De Saussure's System of Linguistics

Rulon S. Wells

DE SAUSSURE'S SYSTEM OF LINGUISTICS

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1. Tho the *Cours de linguistique générale*[1] is justly credited with providing 'a theoretic foundation to the newer trend of linguistics study,'[2] it strikes the reader as very often obscure in intention, not seldom inconsistent with itself, and in the main too barren of detail to be satisfying.　In short, it needs exegesis. The present study takes a cue from de Saussure's treatment of language, by treating his thought as a synchronic self-contained system.[3]　It is our thesis that the solutions to most of the unclarities in the *Cours* can be resolved by careful internal collation of the *Cours* itself.　Often a problem presented by a certain statement is cleared up by one or more slightly different expressions of the same idea to be found elsewhere in the book.　Much of our work consists in bringing such scattered passages together.　Beyond this, analysis shows how the various doctrines that de Saussure maintains are related to fundamental principles.　In stating his ideas as sharply as possible, we bring to bear insights that have been gained since his day.　Occasionally our interpretation leads us to venture a guess about how de Saussure would have dealt with facts or viewpoints that do not come up in the *Cours*.

Naturally, many of the ambiguities and inadequacies of exposition in the *Cours* must be attributed to the circumstances under which the work was prepared.　The editors' task of integrating students' notes (not their own) on courses given in the three years 1906-7, 1908-9, and 1910-11 must have called for a good deal of adjustment in the wording and the manner of exposition.　However, the main theses are expressed over and over, giving confidence that they are amply attested in the notes.　Moreover, the editors occasionally indicate in footnotes points which they do not understand, or feel impelled to comment upon.　This suggests that most of what they wrote had a clear basis in the notes or in their memory of discussions with de Saussure.

After the difficulties due to de Saussure's or his editors' exposition have been

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[1] By Ferdinand de Saussure (1857-1913), edited posthumously by two disciples, Charles Bally and Albert Sechehaye, first edition 1916, second 1922.　Our page references are to the second edition.　A letter after a page number indicates the paragraph, the letter *a* being assigned to the beginning of the page even when the paragraph is continued from the preceding page.　— 　A study and research fellowship from the American Council of Learned Societies has greatly encouraged and aided our work.　We thank two eminent admirers of de Saussure, Professors Leonard Bloomfield and Roman Jakobson, for reading and commenting upon an earlier version of this article.

[2] L. Bloomfield, review of Sapir's *Language* in the *Classical Weekly* 15.142-3 (1922).

[3] A historical study of de Saussure's thought is in preparation.

resolved, there remain the ones inherent in the thought itself. Two evidently untenable notions we probe into at some length: the idea that the formal systematic properties of phonemes are independent of their specific quality, and the idea that a change suffered by a system (a particular language at a particular time) is never engendered by that system itself.

Our treatment falls into six sections, as follows: Phonetics, Phonemics, Historical Phonetics; Language as a Synchronic System; Langue and Parole; Linguistic Change; Critique; de Saussure as Methodologist.

PHONETICS, PHONEMICS, HISTORICAL PHONETICS

2. De Saussure distinguishes three different points of view from which speech may be studied. First, it may be studied as a set of physical-physiological events with correlated psychic events: phonation, sound-waves, audition. Second, it may be studied from the point of view of native speakers and hearers of the language to which it belongs. And third, one may study the sound-changes which a language undergoes in the course of time. Since 'bien loin que l'objet précède le point de vue, on dirait que c'est le point de vue qui crée l'objet' (23b), we may recognize three sciences, each of which studies speech in its own way: phonetics, phonemics (see §5), historical phonetics.

3. The phonational act (acte phonatoire 69a, c, 83b, 103c; cf. 65b) gives rise, in the hearer, to an acoustic image which is distinct from the physical sound (29a). Viewed as physical sounds, many words, phrases, and even whole sentences are continuous; but the acoustic images to which they give rise are not continuous but beaded, segmented, sequences of units (32b, 64a).

La délimitation des sons de la chaîne parlée ne peut donc reposer que sur l'impression acoustique; mais pour leur description, il en va autrement. Elle ne saurait être faite que sur le base de l'acte articulatoire; car les unités acoustiques prises dans leur propre chaîne sont inanalysables. Il faut recourir à la chaîne des mouvements de phonation; on remarque alors qu'au même son correspond le même acte: b (temps acoustique) = b' (temps articulatoire). Les premières unités qu'on obtient en découpant la chaîne parlée seront composées de b et b'; on les appelle *phonèmes*; le phonème est la somme des impressions acoustiques et des mouvements articulatoires, de l'unité entendue et de l'unité parlée, l'une conditionnant l'autre: ainsi c'est déjà une unité complexe, qui a un pied dans chaque chaîne (65b).

As for the length of these phonemes, 'la chaîne acoustique ne se divise pas en temps égaux, mais en temps homogènes, charactérisés par l'unité d'impression' (64a).

To paraphrase: phonetics (*phonologie*)[4] does not treat sounds in the raw, but as broken up into segments. It must consider acoustic images as well as phonation (63b), and the reason is that only the images can yield the segments. But

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[4] 'La physiologie des sons (all. *Laut-* ou *Sprachphysiologie*) est souvent appelée "phonétique" (all. *Phonetik*, angl. *phonetics*). Ce terme nous semble impropre; nous le remplaçons par celui de *phonologie*. Car *phonétique* a d'abord désigné et doit continuer à désigner l'étude des évolutions des sons . . .' (55–6). This argument has not prevailed; and standard English terminology will be best preserved by translating *phonologie* as *phonetics* and *phonétique* as *historical phonetics*.

(and de Saussure's doctrine presumably reflects the conspicuous failure on the part of phoneticians to produce a workable analysis of *sounds* as such) it must return to phonation for a means of distinguishing one sound from another. This procedure will work because 'un phonème est identifié quand on a déterminé l'acte phonatoire' (69c).

4. 'La phonologie [phonetics] est en dehors du temps [cf 135, 194b end, 202c–3c], puisque le mécanisme de l'articulation reste toujours semblable à lui-même (56a). This differentiates it from historical phonetics, which 'se meut dans le temps' (ibid). Moreover, 'il peut être intéressant de rechercher les causes de ces changements, et l'étude des sons nous y aidera; mais cela n'est pas essentiel: pour la science de la langue, il suffira toujours de constater les trans-formations de sons et de calculer leurs effets' (37a).

5. The third science that deals with sounds is linguistics in the narrow sense, that is, linguistics of langue.[5] It is distinct from phonetics. 'Quand on a expliqué tous les mouvements de l'appareil vocal nécessaires pour produire chaque impression acoustique, on n'a éclairé en rien le problème de la langue. Celle-ci est un système basé sur l'opposition psychique de ces impressions acoustiques' (56b).

De Saussure nowhere differentiates a specific sub-branch of linguistics dealing with phonemes, as is usual nowadays. However, he shows (see §§20, 23, 27) that langue is made up of phonemes and morphemes, both of which form systems. Hence, it is easy to abstract the materials in the *Cours* which fall under phone-mics, and it is convenient to do so for the purposes of exposition and comparison. But it is necessary to warn the reader that no such concept and no such term are to be found in de Saussure.

6. The trichotomy of speech-sciences into phonetics, phonemics, and historical phonetics fits neatly into the structure of de Saussure's classification. Phonetics has to do with parole (56b), phonemics with langue, and historical phonetics with the diachronic aspect. The how and why will be shown in §§23, 36, 37. Let it suffice for now to remark that according to de Saussure, phonemics is irrelevant to historical studies.

7. Before comparing de Saussure's conception of phonemes with that of the present day, we must eliminate from consideration the superficially similar notion of phonetic species (espèce phonologique).

The Appendix to the Introduction (63–95), Principes de phonologie, is an excursus dealing, not with langue like the rest of the book, but with phonetics. It incorporates material not only from the lectures of 1906–7 and 1910–11, but also from three lectures of 1897 on the theory of the syllable (63a). Regardless of what de Saussure may have said about the independence of linguistics from phonetics, he devised an original phonetic theory with the aim of making intelligible the Indo-European semivowels (79b); the excursus expounds this theory of what constitutes a syllabic, the core of a syllable.

[5] We adopt *langue* and *parole* as technical terms in English.

The fundamental classification of speech-sounds is by their degree of aperture (70d); this yields seven classes: stops; spirants; nasals; liquids; i, u, $ü$ (the semi-vowels 75b); e, o, $ö$; a. (Only the main sounds are reckoned with, 71c, 73fn., 80d, 85b.) Sounds of all classes except the a-class (80a, 81b) exist in pairs: an implosive or *fermant* (symbolized $p^>$, $i^>$, etc.) and an explosive or *ouvrant* variety ($p^<$, $i^<$, etc.) (80b, 81c, 93a). A syllabic (*point vocalique*) is now very simply defined as an implosion not immediately preceded by another implosion (87c; cf the ed. note of 94b); when a second implosion follows immediately without interruption, the two implosives together form a diphthong (92b). It follows that every sound except a is capable of functioning either as syllabic or as non-syllabic; in practice, the ambivalence is mainly limited to nasals, liquids and semivowels (88a).

8. Now when we consider any minimal segment of speech, e.g. t, 'Le fragment irréductible t, pris à part, peut-être considéré *in abstracto*, en dehors du temps. On peut parler de t en général, comme de l'espèce T (nous désignerons les espèces par des majuscules), de i comme de l'espèce I, en ne s'attachant qu'au caractère distinctif, sans se préoccuper de tout ce qui dépend de la succession dans le temps' (66a). This sounds as if species were phonemes, whose allophones we are being invited to neglect. The impression seems to be supported by the statement: on parle de P [the species of p-sounds] comme on parlerait d'une espèce zoologique; il y a des exemplaires mâles et femelles, mais pas d'exemplaire idéal de l'espèce' (82b). But what can we make of it, then, when he (ibid.) calls species abstractions? We shall see (§56) how strongly he insists that phonemes are not abstract but concrete.

9. The answer is that 'phonetic species' is primarily a phonetic, not a phonemic notion. For instance, i and y are of the same phonetic species (presumably regardless of the language where they occur), and so are u and w (87d-8a, 88d-9, 92a, 93). The whole point of de Saussure's theory of the syllable is that one cannot tell just from knowing the phonetic species of a sound whether it will be syllabic or not (89c). Another matter on which the theory throws light is length by position: only an implosive consonant, not an explosive one, can make length by position (91a, b). So for phonetic purposes it is vital to distinguish implosive and explosive; and hence 'on peut dire que P n'était rien sinon une unité abstraite réunissant les caractères communs de $p^>$ et de $p^<$, qui seuls se rencontrent dans la réalité (82b). The great mistake of phonetics was to consider only these abstractions (82c), that is, not to consider separately implosive allophones and explosive allophones. Otherwise put, its mistake was to neglect what Sweet calls synthesis, the fact 'qu'il y a dans la langue non seulement des sons, mais des étendues de sons parlés' (77c): Therefor, 'à côté de la phonologie des espèces, il y a donc place pour une science qui prend pour point de départ les groupes binaires et les consécutions de phonèmes, et c'est tout autre chose' (78b; cf 79). We hereinafter call these two studies analytic and synthetic phonetics respectively.

