the greatest Indo-Europeanists of the following generation, saw in the *Mémoire* the first appearance of a new point of view, the hierarchy principle which eventually came to dominate modern structuralism; the elements of a language do not exist next to each other but thanks to each other. Watkins (1978: 60ff.) drew attention to the fact that Saussure in later years referred to his first book as to the *Système des voyelles*: there is little doubt that the historical comparative work by Saussure is dominated by the concepts of system, of distinctive characters, of contrast. This is indeed the *fondement* of which Benveniste speaks. It is of course also the leitmotiv of the *Cours* and of the theoretical work. Reichler-Béguelin (1990) has brilliantly highlighted the similarities between the glottological essay written by the fourteen-year-old and the *Mémoire*. In the first case, as she argues, Saussure aims at showing that the existing roots can all be linked to a much simpler underlying system; there is an apparent evolutionary assumption (the simple roots evolve into the attested ones), but in fact we are dealing with a sort of achronic classification where a strong level of abstraction (all labials treated as one sound, etc.) produces a 'satisfactory' account. For the *Mémoire* the position is different. In contrast with the standard view according to which the parent language had an [a] vowel which in the European languages split into two or three vowels, Saussure follows Brugmann and others in assuming that the two or three vowels had merged in Sanskrit. The result is a remarkable alteration of the morphology and morphophonology; if the theory of *coefficient sonantiques* is added, i.e. if we accept Saussure's conclusions, then the morphology and the morphophonology (the pattern of root alternations) become simple and crystal clear. The new version is both

historically valid, i.e. assumptions are made about the earlier existence of surface forms such as those postulated, and in a sense synchronically valid in that it can provide a set of synchronically underlying forms; it 'explains' or 'accounts for' the functioning of the system. It is clear what the import of this is for the general question of the two Saussures. The discovery of *fondements* turns out to be a discovery of underlying structures and underlying systems. This is the characteristic of the earlier and later papers and of the *Mémoire*. But this is also the method that we recognise in the theoretical work. (Countering the accusations of atomism directed against Saussure's conception of diachrony see Saussure, 1972 and Reichler-Béguelin, 1980.)

Linguistic description and terminology

There is more. One of the most famous statements left unpublished by Saussure is found in a letter to Meillet (Benveniste, 1964: 95), probably written in 1894 when he was working on Lithuanian accentuation, and lamenting the fact that his 'historical pleasure' is constantly interrupted by the inadequacy of current terminology and the pressing need to reform it: 'Sans cesse l'ineptie absolue de la terminologie courante, la nécessité de la reforme, et de montrer pour cela quelle espèce d'objet est la langue en général, vient gâter mon plaisir historique, quoique je n'aie pas de plus cher voeu que de n'avoir pas à m'occuper de la langue en général.' This need for definition, for a terminology which is actually consistent and explicit, is typical of Saussure's *modus operandi* at all stages. In the essay written when he was fourteen, he had introduced two new terms; the same need for a 'correct' terminology emerges in the *Mémoire* and in all the historical-comparative papers. It is of course characteristic of the *Cours* too.

Saussure and abstract analysis

The systemic nature of Saussure's historical work, its emphasis on structure, has often been stressed and naturally this has been linked to the explicit contrast between synchrony and diachrony and the assumption that any systemic account of language requires a synchronic study. However, all too often the concealed agenda behind such observations is the desire to underline the contrast between Saussure and his contemporaries. On the one hand are the atomistic neogrammarians or their predecessors, strictly concerned with petty details of developments studied in isolation, on the other Saussure, the man with a global vision who exercises it equally in his historical and his theoretical work. At least for the early period this scenario is due to a misunderstanding. The distinction between synchronic and diachronic is well known (e.g. in Paul's work). Nor was there anything 'atomistic' in works like those of Verner or Brugmann which aimed at reconstructing an earlier phonological system and the way in which