10. Several unclarities remain. If phonetic species are purely phonetic, what does de Saussure mean by their 'caractère distinctif'? Actually, de Saussure's

term refers only to the kind of units that phoneticians have hitherto talked about. Now phoneticians do not distinguish sounds to the limit of discriminability; they deal with types of sounds that they call 'the s-sound', 'the front unrounded a-sound,' etc. Each type includes a range of sounds, whose limits are left vague. In practice the limits are often decided by the phonemics of the languages best known to the phoneticians, particularly their native tongues. This practice accounts for many a resemblance between phonetic species and phonemes, in respect of their range of membership. De Saussure does not say this, but we, having hindsight, can see that 'phonetic species' was a mixture of phonetics and phonemics; and de Saussure does say in effect that in limiting their attention to phonetic species, phoneticians do a half-way job. Qua phonetician, de Saussure has no interest in making precise the notion of species, but only in distinguishing between implosives and explosives. And hence, pursuant to his policy of simplification (see references in §7), he does not raise such questions as 'In a language where i and y contrast and so are phonemically distinct, do they belong to the same species?' and, conversely, 'In a language where a stop and a spirant or a voiced and a voiceless stop belong to the same phoneme, do they belong to the same species?' The implication (see 71b, 84d; 87c is carelessly worded) is that one species falls wholly within one degree of aperture. But the fact that languages differ markedly in the phonetic varieties of sounds that they unite under one phoneme is not brought out by de Saussure. Occasional individual examples (e.g. 72b) may illustrate it, but the reader of the *Cours* would not emerge with an appreciation of it as a sweeping, general truth. Pointing it out was Franz Boas's contribution; de Saussure approached phonemics by a different route, namely by drawing the parallel between morphemic and phonemic systems.

11. De Saussure does speak (68–9) of the distinctive character of species: 'énumérer ces facteurs de production du son, ce n'est pas encore déterminer les éléments différentiels des phonèmes. Pour classer ces derniers, il importe bien moins de savoir en quoi ils consistent que ce qui les distingue les uns des autres.' But the context shows that the viewpoint is not specifically phonemic; he means merely that 'par exemple l'expiration, élément positif, mais qui intervient dans toute acte phonatoire, n'a pas de valeur différentiatrice; tandis que l'absence de résonance nasale, facteur négatif, servira, aussi bien que sa présence, à caractériser des phonèmes' (ibid.). It would do so in any language. The English a is as much characterized by absence of nasalization as the French a, altho in French but not in English there is an opposing ã. French š, ž, ɲ are phonetically differentiated from the other French sounds not merely by being 'back' (which is their phonemic position), but by being palatal. At least there is no denial in de Saussure, explicit or implicit, of the above interpretation; and it is sounder method to lean over backward than to read too much into him.

Outside of the Appendix, there is just one other passage where de Saussure speaks of species; this is apropos of sound-changes: 'Les exemples précédents montrent déjà que les phénomènes phonétiques, loin d'être toujours absolus,

sont le plus souvent liés à des conditions déterminées: autrement dit, ce n'est pas l'espèce phonologique qui se transforme, mais le phonème tel qu'il se présente dans certaines conditions d'entourage, d'accentuation, etc.' (199b). Not analytic but only synthetic phonetics (see §9 end) can help historical phonetics.

12. It has been necessary to devote a very elaborate discussion to de Saussure's notion of phonetic species, in order to disentangle it from his genuine contribution to phonemics. *Phonème*, in the passages where we have encountered it so far, has meant simply an acoustically minimal and homogeneous segment of speech. Now de Saussure never lays down the necessary and sufficient conditions under which two sounds are the same phoneme; therefor we cannot ascertain in what degree his sense of phoneme is similar to ours, except by squeezing what information we can from his few examples.

In the first place, the number of phonemes, unlike the number of sounds, is sharply definite (32b, 164c). In the second place, we are invited (83b, 84c) to disregard, even in phonetics, 'furtive' transitional sounds which are not perceivable by the ear [of native speakers? of trained phoneticians?]. In the third place, the existence of voiceless *m* and *l* is noted in French (72e, 74 D 1), 'mais les sujets parlants n'y voient pas un élément différentiel'—differential, presumably, from the voiced varieties. In other words, we are told to consider voiceless *m*, *l* as belonging in French to the *m* and *l* phonemes respectively. In the fourth place, the existence of free and individual variations is noted, apropos of French '*r* grasseyé' and '*r* roulé' (164d-5a). In the fifth place, speaking about synthetic phonetics (see §9 end), de Saussure says (78-9): 'Dès qu'il s'agit de prononcer deux sons combinés, . . . on est obligé de tenir compte de la discordance possible entre l'effet cherché et l'effet produit; il n'est pas toujours en notre pouvoir de prononcer ce que nous avons voulu. La liberté de lier des espèces phonologiques est limitée par la possibilité de lier les mouvements articulatoires.'

All these stray hints do not tell us the necessary and sufficient conditions for two distinguishable sounds to be assigned to the same phoneme. The concept of complementary distribution is nowhere stated, and only remotely implied. The drift of de Saussure's remarks is that two sounds (of the same dialect, let us add) belong to one phoneme if they do not convey to native hearers distinct acoustic impressions. But this means that an implosive and its corresponding explosive, being acoustically different (65 fn, 79c-80), are different phonemes, a conclusion proclaimed by de Saussure (81c). But perhaps we ought to regard the following amazing statement as a lapse: When the early Greeks distinguished between *kappa* and *koppa*, 'Il s'agissait de noter deux nuances réelles de la prononciation, le *k* étant tantôt palatal, tantôt vélaire; *d'ailleurs le* koppa *a disparu dans la suite*' (65 fn.; italics ours).

13. If de Saussure has not told us definitely whether and when two segments belong to one phoneme, at least he plainly answers the converse question: one segment can never belong to two phonemes at once. Thus the accent of a syllabic can not be considered a separate phoneme. His stated reason is that 'la syllabe [rather *le point vocalique*, since a syllable may be more than one segment, 65a, 66a] et son accent ne constituent qu'un acte phonatoire; il n'y a pas dualité

à l'intérieur de cet acte, mais seulement des oppositions diverses avec ce qui est à côté' (103c). It is surprising to find unity ascribed here to the phonational act rather than to the acoustic image (65b, 'l'unité parlée,' is not to be taken seriously, since de Saussure has told us that la chaîne parlée is broken up into units only by its correspondence with the acoustic image); but the import is the same.

14. The upshot of all the previous discussion is that a number of passages which might seem, to a hindsighted reader, adumbrations of phonemics cannot be so regarded after careful study. Yet de Saussure does make a major contribution to phonemics, greater than that of any of his predecessors. For his whole system is the contribution. In this system, phonemics occupies a clear place; it belongs to the system only because of its analogies with grammar. The discussion of phonemics is generally a simple transfer, mutatis mutandis, of principles of grammar proper, that is, of the relations between morphemes, and this schematizing and abstract theory, rather than any specific and particular analysis, is de Saussure's contribution to phonemics. We are thus led to an abrégé of his entire system.

LANGUAGE AS SYNCHRONIC SYSTEM

15. Speech (la parole) is made up (146c; cf. 167a) of two linear sequences, each of which is articulated (26b, 156c), that is discrete. The members of the one sequence are *tranches de sonorité* (146a, 150b) which are in turn sequences of one or more phonemes (180b); and (103, 170c) two phonemes cannot occur at once (cf. §13). Now phonemes were defined as sums of acoustic images and articulatory movements; but in the synchronic study of langue (see §§33, 37), the acoustic image alone is relevant (98c). So much so that in one place de Saussure proposes, on etymological grounds, to discard the term 'phoneme.' 'C'est parce que les mots de la langue sont pour nous des images acoustiques qu'il faut éviter de parler des "phonèmes" dont ils sont composés. Ce terme, impliquant une idée d'action vocale, ne peut convenir qu'au mot parlé, à la réalisation de l'image intérieure dans le discours. En parlant des *sons* et des *syllabes* d'un mot, on évite ce malentendu, pourvu qu'on se souvienne qu'il s'agit de l'image acoustique' (98d). In practice he retains the term; but we must remember that in the passages quoted from now on, it has a more limited sense; the phoneme no longer 'has a foot in each chain' (cf §3).

16. The other sequence composing speech is a sequence of meanings. A meaning is not a physical thing but a concept (98c). The boundaries of a *tranche de sonorité* are not marked phonemically, but only by the fact that just this much of the stream of speech is correlated with a certain meaning and the next *tranche* is correlated with another meaning (145d-6a; cf. 135a).

A *tranche de sonorité* consisting of one (180b) or more phonemes which is associated with a concept de Saussure calls a *signifiant*; the concept with which it is correlated, a *signifié*; and 'nous appelons *signe* la combinaison du concept et de l'image acoustique', (99c), 'le total résultant de l'association d'un signifiant à un signifié' (100c; cf. 32a, 99d 144c-5). However, de Saussure does not always

adhere strictly to this definition.   Now and then (e.g. 159b) he applies the term sign to 'le rapport qui relie ses deux éléments'; more often (e.g. 26b, 33c, 109d twice; 208c; also 98d, 99c, 160a, 162b, where *mots*, which are elsewhere called signs, are treated as signifiants) he lapses into 'l'usage courant' according to which 'ce terme désigne généralement l'image acoustique seule' (99c).   But a definition that conforms better to de Saussure's regular usage in practice is that a sign is neither a relation nor a combination of signifiant and of signifié, but the signifiant itself qua signifiant.   In adding 'qua signifiant' we are taking note of the caution that 'si *arbor* est appelé signe, ce n'est qu'en tant qu'il porte le concept "arbre"' (99c), which means two facts: 1) every sign is a *tranche de sonorité* but not vice versa (135, 146-7); 2) if one *tranche de sonorité* is associated with two distinct signifiés, it constitutes two distinct, tho homonymous signs (147a, 255c; cf. 150b-1).   Needless to say, the converse is also true: if one signifié is expressed by two (therefore synonymous) signifiants, these signifiants are still different signs (147c-8); this applies even to what would nowadays be regarded as morpheme alternants.   See also §23.   The signifié is also, for its part, sometimes called '*la signification*' (158e, 159c, 160a, 162b).   Our proposed emendation harmonizes with the definition (146a) of a linguistic unit (which is a linguistic entity 145c, this in turn being, 144a, a sign): 'une tranche de sonorité qui est, à l'exclusion de ce qui précède et de ce qui suit dans la chaîne parlée, le signifiant d'un certain concept' (italicized in the text).

17. Signs are the primary objects of linguistic study.   Words, word-groups, and sentences are all signs—signifiants linked with signifiés (177c); but they are, in general, further analyzable into component signs.   Those that are simple (not further analyzable) are the units par excellence of linguistics (145 ff).

The term 'units' (*unités*) is de Saussure's own; it is obvious from their definition that the simple units are essentially the same as the morphemes of Baudouin de Courtenay and of modern linguistics, except that what we today regard as morpheme alternants, de Saussure subsumes under his broader concept of alternance (cf. §§22, 45).   The term *morphème* was current in de Saussure's day, but with a specialized significance: the 'formative' elements of a word (affixes, endings, etc.) as opposed to the root.   For clarity's sake, let us define a simple unit (= simple sign) more rigorously than he did but probably in accord with his intentions, as a sign meeting the following conditions: 1) it is an uninterrupted linear sequence of phonemes; 2) it has a meaning; 3) it is not divisible into two sequences meeting conditions 1) and 2) and such that its meaning is derived from their meanings.   Thus there are two signs *haiə* in Southern British English: one, spelled *higher*, is composed of *hai* and *-ə*; the other, spelled *hire*, cannot be divided into parts which meet the required conditions and it is therefor a simple sign. A compound sign, i.e. an uninterrupted sequence of morphemes (no two of which occur simultaneously) is called a syntagm (170c).

18. De Saussure ascribes (100b, 103b) to linguistic signs two fundamental properties: they are arbitrary and they are arranged in a line.   But he neglects to mention in this place another essential trait which figures far more prominently in his theory than linearity, to wit that linguistic signs are systematic.   The

characterization of langue as a deposit of signs 'passivement enregistrés' (see § 31) does not mean that these signs are disordered, and simply a nomenclature (34c, 97a, 158d; cf. 162b); on the contrary, they form a very tightly knit system (26b, 29g, 32a, 43b, 107c, 124c, 149d, 154a, 157e). 'Arbitrary' and 'systematic' are the two fundamental properties of signs. A further discussion of the arbitrariness of the sign will be deferred to §§28, 44; it will suffice here to say that signs are arbitrary, according to de Saussure, in the sense that they are unmotivated (101c, 102b, 180-4): there is no natural, inherent connection between a signifiant and its signifié; any signifié could be expressed by any signifiant. This is proved a posteriori by the existence of different languages and by the fact that languages change. The same concept is equally well expressed by *boeuf* (which in turn came from a former *bov-em*) and by *Ochs* (100). The element of onomatopy in language is too slight to invalidate the general principle (101-2). Linguistic signs are not aptly called symbols, since 'symbol' ordinarily connotes a more or less natural non-arbitrary sign (101b).

19. Simple signs (e.g. Fr. *neuf, dix, vingt*) are wholly arbitrary (unmotivated), but syntagms (e.g. *dix-neuf*) are relatively motivated (180-4). Their motivation consists in the fact that each is related syntagmatically to its components and associatively to the other syntagms having the same pattern (182b). But this is a poor explanation of what de Saussure is driving at, since simple signs also stand both in syntagmatic and in associative relations. A better statement, we suggest, would be as follows. Let us call a class of similar syntagms a *pattern*. Given a syntagm S_1 consisting of morphemes $M_1, M_2 \ldots M_n$, then any syntagm belongs to the same pattern as S_1 if its first morpheme belongs to the same morpheme-class as M_1, its second to the same class as M_2, and so on to M_n. Now patterns have meanings, and the meaning of a syntagm is a function of the meanings of the morphemes contained in it and of the pattern to which it belongs. From a smaller number of morphemes and a small number of patterns a very large number of sentences can be constructed; this is how we can understand sentences that we have never heard before. (Cf. Bertrand Russell *An Inquiry into Meaning and Truth* 1940, pp. 11a, 34a, 238b, 306f, 386c-7.) French *deux-cents* and *cent-deux* contain the same morphemes, but the pattern-meanings are different: since *deux-cents* means 'two hundred,' the meaning of the pattern is 'multiplied by,' and since *cent-deux* means 'one hundred and two,' the meaning of its pattern is 'added to.' The meaning of a pattern is not determined simply by the order of the morphemes, because one pattern (as defined above) may have very different meanings—e.g. *old men and women* means either 'old men and old women' or 'women and old men.' It is important to realize that the meaning of a pattern is as arbitrary, as unmotivated as the meaning of a morpheme; the meaning of a syntagm on the other hand is motivated in that it is a function of the meanings of the morphemes and the patterns entering into it. Moreover, not every mathematically possible combination of morphemes occurs; there is the syntagm *désireux* but no *eux-désir* (190c). For these two reasons, altho 'une unité telle que *désireux* se décompose en deux sous-unités (*désir-eux*), ... ce ne sont pas deux parties indépendentes ajoutées simplement l'une à l'autre

(*désir* + *eux*).   C'est un produit, une combinaison de deux éléments solidaires, qui n'ont de valeur que par leur action réciproque dans une unité supérieure (*désir* × *eux*)' (176c; cf 182a).

20. As we have shown (§18), a fundamental property of linguistic signs is that they are systematic.   Now, de Saussure does not hold that every linguistic fact fits into a system.   He holds that, as we narrow our attention from language as a whole (langage) to that part of it which is a socially acquired and passive repository in the minds of native speakers (langue), we find that langue, thus defined, is a system.   What de Saussure calls parole embraces the non-systematic elements of language.   Precisely what is the difference between langue and parole, and why langue should engage the primary attention of the linguist, are points dealt with in §§30–2, 36, 37, 56.

De Saussure says, 'En déterminant . . . les éléments qu'elle manie, notre science remplirait sa tâche tout entière' (154c).   By continued and very clear implication, the elements of langue are of two kinds: signs, divided into morphemes and syntagms, and tranches de sonorité—phonemes and sequences of phonemes.   In order to understand de Saussure's views about the properties and relations of phonemes, it is well to examine first his notions on the relations of signs.

21. In linguistics, 'comme en économie politique, on est en face de la notion de *valeur*; dans les deux sciences, il s'agit d'un *systéme d'équivalences entre des choses d'ordres différents:* dans l'une un travail et un salaire, dans l'autre un signifié et un signifiant' (115a; cf 116b, 160a, and 164b).   The linguistic analogue of economic value consists (158–60) in the relations of a sign (1) to its signifié, and (2) to other signs.   (160a weighed against 159b and the diagram of 159c proves again the conclusion of §16 that in practice *signe* means for de Saussure 'signifiant qua signifiant.')   Since value includes relations to other signs, it can change without either the sign itself changing or its relation to its signifié (166b, 179d) and different languages can have signs that have the same signifié but different values (160b-c).

Relations of a sign to other signs are again of two types (170–5): associative and syntagmatic.   The relations of a sign to signs that may precede, follow or include it, and also to those included in it if it is a syntagm, are its syntagmatic relations.   All these result from the fact that the signs constituting an utterance are arranged in a line; and it may be that de Saussure's insistence upon the linearity both of phonemes and of signs was for the sake of preserving the picture of language as articulated (§15).   Of an entirely different type are the associative relations; a sign can recall other signs which are grammatically like it, or semantically affiliated with it, or even connected by nothing more than similarity of sound (e.g. *enseignement, justement*).   'Le rapport syntagmatique est *in praesentia*: il repose sur deux ou plusieurs termes également présents dans une série effective.   Au contraire le rapport associatif unit des termes *in absentia* dans une série mnémonique virtuelle' (171).   The two types of relation support each other (177–80); de Saussure's meaning, restated in modern terms, is that each syntagm (e.g. French *défaire*, Latin *quadruplex*) is capable of associatively re-

calling all the other syntagms that have the same pattern (e.g. Fr. *décoller, déplacer.* . . . ; *refaire, contrefaire*), and that each morpheme is associatively connected with all the other signs which may replace it to form syntagms having the same pattern.

22. The want of detail in de Saussure's classification is deliberate; it is scarcely necessary to point out that a sign stands in much more intimate relations with some signs than with others.   For example, there is the special kind of associative relation called by de Saussure (as also in his *Mémoire* of 1878, and by Baudouin de Courtenay as a borrowing therefrom) *alternance* (215-20; cf §45).   Again (174b-5), a sign stands in associative relations sometimes with a definite, sometimes with an indefinite number of other signs.   But quite apart from this lack of detail, it would seem that there is no room in de Saussure's scheme for frequency relations, much emphasized nowadays.   Perhaps he would have held that relative frequency pertains to parole, not to langue.   But the bearing of frequency on linguistic change (§50) seems to oppose such an explanation.

23. The crux of de Saussure's theory, for the statement of which all the preceding exposition has been preparatory, is the role of relations in a system: Signs are constituted partly, and phonemes wholly, by their relations, that is by belonging to a system.   (But cf. §53.)   For them, to be is to be related.

A langue is a system of signs.   Signs, therefor, are its elements.   And yet, in some sense phonemes and their sequences are also elements (cf §20, 27).   How so? 'Une suite de sons,' we are told in 144c, n'est linguistique que si elle est le support d'une idée; prise en elle-même, elle n'est plus que la matière d'une étude physiologique.'   Ambiguous passage; for it might mean that a phonetic sequence is the object of linguistics only if it is a signifiant; or it might mean that only psychic sounds (phonemes) and their sequences (including signifiants) are linguistic because only they are supports of ideas: signifiants directly, and phonemes indirectly in that signifiants are built out of them.   The former interpretation seems to be borne out by the context; yet cf 180b: 'Un phonème joue par lui-même un rôle dans le système d'un état de langue.'

24. The important concept of opposition is treated by de Saussure in several passages:

   (i) [le] signifiant linguistique . . . n'est aucunement phonique, il est incorporel, constitué, non par sa substance matérielle, mais uniquement par les différences qui séparent son image acoustique de toutes les autres (164b; cf. 163a-b).
   (ii) Ce principe est si essentiel qu'il s'applique à tous les éléments matériels de la langue, y compris les phonèmes . . . .   Ce qui les caractérise, ce n'est pas, comme on pourrait le croire, leur qualité propre et positive, mais simplement le fait qu'ils ne se confondent pas entre eux.   Les phonèmes sont avant tout des entités oppositives, relatives et négatives (164c).

   (iii) The same is true of signifiés considered in themselves: concepts 'sont purement différentiels, définis non pas positivement par leur contenu, mais négativement par leurs rapports avec les autres termes du système.   Leur plus exacte caractéristique est d'être ce que les autres ne sont pas' (162a).   Trubetzkoy, La phonologie actuelle, *Jour. de Psych.* 1933. 233 fn. 1, quotes this passage

as tho it applies to phonemes, but since de Saussure's view of signifiants and signifiés was the same in this respect, no misrepresentation results.