it operated. Similarly there is no form of atomism in theoretical accounts such as those by Hermann Paul, the author of the *Principien der Sprachgeschichte* (1880) which was considered the bible of the neogrammarians. On the contrary, the prevailing psychologism was in essence anti-atomistic. The real difference between Saussure and the neogrammarians is elsewhere. The neogrammarians were far more interested in questions of method and theory than their immediate predecessors; indeed they had noisily requested an explicit account of the principles which determined historical and comparative work. Their insistence on a strict adherence to the regularity principle was among other things a request for a consistent and explicit discovery procedure. However, they were far less aware than Saussure of how much they took for granted in linguistic analysis, and in most instances they were content with adopting the traditional analyses and descriptions without challenging them. They also differed from Saussure in their style of argumentation and in their attitude to abstraction. While in the *Mémoire* and elsewhere Saussure was prepared to produce an analysis of morphology and morphophonemics and then test it on the data – hence the mathematical and deductive style of his procedure – the neogrammarians much preferred an explicitly inductive approach; they started with long lists of data and tried to identify any patterns that emerged.[6] And while Saussure's analysis led, as we have seen, to the identification of underlying structures which in a sense provided that 'classification logique' of the linguistic facts which he was aiming at, the neogrammarians were not prepared to accept that level of abstraction either in linguistic description or in the study of linguistic development.

A final puzzle

The letter to Meillet quoted above reveals Saussure's dissatisfaction with the state of the subject; other remarks in the same letter and elsewhere reiterate the same sentiments. The dissatisfaction is both with the state of the subject and, one feels, with himself. He explains to Meillet that he will have to write, without enthusiasm or passion, a book where he will explain why there is not a single term used in linguistics which has any sense. Only after that will he be able to return to historical work. It is likely that we shall never know what exactly determined Saussure's 'thirty years of silence' (health problems may have played a part), but a further problem should be mentioned. To judge from the odd observations in letters or biographical accounts (such as the letter of 1903 meant for Streitberg), Saussure felt all his life that his work was not understood or not quoted or not appreciated. To be told by Hübschmann that Brugmann had discovered the vocalic nasals, when he knew that he had done so when still at school, clearly hurt even a quarter of a century after the event. To find that Gustav Mayer in his *Griechische Grammatik* (1880) used data and results published in the *Mémoire* without an explicit quotation was equally

a reason for severe disappointment (Saussure, [1903] 1960: 23). The question which comes to mind concerns the link between the findings of the *Mémoire* and of the other historical-comparative papers and Saussure's general scepticism about linguistic work. Put more bluntly, Saussure's disappointment in the reception of his work, his need to establish his priority in order to avoid the accusation of plagiarism, implies complete faith in the validity of that work. How is this to be reconciled with the assumption that nothing is known about the nature or essence of language? In the letter to Meillet he explained that the only thing he still found interesting was the picturesque and ethnographic side of language (Benveniste, 1964: 95). This remark has rightly been adduced to explain some of the etymological work (Vallini, 1978: 114f.). However, the subject matter of the *Mémoire* and of most of the other papers belongs to the structural and not to the picturesque side of language. Should we resort to the simple explanation that nobody likes being slighted or plagiarised and Saussure was no exception, even if he had stopped believing in his work? Is this not too facile an account? Let us not forget Saussure's wish, also mentioned in the letter to Meillet, to be able to return to his work. The conclusion must be that Saussure was convinced that what he had done was quite simply novel and 'right'. For the historian of linguistics interested in Saussure's historical work the problem is crucial. But there is also an odd twist in the inquiry. One of the manuscript notes by Saussure recently discovered (and undated) returns to the question of the beginnings of linguistics (Saussure, 2002: 129–31). The school founded by Bopp, we are told, was interested in *la langue* or *l'idiome*, i.e. the set of manifestations of language (*langage)* at a certain time in a certain people; it did not consider language (*langage*) as a phenomenon or the application of a mental faculty. It is now accused of having misunderstood the essence of the object which it pretended to study. But in fact, Saussure continues, this is to attribute arbitrarily to that school a mission which it had no intention of undertaking and which many of its followers would no doubt have rejected. 'In fact it is the object that has changed and without realising it a different discipline has taken the place of the previous one. In doing so it has sought to condemn its predecessor, without having necessarily guaranteed its own legitimacy' (Saussure, 2002: 131). This is an important point and it opens new forms of historiographical inquiry. However, we miss a vital link. How did Saussure envisage his own historical work? Did it belong to the discipline founded by Bopp or to the new discipline which had replaced it? If the former, the puzzle with which we started would be solved.