(iv) Tout ce qui précède revient à dire que *dans la langue il n'y a que des différences . . . sans termes positifs*' (166b).

(v) But this is true only of signifiés and signifiants considered apart from each other; 'bien que le signifié et le signifiant soient, chacun pris à part, purement différentiels et négatifs, leur combinaison est un fait positif; c'est même la seule espèce de faits que comporte la langue, puisque le propre de l'institution linguistique est justement de maintenir le parallélisme entre ces deux ordres de différences' (166–7; cf. 146c, cited in §15).

(vi) In short, 'Dès que l'on compare entre eux les signes—termes positifs—on ne peut plus parler de différence; l'expression serait impropre . . . ; deux signes . . . ne sont pas différents, ils sont seulement distincts.   Entre eux il n'y a qu'*opposition*' (167c).

25. Let us try to find out exactly what de Saussure means by opposition. 'En grec *éphēn* est un imparfait et *éstēn* un aoriste, bien qu'ils soient formés de façon identique; c'est que le premier appartient au système de l'indicatif présent *phēmi* 'je dis,' tandis qu'il n'y a point de présent *stēmi; or c'est justement le rapport *phēmi-éphēn* qui correspond au rapport entre le présent et l'imparfait (cf. *deíknūmi-edeíknūn*), etc.   Ces signes agissent donc, non par leur valeur intrinsèque, mais par leur position relative' (163–4).   To quote an example from Bally, *Ferdinand de Saussure et l'état actuel des études linguistiques* (Lecture delivered 27 October 1913), p. 14: 'Dans *chevaux* la finale -ô . . . a la valeur d'un pluriel parce que notre esprit s'oppose au signe -al du singulier *cheval*, tandis que dans *tuyaux* [phonemically the same as the singular *tuyau*] le *même* son -ô est dépourvu de valeur, parce que notre esprit ne l'oppose à rien.'   Similarly, in the *Cours*, 'Le fait de synchronie est toujours significatif; il fait toujours appel à deux termes simultanés; ce n'est pas *Gäste* qui exprime le pluriel, mais l'opposition *Gast: Gäste*' (122b).   And so, since 'la valeur de l'un [terme] ne résulte que de la présence simultanée des autres' (159c),

ce qu'on appelle communément un "fait de grammaire" répond en dernière analyse à la définition de l'unité, car il exprime toujours une opposition de termes; seulement cette opposition se trouve être particulièrement significative, par exemple la formation du pluriel allemand du type *Nacht: Nächte*. Chacun des termes mis en présence dans le fait grammatical (le singulier sans umlaut et sans e final, opposé au pluriel avec umlaut et -e) est constitué lui-même par tout un jeu d'oppositions au sein du système; pris isolément, ni *Nacht* ni *Nächte*, ne sont rien . . . Cela est si vrai qu'on pourrait fort bien aborder le problème des unités en commençant par les faits de grammaire. Posant une opposition telle que *Nacht: Nächte*, on se demanderait quelles sont les unités mises en jeu dans cette opposition (168b).

The oppositions of a sign are its relations, syntagmatic and associative, with other signs (180b, apropos of phonemes), and are therefor part of its value.

De Saussure goes so far as to say (vii) '*les caractères de l'unité se confondent avec l'unité elle-même*. Dans la langue, comme dans tout système sémiologique, ce

qui distingue un signe, voilà tout ce qui le constitue.   C'est la différence qui fait le caractère, comme elle fait la valeur et l'unité' (168a).

26. We have now come to the genuine crux of de Saussure's theory.

Passage i tells us that signifiants are characterized by their differences.   Now what is the difference between, say, English *hit* and *hits, hid, hot, bit*, etc?   That they are composed of different phonemes, no doubt.   But ii tells us that phonemes are characterized—not by their differences—but by the fact that they are different, 'le fait qu'ils ne se confondent pas entre eux.'   If phonemes are characterized only by being different, it does not matter *how* they differ; pushed to its extreme this means that only the number of distinct phonemes matters.   If any or all of the elements should be respectively replaced by materially different ones, provided that the same number be preserved, the system would be the same (43b, 153d-4).   There could not be two distinct systems of phonemes whose number of phonemes was the same, for if so they could differ only in some property or relation of the phonemes other than that of being different, which violates the hypothesis.   On the other hand if the phonemes are characterized by their differences, then they are like signifiants as described in passage i. It is yet a third thing to say as de Saussure says of signs (vii) that they are characterized by those of their properties that are distinct, i.e. not common to all the signs, phonemes, or whatever one makes the statement about.   A distinctive feature or property, a difference or distinction, and the property of being different or distinct are all three entirely distinct properties, and it is far from hypersubtle to say this.   It is not clear, even from the larger context of the whole *Cours*, whether ii is meant simply as a restatement of i (a rather careless one, if so), or whether it is intended to say something different about phonemes than has been said about signifiants.   In 163b, we read (viii) that 'puisqu'il n'y a point d'image vocale qui réponde plus qu'une autre à ce qu'elle est chargée de dire, il est évident, même *a priori*, que jamais un fragment de langue ne pourra être fondé, en dernière analyse, sur autre chose que sur sa non-coïncidence avec le reste.   *Arbitraire* et *différentiel* sont deux qualités corrélatives.'   This lends color to the view that ii is meant to apply to signifiants as well as to phonemes, and that i is simply a preliminary version of it.   The next paragraph says: 'la conscience ... n'aperçoit perpétuellement que la différence *a/b*' (163c); but the following example and comment show that 'la différence *a/b*' means 'the fact that *a* differs from *b*.'   The total impression conveyed by all the statements is that de Saussure means to say that phonemes, signifiants and signifiés are all alike in being characterized not by their differential properties—nor by their differences—, but by their being different; but that to be different is only part of the characterization of signs.   This is what he means in saying that signs are distinct, not merely different.

27. De Saussure does not consistently maintain the terminological separation between difference and distinction, nor his restriction of opposition to signs (to the exclusion of phonemes and signifiants); phonemes as well as signs enter into oppositions, and of the same two types:

Un phonème joue par lui-même un rôle dans le système d'un état de langue. Si par exemple en grec *m, p, t*, etc., ne peuvent jamais figurer à la fin d'un mot, cela revient à dire que leur présence ou leur absence à telle place compte dans la structure du mot et dans celle de la phrase. [For other anticipations of Trubetzkoy's concept of Grenzsignale, cf. 256c, 316b.] Or dans tous les cas de ce genre, le son isolé, comme toutes les autres unités, sera choisi à la suite d'une opposition mentale double: ainsi dans la groupe imaginaire *anma*, le son *m* est en opposition syntagmatique avec ceux qui l'entourent et en opposition associative avec tous ceux que l'esprit peut suggérer, soit *a n m a* (180b).
$$v$$
$$d$$

Let the reader thoroly absorb this passage, for it is all that de Saussure has to say about the system of phonemes. And with this quotation we have concluded our exposition of de Saussure's direct contribution to phonemics. His greater contribution is indirect, his linguistic theory in general and his concept of synchronic systems in particular. All he has to say about phonemes is that what is true of morphemes is true mutatis mutandis of them also; but he does not indicate what the mutanda are. From the standpoint of present day phonemics, we can see the analogues: the syntagmatic relations of phonemes are what we call their positions of occurrence, and the phonemes with which a given phoneme is associatively related are the phonemes involved in the same morphophonemes as it and the phonemes which occur in the same position; also those which undergo similar morphophonemic changes. But of all this there is no hint in de Saussure.

28. What are the relations between the two fundamental properties of signs, their arbitrary and their systematic nature (see §18)?

'Une langue constitue un système. . . . C'est le côté par lequel elle n'est pas complètement arbitraire et où il règne une raison relative' (107c, cf. 180–4, esp. 182b). We have discussed this contrast between the absolutely arbitrary and the relatively motivated in §19.

A sentence of 157c, 'Les valeurs restent entièrement relatives, et voilà pourquoi le lien de l'idée et du son est radicalement arbitraire,' makes it sound as if arbitrariness resulted from the nature of value; but this contravenes de Saussure's whole teaching, and is merely careless wording. His basic teaching may be stated as follows: (1) Signs stand in systematic relations to one another. (2) Simple signs are completely arbitrary; all that matters is that they be distinct from one another. (3) Therefor, *only* the relations of signs, i.e. their values, are relevant to the system; the systematic (relational) properties and the non-relational properties are independent of each other, they do not involve or affect each other. Signs are distinct, not merely different; this means, we take it, that not only their relations to each other but their relations to their respective signifiés are relevant and in fact essential. And all that is relevant to signifiants and to the phonemes of which they are composed is that they are different from each other. This follows from the arbitrariness of the sign (cf. 165e).

This framework of ideas is strikingly similar to the doctrine known in anthropology as functionalism, to which de Saussure comes closest in his discussion (150–4) of synchronic identity: two materially different entities are the same as

far as the system goes if and only if they have the same value (154a), that is, are characterized by the same relations.

29. By the comparative method linguists have reconstructed large parts of the vocabulary of Proto-Indo-European. This method lets us ascertain the number of phonetic elements and their combinations. Its validity, according to de Saussure, is not contingent upon our demonstration of the precise or even the rough phonetic properties, articulatory or acoustic, of these elements, tho we are often in a position to do so; it is sufficient to establish the number and distinctness of these elements (302-3).

Offhand one might think that this example shows the relevance of phonemics to historical linguistics. But actually it is not part of history in the strict sense, according to de Saussure's conception. For, tho no doubt linguists have ascribed to PIE features that were not in fact contemporaneous, so that our reconstruction of it does not represent a language spoken by one particular community in one particular year or even decade or century, still PIE is roughly and in the main a single language-state.

And in fact, de Saussure does not apply phonemics to problems of historical change. This is no accidentally omitted detail; it reflects his general doctrine of linguistic change: every linguistic change is isolated. A system does not engender changes within itself.

By Sapir, Bloomfield, and the Prague School, phonemics is thought to be just as relevant to problems of linguistic change as to the descriptions of languages in their momentary states. It is part of our job, therefor, to show why de Saussure holds the opposite view. This requires that we penetrate still more deeply into the groundwork of his system of thought.

LANGUE AND PAROLE

30. Language (*le language*), like any social phenomenon, is subject to perpetual change, and so may be analyzed at any one time into an inherited or institutional element and an element of innovation. The institutional element de Saussure calls *la langue*, and the innovational element *la parole*; by definition the two together exhaust *le langage* (36a, 37c, 112c).

31. Langue is (30f, 32b; cf §18) a deposit of signs that each individual has received from other members of the same speech-community, l'ensemble des habitudes linguistiques qui permettent à un sujet de comprendre et de se faire comprendre (112c; cf. 100f); in other words, it is a passively accumulated repository in relation to which each person is a hearer, not a speaker (30f, 31d). Parole, by contrast, is both active and individual (30-1); it consists of particular speech-utterances. It is (24, 30e) *le côté individuel* as opposed to *le côté social* of language. A sentence is the typical unit of parole (148c, 172c), for 'le propre de la parole, c'est la liberté des combinaisons.' More comprehensively stated (38c; 30g-1a), 'la parole ... est la somme de ce que les gens disent, et elle comprend: a) des combinaisons individuelles, dépendant de la volonté de ceux qui

parlent, b) des actes de phonation également volontaires, nécessaires pour l'exécution de ces combinaisons.'

32. Langue, tho described as a repository, is not to be thought of simply as a pile of words (cf. §18); the previous sections have shown clearly how it is essentially a system, to which belong not only the signs with their values but what we defined as patterns. Native speakers (excluding scholars) are ignorant of the history of their own language, which means that the history is irrevelant to the system as they know it: 'La parole n'opère jamais que sur un état de langue, et les changements qui interviennent entre les états n'y ont eux-mêmes aucune place' (127a). And 'la première chose qui frappe quand on étudie les faits de langue, c'est que pour le sujet parlant leur succession dans le temps est inexistante: il est devant un état' (117c). It follows (ibid.) that 'aussi le linguiste qui veut comprendre cet état doit-il faire table rase de tout ce qui l'a produit.' It is the business of the linguist, in describing a system, to describe just those relations of which the native speakers are aware (128c, 136a, 140c, 189b, 251b-2), tho in precision and explicitness the linguist's comprehension of the system will far exceed the speaker's. There are syntagms of whose analysis the speakers are doubtful (234a, 258c), and even signs such that the speakers are doubtful whether to regard them as syntagms or as simple signs (181c). 'Autre chose est de sentir ce jeu rapide et délicat des unités, autre chose d'en rendre compte par une analyse méthodique' (148b; cf. 106b, d, 107c, 256b). This methodical analysis is grammar (141).

33. The point of view so far described is what de Saussure calls (117, 12c) synchronic linguistics, whose essence is that it considers langues one by one. In discussing it, de Saussure speaks as tho it were opposed only to historical or diachronic linguistics, but actually the *Cours* recognizes two or possibly three non-synchronic studies, each of which considers langues two or more at a time.

34. The first such study is diachronic linguistics, which differs from the synchronic branch in taking change into account. But an immediate elucidation is needed. On the one hand, synchronic linguistics abstracts from time and change not by treating facts of different times as tho they were simultaneous—doing so has been a common mistake (137b-8, 202a), sometimes deliberate (251a, 252b); but by considering a langue during a span of time too short to show any appreciable change (142b). In short, synchronic linguistics describes language-*states* (117a). And on the other hand, diachronic linguistics does not directly capture the process of change. De Saussure seems to have adopted the physicists' conception that change may be described as a succession of states (117a only apparently contradicts this); diachronic linguistics, taking as its data synchronic descriptions of different states of cognate languages, infers the changes that led from the earlier states to the later ones (128a, 140d). To do this one must have ascertained the diachronic identities (249; cf. §53)—e.g. that Latin *passum* is diachronically identical with French *pas*. Diachronic identity does not imply synchronic identity, nor vice versa; *pas* 'step' and *pas* 'not' are diachronically but not synchronically identical (129b, 150b, 250a); whereas *décrépi* < Latin *de* + *crispus* and *décrépit* < Latin *decrepitus* are synchronically identical (119d;

160c; 167b, 136a). Thus diachronic linguistics arrives inferentially at the phenomena which are its special province, viz. events (117a, 129b).

35. Diachronic linguistics is achieved by two different techniques (128c, 291–4), according to the character of the data on which it operates. The *prospective* method requires as data records of two or more states of the same language, that is, such that each state is either an ancestor or a descendant of each other state; this is the method mainly used in Romance linguistics. The *regressive* (better known as the comparative) method is primarily inferential, and requires—to continue the metaphor of family-terms—that they be brothers, cousins, uncles and nephews etc. of each other; in other words, that they be only collaterally, not linearly, related. From these data it infers so far as possible the state which was the last common ancestor of all these known states. In practice, the data are usually such as to admit and require the application of both prospective and retrospective methods.

36. The langue-parole distinction entails (37c, 38e) a corresponding dichotomy of linguistics (cf. §§37, 56). Of the two branches, linguistics of langue is primary, and the main object of the *Cours* (39b, 317c); as we have seen, it is in turn bifurcated into synchronic and diachronic linguistics. Now by definition, langue and parole stand in a chicken-and-egg relation to each other. On the one hand, parole is based on langue (227a–b); we might restate de Saussure's idea in Aristotelian terms and say that langue is the active potentiality of producing parole. And on the other hand 'c'est la parole qui fait évoluer la langue' (37d; cf. 127a, 138c–9, 231a). More specifically, 'un fait d'évolution est toujours précédé d'un fait, ou plutôt d'une multitude de faits similaires dans la sphère de la parole; cela n'infirme en rien la distinction établie ci-dessus, elle s'en trouve même confirmée, puisque dans l'histoire de toute innovation on rencontre toujours deux moments distincts: 1° celui où elle surgit chez les individus; 2° celui où elle est devenue un fait de langue, identique extérieurement, mais adopté par la collectivité ' (139a). Now since parole is the source, the *situs* of linguistic change, how does linguistics of parole differ from diachronic linguistics (of langue)? Are they not the same province under different names? De Saussure does not anticipate this question, but the answer is clearly implied. There is no necessary passage from the first of the two moments mentioned above to the second; 'toutes les innovations de la parole n'ont pas le même succès' (138c, cf. 232b). Diachronic linguistics does not take parole as its subject matter; by a comparison of earlier and later states it ascertains the changes from one to the other; and tho these changes arose in parole, its concern is with the changes and not with their source. We have already (§§4, 6) pointed out how historical phonetics (which is part of diachronic linguistics) is wholly separate from the study of 'la parole y compris la phonation' (37c), which includes phonetics.

37. From the characterization of diachronic linguistics, it is clear that it rests upon synchronic descriptions (128a)—a doctrine which is the polar reversal of Hermann Paul.[6] And yet diachronic and synchronic linguistics are two radically separate enterprises.

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[6] 'Es ist eingewendet, dass es noch eine andere wissenschaftliche Betrachtung der Sprache gäbe, als die geschichtliche. Ich muss das in Abrede stellen' (*Prinzipien* 3te Aufl., Einl. § 10).

According to de Saussure, synchronic linguistics is grammar (cf. §32 end), and (as we shall see in §§43, 44), diachronic linguistics is historical phonetics (137a, 194c, 209c, 226c, 228a, 317a). 'Qui dit grammatical dit synchronique et significatif, et comme aucun système n'est à cheval sur plusieurs époques à la fois [cf. 140d, 122b], il n'y a pour nous de "grammaire historique" . . . ' (185b). What, then, says Jespersen (*Linguistica* 109–15; originally written 1916) have people like myself been writing about all these years, if not historical grammar? De Saussure has anticipated the question: 'Il faut s'en souvenir pour ne pas affirmer à la légère qu'on fait de la grammaire historique quand, en réalité, on se meut successivement dans la domaine diachronique, en étudiant le changement phonétique, et dans le domaine synchronique, en examinant les conséquences qui en découlent' (195d; cf. §62).

38. So much for the delineation of diachronic linguistics. There is a second non-synchronic study which may belong with it, and that is dialect-geography. De Saussure distinguishes (40–3) between internal and external linguistics, by the latter term understanding in particular (40a, 41d, cf. Bally *L'état actuel* 21b) the type of studies upon 'words and things' undertaken by Meringer. The significance of the distinction is evidently methodological: 'La séparation des deux points de vue s'impose. . . . La meilleure preuve en est que chacun d'eux crée une méthode distincte' (42–3). The following formulation, we think, expresses de Saussure's basic thought more incisively than his own characterizations do: That is internal which lets systems be studied autonomously, whether one by one or two or more at a time, without reference to anything except other linguistic systems; in short, internal linguistics of langue is *pure* linguistics of langue (cf. 143a).

Now de Saussure relegates dialect geography to external linguistics (41c, 261a), presumably on the ground that it studies correlations between langues and something else. However, could we not consider that dialect geography is the spatial analogue of diachronic linguistics in that it considers contemporaneous cognate systems as they are arrayed in space rather than in time? There would be two significant differences: the array would have to be two-dimensional rather than one dimensional (because isoglosses cross over each other), and there would be no *direction* to the array—nothing corresponding to the earlier and later of time. Of two contemporaneous dialects, one could not be singled out as cause and the other as effect. Still, inter-dialect identities could be established; this is done in phonemics by Daniel Jones's notion of diaphone. It is true that dialect geography as ordinarily conceived includes more than the pure comparison of the spatial relations of linguistic states; these other topics are truly external and would have to be separated in order that dialect geography might be regarded as part of the internal linguistics of langue. There would of course be combinations of the dialectal and the diachronic modes of comparison. We are content to have suggested this viewpoint without insisting upon it.

39. The third non-synchronic study of language is the comparison of two or more non-cognate languages (263–4; cf. 183–4), a branch of study to which de Saussure barely alludes.

40. According to the neo-grammarian picture, linguistic change consists of (1) sound-change, (2) analogy, (3) borrowing, and (4) miscellaneous minor processes, such as coinage, blending, folk-etymology, syncope, obsolescence (or, as we would put it today in more general terms, change of frequency), semantic change, syntactic change (distribution of morphemes), and perhaps sundry others. De Saussure's discussion leaves out of account the third and fourth groups of changes except for brief examples and adventitious chapters and states (194b) that linguistic change is, in the main, phonetic change. Moreover (198a), that every linguistic change is isolated.

By the latter statement de Saussure appears to mean two things: (1) linguistic changes are not general, and (2) they are not systematic.

41. The *Cours* says:

Les faits diachroniques sont particuliers; le déplacement d'un système se fait sous l'action d'événements qui non seulement lui sont étrangers . . . , mais qui sont isolés et ne forment pas système entre eux' (134b). [This is as true when the change is semantic as when it is phonetic.] A une certaine époque presque toutes les formes de l'ancien cas sujet ont disparu en français; n'y a-t-il pas là un ensemble de faits obéissant à la même loi? Non, car tous ne sont que les manifestations multiples d'un seul et même fait isolé. C'est la notion particulière de cas sujet qui a été atteinte et sa disparition a entraîné naturellement celle de toute une série de formes(132c).

Clearly, insofar as it applies to *phonetic* change, this is simply the neo-grammarian proposition 'sound-changes have no exceptions.'

When a certain phoneme or cluster of phonemes in a certain environment undergoes a certain change no matter in what words it is contained, it is easy to say that the change in the words is secondary, stemming from the primary change of the phoneme. When all the words having a certain meaning become obsolete, it is easy to say that it is primarily the meaning and only secondarily the individual words which have perished. But certain apparent embarrassments come to mind.

The *Cours* (130) mentions four phonetic laws concerning the passage from Indo-European to Greek: (1) Voiced aspirates become voiceless aspirates; (2) initial prevocalic *s* becomes *h*; (3) final *m* becomes *n*; (4) final stops are dropped. Now (2) and (3) concern one phoneme each; but (1) concerns *bh*, *dh*, *ĝh*, *gh*, *gʷh*, and (4) concerns *p*, *t*, *k̂* and *q*. Are not then (1) and (4) general? De Saussure's only answer seems to squarely avoid the issue (133b; cf 248 c):

La vraie question est de savoir si les changements phonétiques atteignent les mots ou seulement les sons; la réponse n'est pas douteuse: dans *néphos, méthu, ánkhō*, etc. [instances of 1], c'est un certain phonème, une sonore aspirée indo-européene qui se change en sourde aspirée, c'est l's initial du grec primitif qui se change en *h*, etc. et chacun de ces faits est isolé, indépendant des autres événements du même ordre, indépendant aussi des mots où il se produit.

But (1) and (4) are not isolated in the same sense as (2) and (3), since each of them concerns not one phoneme but a class—of five and of four phonemes re-

spectively. One could of course go a step further and, seeking a property common to all the voiced aspirates or all the stops, say it is this which has changed. This obvious suggestion is made by the editors, 133 fn., and seems to be implicit in 203c also. Another response, in the vein of the dismissal (102) of onomatopy, would be that even tho whole classes of phonemes sometimes undergo a common change, such cases are the exceptions, or at least are not the only kind, and that it is the existence of changes like (2) and (3), rather than like (1) and (4), that is noteworthy. But de Saussure's own answer is right in the quotation above. He would not have hesitated to admit that (1) and (4) are general in a sense—only not in the sense which he had in mind. In his sense, to ask whether phonetic changes are general or particular is to ask whether they 'atteignent les mots ou seulement les sons.' Phonetic changes are specific in that 'le déplacement d'un système se fait sous l'action d'événements qui . . . lui sont étrangers.' (134b; cf 133c). The point would have been much clearer if de Saussure had given some examples of what he would be prepared to call a general change, but we shall undertake to construct one. A change is particular if there is common to all the entities which exhibit this change some part or else some property which changes. But if all members of a certain class change, not by change of their common part or common property but by changes in their respectively peculiar features, the change is called general. Thus suppose that in a certain language all nouns are single morphemes and that they end in a consonant, and that the names of plants have no common feature of phonemic structure that differentiates them from other nouns; in particular that for every consonant in the language there is at least one plant-name and also at least one other noun ending in that consonant. Now suppose that in the course of time every plant-name loses its final consonant, but every other morpheme retains it. The change cannot be ascribed to the common feature of plant-names, which is semantic only; it is therefor general, and if our interpretation is correct it is this sort of change whose occurrence de Saussure denies. On the other hand, if all feminine nouns become neuter, this could be regarded as a particular (even tho not a phonetic) change like the French loss of the Latin nominative or (122–3) the loss of the post-tonic syllables of Latin words.

42. De Saussure's meaning is clear when he says that linguistic changes are non-systematic, for we know what it is that he is denying. Changes do not depend on each other, they do not have value; they are brute facts. The change of *bh* to *ph* would in nowise have been affected had *dh* and the others remained as they were. Nor does a later change depend *directly* on an earlier one; the earlier one results in a certain state, and the later one then affects this state. 'La parole n'opère jamais que sur un état de langue, et les changements qui interviennent entre les états n'y ont eux-mêmes aucune place' (127a).

In 125b, de Saussure compares synchronic description with the description of a transversal cross-section of a plant-stalk, and diachronic description with the description of an axial (longitudinal) section. He tells us that the study of the transversal section 'fait constater entre les fibres certains rapports qu'on ne pourrait jamais saisir sur un plan longitudinal.' True; but the converse is also

true: the tissues are as 'solidaire' in the longitudinal section as in the transversal. The analogy of the plant-section is ill-chosen to illustrate de Saussure's teaching that in studying the 'axis of successivities' 'on ne peut jamais considérer qu'une chose à la fois, mais où sont situées toutes les choses du premier axe [the 'axis of simultaneities'] avec leurs changements' (115b).

43. De Saussure admits difficulties in his thesis that all linguistic change is phonetic. Quite apart from the tremendous role of analogy (of which more anon , §§ 47–51), there are purely syntactical changes like the one mentioned on p. 247: the Indo-European verbal modifiers, still fairly freely placed in early Greek (e.g. *óreos bainō káta* 'I descend from the mountain'), came to be fastened to the verb (*katabaínō óreos*). 'Si donc la phonétique intervient le plus souvent par un côté quelconque dans l'évolution, elle ne peut l'expliquer tout entière; le facteur phonétique une fois éliminé, on trouve un résidu qui semble justifier l'idée d'une "histoire de la grammaire"; c'est là qu'est la véritable difficulté; la distinction—qui doit être maintenue—entre le diachronique et le synchronique demanderait des explications délicates, incompatibles avec le cadre de ce cours (196–7; cf 194c–d and 248a).

44. The concession does not imperil de Saussure's argument; for the important point is that every linguistic change is external to the synchronic system which it affects. In the first place, it is not deliberate, not motivated by the system; the arbitrariness of the sign excludes deliberateness (106b–d, 107c, 110d, 116b). 'La langue ne prémédite rien' (127b; cf. 30f). Tho one sometimes speaks of langue as a convention (25c) or a contract (31d), it is not really either of these, because 'à tout instant, la solidarité avec le passé met en échec la liberté de choisir' (108b). Thus 'on arrive au principe de continuité, qui annule la liberté' (113c; cf 34e, 101c, 102b, 104, 110d, 113c). The question about the origin of langue is meaningless, because (111c):

aucune société ne connait et n'a jamais connu la langue autrement que comme un produit hérité des générations précédentes et à prendre tel quel' (105b). Langue is not only social but bound to time (108b, 112f–3). On the other hand, when a change arises from without, 'une langue est radicalement impuissante à se défendre contre les facteurs qui déplacent d'instant en instant le rapport du signifié et du signifiant. C'est une des conséquences de l'arbitraire du signe' (110c). And such factors are constantly arising (111e–2); hence 'la continuité du signe dans le temps, liée à l'altération dans le temps, est un principe de la sémiologie générale.

45. In the second place, a linguistic change is not telic: it does not work for the benefit of the system (121c); on the contrary it disrupts it (211–13, 219d, 221a). Or, at best, by creating alternances, it merely supports a grammatical difference which already existed (219d–20). Thus, there is a French alternance *eu/ou;* but *neuv-* comes from L. *nóv* (accented, of *novum*) and *nouv* from *nov* (accentless, of *novellum*); there was already a phonetic difference in Latin and it expressed a grammatical relation (216–7; cf. 215a). (By alternance de Saussure means (216c) a regular alternation, that is, one occurring in many pairs of morphemes of a certain category, not one confined to isolated pairs like French *moi/me*.

So 'la langue est un mécanisme qui continue à fonctionner malgré les détériora-tions qu'on lui fait subir' (124a).

46. In the third place, a linguistic system is never modified all at once; 'ce qui domine dans toute altération, c'est la persistance de la matière ancienne; l'infi-délité au passé n'est que relative. Voilà pourquoi le principe d'altération se fonde sur le principe de continuité' (109a). Specifically, only certain units, certain signs of a system are violently changed; and, by definition of value and system, their change involves a change in the values of all the other signs.

Jamais le système n'est modifié directement; en lui-même il est immuable; seuls certains éléments sont altérés sans égard à la solidarité qui les lie au tout. C'est comme si une des planètes qui gravitent autour du soleil changeait de dimensions et de poids: ce fait isolé entraînerait des conséquences générales et déplacerait l'équilibre du système solaire tout entier (121e; cf 37a, 124d, 126c–d, 134b).

<center>CRITIQUE</center>

47. Of the varieties of linguistic change, only phonetic change receives ex-tended consideration. Altho de Saussure regards semantic change as being fundamentally like it in that each is 'un déplacement du rapport entre le signifié et le signifiant' (109c), it is dealt with only in passing (cf. 33 fn. 1), perhaps for that very reason.

But analogy cannot be neglected so easily. Does it not contradict everything that de Saussure has said about linguistic change? He has taught that system limits the arbitrariness of signs, and also (226c, 227b) that speakers manifest their understanding of the system by analogical creation. Then isn't analogy a change of the system which is inspired by the system itself?

48. De Saussure undercuts all these objections with one bold sweep. Analogy is not change at all, but a synchronic fact. 'L'analogie est d'ordre grammatical: elle suppose la conscience et la compréhension d'un rapport unissant les formes entre elles' (226c; cf 226e, 227d–8). But how can he say this, especially when he notes explicitly that 'la création qui en est l'aboutissement ne peut appartenir d'abord qu'à la parole' (227a; cf §36)? The answer is short. 'Il faut y distinguer deux choses: 1° la compréhension du rapport qui relie entre elles les formes génératrices; 2° le résultat suggéré par la comparaison, la forme improvisée par le sujet parlant pour l'expression de sa pensée. Seul ce résultat appartient à la parole' (ibid). This result of analogy is never a simple sign, but always a syntagm which is, most often, nothing but a new arrangement of old simple signs (235c–6); 'et sa réalisation dans la parole est un fait insignifiant en com-paraison de la possibilité de le former' (227c).

49. Here is another reason why analogy is not regarded as a change. When rhotacism had changed Latin *honōsem* to *honōrem* but left *honōs* untouched, and when *honor* had come into general currency alongside of *honōs*, on the pattern *ōrātor*: *ōrātōrem*, etc., 'au moment où naît *honor*, rien n'est changé puisqu'il ne remplace rien; la disparition de *honōs* n'est pas davantage un changement, puisque ce phénomène est indépendant du premier. Partout où l'on peut suivre la marche des événements linguistiques, ou voit que l'innovation analogique et

l'élimination de la forme ancienne sont deux choses distinctes et que nulle part on ne surprend une transformation' (224d–5). It is in this sense that the disappearance of the older syntagm is independent of the instituting of the new one; 'tandis que le changement phonétique n'introduit rien de nouveau sans annuler ce qui a précédé (*honōrem* remplace *honōsem*) la forme analogique n'entraîne pas nécessairement la disparition de celle qu'elle vient doubler, (224d).

50. It is true that neither *honōs* nor *honor* has been 'changed' if one declines to call generation and obsolescence change (cf. 225b–6a); the fact remains that the *system* has been changed, once when *honor* entered it and again when *honōs* left it (cf. 232c, 235a). Moreover, the patterns have been changed (cf. 235c, also 227b). And we see how de Saussure neglects change of frequency, just as he neglected relative frequency as a synchronic relation (cf. §22). An analogical creation, like the other innovations of parole, more often than not fails to take hold (231–2); but whether it or its older rival wins, the loser is likely to disappear (unless it is saved in a special meaning), since 'la langue répugne à maintenir deux signifiants pour une seule idée' (224d; a concomitant principle is stated 167b). Thus casually is mentioned one of the fundamental principles governing changes in relative frequency.

51. Even if analogy is synchronic, it is nevertheless clear that the system itself inspires certain innovations of parole, some of which succeed in changing the system by leading to the currency of some new terms and the obsolescence of some old ones. One can readily grant that analogical change is different in the ways named by de Saussure from phonetic change, and still contend that it is a type of change whose ultimate cause may be external to the system, but whose immediate cause is the system itself.

The fact is that de Saussure's idea of system is radically vitiated by an ambiguity. *In his parlance, 'système' has two meanings: (1) state and (2) stable state, that is, equilibrium.* His argument that linguistic changes always arise externally is wholly dependent upon the switch from one of these senses to another. Every language during a sufficiently short span of time is necessarily a system in the first sense; but when de Saussure says that a system never originates a change, he can only mean an equilibrium, as he himself calls it (126c, f, 154a, 169a). In a passage already quoted, he compares a language with the solar system, but as usual he does not follow his simile thru. At each instant the solar system is a state, but at no time is it an equilibrium. It is at all times changing, but the changes from any prior state to a following state are caused immediately by the prior state, and can even be computed if one knows three data: the general laws of dynamics, the prior, and either the direction of change or a sufficient number of earlier states. The original impetus was doubtless external (one of the fundamental ideas of science is that all change may be ultimately traced to an external cause), yet one change inaugurates a chain of others lasting for a shorter or longer time. Another way of expressing de Saussure's ambiguity is that in effect he assumed the effects of every linguistic change to be instantaneous. His idea seems to have been that linguistic change is like a car going uphill: it stops as

soon as it is no longer actively propelled. It is quite true that he declares
linguistic change to be unlimited (126e, 208–10; cf. 121c, 124d); but he simply
means that one diachronically identical sign may become vastly changed by a
series of phonetic changes (e.g. German *je* stemming from PIE *aiwom*), and also
that phonetic change of certain signs indirectly affects other signs.

52. Can one, by an inductive study of antecedent and consequent states,
establish that given states lead to given changes, regardless of the external
buffets or supports to which they are subjected? Or can one make such pre-
dictions by taking into account the prior history of the system? If so, one will
have founded, alongside of retrospective and of what de Saussure inaptly calls
prospective linguistics, a third branch of diachronics, a truly prospective branch
—predictive, let us call it, for it would enable one, given a set of linguistic states
as data, to infer another state which is *later* than all of them. When it becomes
predictive not only of the past but also of the future, linguistics will have attained
the inner circle of science. In admitting that 'on ne peut pas dire d'avance
jusqu'où s'étendra l'imitation d'un modèle, ni quels sont les types destinés à la
provoquer' (222d), de Saussure shows that linguistics has not yet achieved this
triumph. The Prague school believes that it has been able to make the begin-
ning steps; and it is mainly because their efforts were formulated as a refutation
of de Saussure's opposite view that we have analyzed the latter so carefully.

53. De Saussure teaches in effect that signs have two independent sets of
properties: their values or relations (with their signifiés and with other signs)
and their content or 'material envelope.' This thesis is true in a sense and in
another sense not, and calls for some remarks of elucidation.

The distinction between synchronic and diachronic linguistics is methodological
(115b): '[La] différence de nature entre termes successifs et termes coexistants,
entre faits partiels et faits touchant le système, interdit de faire des uns et des
autres la matière d'une seule science' (124d). But diachronic linguistics cannot
ignore synchronic relations, for a diachronic identity (cf. §34) between a sign of
state S_1 and a sign of a later state S_2 can be established only by considering both
the phonemic makeup of the signs and their relations to other contemporary signs.

Furthermore, as de Saussure has pointed out at great length, a change in the
content of a sign generally entails a change in its synchronic relations. This
could not be so if the relations were completely independent of the 'material
envelope.' However, de Saussure has nowhere implied that the independence
is complete. He has only implied, by his doctrine that phonemes and signifiants
are differential in function, that if one were to replace the material envelopes of
all the signs of the system by any others whatsoever which would keep all those
same signs phonemically distinct from each other, the relations of the signs and
therefor the system would be preserved intact (see esp. 43b and 153d–4, and
cf. §26).

Finally, the material envelope is relevant to the synchronic system in yet
another respect. Tho de Saussure points out 'la latitude dont les sujets jouissent
pour la prononciation dans la limite où les sons restent distincts les uns des
autres', (164d; cf. all of 164b–6a), there are limits to this latitude, much narrower

limits than mere preservation of the system would require. This is because of the continuity with the past which de Saussure has pointed out. In short, his own discussion (104–8) of the 'immutability' of the sign indicates a sense in which material envelopes as well as relations constitute the system.

DE SAUSSURE AS METHODOLOGIST

54. If there is one feature of the *Cours de linguistique générale* which is more striking than all others, it is that it holds true to its name by dealing strictly with principles. It is clear that de Saussure was a meticulous thinker. He reexamined methodically and painstakingly the doctrines which lay at the basis of current thinking, ferreting out the tacit and hidden ones as well as testing the propositions which were daily mouthed by everyone. His conclusions he sought to weave into a coherent and almost deductive system.

55. The propositions involved in any field of inquiry are of three sorts: First, delimitations of the *aims* of the inquiry, characterizing the objects which it studies. Second, the description of *methods*. And third, the *results*, the statements of fact which emerge from the inquiry.

Those ideas of the *Cours* which we have discussed up to this point, as well as the contributions of the *Mémoire* and the other papers which de Saussure published in his lifetime, deal with the results of linguistics, the matters of fact. But these do not begin to exhaust the content of the *Cours*. For an appraisal of de Saussure's thought, the keen interest which he manifests in aims and methods has a twofold importance. In the first place, the discussions of aims and the strictures about methods that are dispersed thruout the *Cours* add up to a considerable portion of it; they are not intrusive, but integral, and they have influenced other thinkers. In the second place, de Saussure's method of thinking was systematic. He did not merely track down premises and consequences; he did not merely try to segregate truths of linguistics into basic principles and derived propositions. He strove to contract the group of basic principles still more and exhibit the relations between those that remained irreducible. We do not mean to say that he anticipated modern logistic method or that, like Newton and Spinoza, he emulated Euclid by casting his treatise into axioms, theorems, corollaries and lemmas. But in 100e, 103b, 104c, and other passages he signalizes propositions (that signs are arbitrary, linearly arrayed, and independent of individual volition) from which many consequences follow; and it is a good guess —tho one which the pitiful meagerness of biographical data prevents us from testing—that this patient weaving of the general facts of linguistics into a fabric of premises and consequences was for de Saussure an actual method of discovery which led to many of his aperçus and to his grappling with problems not faced, and for the most part not even sensed, by previous thinkers (See Bally, *L'état actuel* 8d–9 and 12b).

56. De Saussure lists (20) three tasks for linguistics: to describe all languages and their histories as far as possible; to seek universal laws and forces; and 'de se délimiter et de se définir elle-même.' The brand of linguistics pursued by his predecessors from Bopp onward, he says, 'ne sait pas exactement vers quel but

elle tend' (118c; cf 16c, 18c, 20e item c, and all of 118–9b).   The reason for this confusion is that the phenomena of language can be studied from different points of view.   Dozens of sciences can study linguistic phenomena (20–1, 24e–5, 40–3) from as many points of view—each one putting these phenomena into relation with phenomena of some other sort.   What aspect of the phenomena, if any, is left to linguistics as its exclusive property?   How can language be studied not in relation to other phenomena but as the self-contained object of an autonomous science?   As de Saussure himself puts it, 'Quel est l'objet à la fois intégral et concret de la linguistique?' (23).   The sequel makes it clear that *signs* are the integral and concrete objects of linguistic study; and that by concentrating first on the synchronic systems which they form (langues), then on the diachronic relations between these systems, and lastly upon parole, linguistics will have found a rational and unifying order (23–30, esp. 25b, d; 36a, 37b; 38e, 139b), an ideal order, whether or not it prove practicable (139c–40).

Now what is the methodological significance of the quest for objects that are both integral and concrete?

57. By calling a class of phenomena or of objects 'integral' (tho the word itself is not used after 24e), de Saussure means that the phenomena are all of one kind and are sufficiently unified that they may be studied by one science, that they are 'classable parmi les faits humains' (33a, 25c).   Now 'tandis que le langage est hétérogène [cf 24e, 25c, 31d, 38e] la langue ainsi délimitée est de nature homogène: c'est un système de signes où il n'y a d'essentiel que l'union du sens et de l'image acoustique, et où les deux parties du signe sont également psychiques' (32d; cf 29a, 37c, 98b–c).   It is true that the study of langue is subdivided into synchronic and diachronic linguistics; moreover, within the class of psychic entities, images are different from concepts (98c, 115a).   But these diversities are nothing like the diversity within la parole 'y compris la phonation' (37c), the study of which is, therefor, psychophysical (ibid.).

58. De Saussure's idea of concreteness is less easy to establish.   He uses the term 'concret' in several senses.

(1) Phonetic species are abstract whereas allophones are concrete (82b); words (e.g. the word *mois* 'month') are abstract whereas their alternant forms (e.g. the two liaison forms, phonetically *mwa* and *mwaz*) are concrete (147c–8; cf 188b); formclasses, such as the genitive case, are abstract (190b, 191b) whereas the forms that belong to them are concrete.   The sense in question is explicitly stated in 148c–9 of sentences: the class of sentences is abstract because there is no property common to all sentences.   Consonantly, the sign is so defined that the signifiant must be just one sequence of phonemes, just as the signifié must be just one concept, one meaning.   Slight variation in the shades of meaning is allowed (151a, 152b), but (255c) if one signifiant is correlated with two distinct signifiés, we must consider that there are two distinct signs.   This saves the concreteness of the sign.

(2) An entity is concrete in the second sense insofar as it has instances (173b), a material realization (151b–2b).   This implies, tho de Saussure does not point it out, that there is a gradation from greatest concreteness to greatest abstract-

ness. Thus, the 8:45 train from Geneva is a concrete entity, even tho the material realization of it on different days need not be the same train in the physical sense. The analogs in linguistics are obvious: a phoneme is concrete because many sounds are instances of it; a signifiant is concrete because many *tranches de sonorité* belong to it; and so on. Langue and the signs that compose it are concrete in this second sense; '[ils] ont leur siège dans le cerveau' (32b). People sometimes use 'abstract' as synonymous with 'universal' and 'concrete' as synonymous with 'particular,' but in the present usage both abstractness and concreteness are predicated only of universals.

(3) Signs are concrete, whereas signifiants and signifiés are abstract (144; 153c, 157a); it is presumably in this sense that words are said to be concrete (158b), implying no contradiction of the other sense, in which some words are abstract. To emphasize his point, de Saussure compares the sign to a chemical compound, such as of water out of hydrogen and oxygen (145), an inapt analogy since both hydrogen and oxygen can exist separately with properties distinct from the compound. The point seems to be that wholes are concrete whereas each of their parts, considered by itself, is abstract, and apparently de Saussure's intention is the same as when he says (162a, 166b–7) that both signifiants and signifiés are, by themselves, purely negative, differential entities whose positive qualities do not matter in the least whereas (167c; tho cf 168a) signs are positive entities which are not merely different but distinct. If one carried out this viewpoint fully, one would expect that a whole system would be concrete but its parts the component signs would not.

59. It is plain that in these different passages de Saussure speaks of 'concreteness' in different senses. When he says (32b) that 'la langue n'est pas moins que la parole un objet de nature concrète,' I think he means simply that it admits of being studied by itself: that is concrete (to put it paradoxically) which can be successfully studied in abstracto. His insistence that the objects of study must be concrete is in effect a critique of the neo-grammarians, as is evident from the following passage. Remarking that 'l'ancienne école [Bopp etc.] partageait les mots en racines, thèmes, suffixes, etc. et donnait à ces distinctions une valeur absolue,' he continues:

On devait nécessairement réagir contre ces aberrations, et le mot d'ordre, très juste, fut: observez ce qui se passe dans les langues d'aujourd'hui, dans le langage de tous les jours, et n'attribuez aux périodes anciennes de la langue aucun processus, aucun phénomène qui ne soit pas constatable actuellement. [Lyell's principle of uniformitarianism, enunciated 1830 in his *Principles of Geology,* which had a great influence upon Darwin and others]. Et comme le plus souvent la langue vivante ne permet pas de surprendre des analyses comme en faisait Bopp, les néogrammariens, forts de leur principe, déclarent que racines, thèmes, suffixes, etc. sont de pures abstractions de notre esprit et que, si l'on en fait usage, c'est uniquement pour la commodité de l'exposition. Mais s'il n'y a pas de justification à l'établissement de ces catégories, pourquoi les établir? Et quand on le fait, au nom de quoi déclare-t-on qu'une coupure comme *hipp-o-s*, par exemple, est préférable à une autre comme *hipp-os*?

'L'école nouvelle, après avoir reconnu les défauts de l'ancienne doctrine, ce qui était facile, s'est contentée de la rejeter en théorie, tandis qu'en pratique elle restait comme

embarrassée dans un appareil scientifique dont, malgré tout, elle ne pouvait se passer. Dès qu'on raisonne ces 'abstractions,' on voit la part de réalité qu'elles représentent, et un correctif très simple suffit pour donner à ces artifices du grammarien un sens légitime et exact (252-3).

In short, roots etc. are concrete after all, not abstract: but they are relevant units primarily in diachronic, and only occasionally and accidentally in synchronic descriptions.

60. Whichever sense of concreteness he meant, there remains the task of deciding which of the various entities (morphemes, syntagms, words, phrases, sentences) are concrete. De Saussure puzzles over this task (148a-b, 149d-e, 153c, 154c, 158b) without making the ground of his perplexity clear. Is it because there are signs of which we are uncertain whether they are morphemes or syntagms (181c)? Only in part; but mainly, I think, because of difficulties in accurately defining the 'word.' On the one hand, 'le mot, malgré la difficulté qu'on a à le définir, est une unité qui s'impose à l'esprit, quelque chose de central dans le mécanisme de la langue (154c); on the other, it does not exactly fit the definition of linguistic unit (158b)—presumably because of the existence (147c-8) of alternant forms of what we want to call one word and which, not differing in a regular manner, cannot be subsumed under de Saussure's concept (215-20) of alternation. However, he makes an attempt to characterize words: 'Un mot représente toujours une idée relativement déterminée, au moins au point de vue grammatical' (255c); and moreover, 'tout mot qui n'est pas une unité simple et irréductible ne se distingue pas essentiellement d'un membre de phrase, d'un fait de syntaxe; l'agencement des sous-unités qui le composent obéit aux mêmes principes fondamentaux que la formation des groupes de mots' (187b; cf 172a). This is perhaps why 'en matière de langue on s'est toujours contenté d'opérer sur des unités mal définies' (154c).

There is another problem of concreteness. Language is a social phenomenon which requires 'une masse parlante' (112-3). 'C'est un trésor déposé par la pratique de la parole dans les sujets appartenant à une même communauté, un système grammatical existant virtuellement dans chaque cerveau, ou plus exactement dans les cerveaux d'un ensemble d'individus; *car la langue n'est complète dans aucun, elle n'existe parfaitement que dans la masse*' (30d, italics ours). More specifically: 'Tous les individus ainsi reliés par le langage ... reproduiront,—*non exactement sans doute, mais approximativement*—les mêmes signes unis aux mêmes concepts' (29 bottom, italics ours). Can langue be concrete when it does not repose complete in any one individual?

Speaking of linguistic change de Saussure says it is incessant and gradual, and (296a) for this very reason there is no sense in speaking of 'mother-languages' and 'daughter-languages.' 'D'ailleurs la délimitation dans le temps n'est pas la seule difficulté que nous rencontrons dans la définition d'un état de langue; le même problème se pose à propos de l'espace' (143). That many dialects shade off into one another is set forth (275-80), but the most striking fact is not mentioned: there can be an area divided into a series of sub-areas such that people of any two adjacent sub-areas understand each other readily, but people from

the two extreme sub-areas scarcely understand each other at all. What this proves is that the concept of langue is an idealized one. There are degrees of intelligibility; every one can understand some speakers better than others. Can a langue be concrete when it does not even have fixed limits? It is a montage, a composite photograph. It is not enough to admit the indefinite subdivisibility of a language into distinguishable dialects (128d; cf. 264b, 278–80). The only real solution is to admit that 'one language,' like a perfectly pure chemical or a cause without any interfering complications whatsoever, is nowhere to be met with in experience, but is an idealized construct designed to make explanation practicable; and to boldly embrace what seems to be, for de Saussure, a reluctantly wrung admission: 'La notion d'état de langue ne peut être qu'approximative. *En linguistique statique, comme dans la plupart des sciences, aucune démonstration n'est possible sans une simplification conventionelle des données*' (143, italics ours).

61. The notion of langue is the first step in making linguistics a science. It not only orders the problems of language among themselves, but it gives linguistics a place among the sciences (33d–4a): there is a science of semiology, hitherto unrecognized, (34b) 'qui étudie la vie des signes au sein de la vie sociale; elle formerait une partie de la psychologie sociale, et par conséquent de la psychologie générale.... Elle nous apprendrait en quoi consistent les signes, quelles lois les régissent' (33d). This semiology is differentiated by definition from semantics, 'qui étudie les changements de la *signification*' (33 fn. 1, editorial note). Sign-systems are necessarily social (34d; 112d–3, 157d), but they have their own differentia: 'la signe échappe toujours en une certaine mesure à la volonté individuelle ou sociale, c'est là son caractère essentiel' (34e). The reason is that a system of signs is strictly bound to the past (104–8, 113), as a heritage. There are constant laws of semiology (135 lines 4–5, referring to 126b); one of these is (111c) 'la continuité du signe dans le temps, liée à l'altération dans le temps.' According to de Saussure (34), semiology has never been recognized as a science, first because langue has rarely been treated as a self-contained object of study, second because people think of langue as a nomenclature, third because they study it in relation to the individual, and fourth because even when it is studied as social, the distinctive feature, of sign-systems—their arbitrariness—is not sufficiently recognized.

Even if semiology includes the study of symbols, 'les signes entièrement arbitraires réalisent mieux que les autres l'idéal du procédé sémiologique; c'est pourquoi la langue, le plus complexe et le plus répandu des systèmes d'expression, est aussi le plus caractéristique de tous' (101a). To differentiate langue from other sign-systems is the business of the linguist (33e).

62. The second step in making linguistics a science is the clear-cut discrimination in principle, even when it is difficult in practice (139c) between the synchronic and diachronic branches. In attaining to this discrimination, linguistics has passed thru an interesting triad of stages (118–9). *Grammaire raisonnée* was synchronic but normative. The nineteenth century inaugurated a phase that abandoned the prescription of norms (a last shred of prescription was the

temptation to brand analogy as 'false'), but was preponderantly historical. The latest phase is to study both synchronic and diachronic linguistics, but to study both of them factually and in conscious contrast with each other.

63. Nevertheless, neither synchronic nor diachronic linguistics is able to arrive at true laws, says de Saussure. The word law is commonly used in two senses: juridical and natural (134e). A juridical or social law is imperative and general (130a); by contrast (134c) 'les faits synchroniques, quels qu'ils soient, présentent une certaine régularité, mais ils n'ont aucun caractère impératif; les faits dia-chroniques, au contraire, s'imposent à la langue, mais ils n'ont rien de général.' Are there natural, i.e. panchronic laws 'qui se vérifient partout et toujours' (134e)? 'En linguistique comme dans le jeu d'échecs ..., il y a des règles qui survivent à tous les évènements [the constant laws of semiology are instances, see §61]. Mais ce sont là des principes généraux existant indépendamment des faits concrets; dès qu'on parle de faits particuliers et tangibles, il n'y a pas de point de vue panchronique' (135).

This critique is remarkable in its oversights. We have seen de Saussure's reason for saying that diachronic facts are particular, not general. Now 'on pourra objecter que dans le fonctionnement de la parole, la loi synchronique est obligatoire, en ce sens qu'elle s'impose aux individus par la contrainte de l'usage collectif ... ; sans doute; mais [italics ours] *nous n'entendons pas le mot d'im-pératif dans le sens d'une obligation relative aux sujets parlants;* il signifie que [italics de Saussure's] *dans la langue* aucune force ne garantit le maintien de la régularité quand elle règne sur quelque point' (131d). It is curious that de Saussure failed to think of a very simple retort which renders his critique nuga-tory: a juridical law itself is not imperative in this sense, for dictators, legislators, and even common consent may change laws and statutes. And as for natural laws, in no empirical science do they exist strictly 'indépendamment des faits concrets.' It is true that the statement 'intervocalic *s* is replaced by *r*' differs from the chemical proposition 'vaporized hydrochloric acid and vaporized ammonia mixed together produce a white cloud' in not being panchronic. But the other sciences of life and mind (or behavior) are in pretty much the same state. Moreover, de Saussure has said nothing to show that this deficiency is inherent in linguistics; he has adduced no reason to believe that no possible future progress will ever be able, by specifying the conditions more fully, to state panchronic laws of sound-change or of other linguistic phenomena.

64. De Saussure's critique of law brings out a general trait of his methodo-logical viewpoint that is worth noting because it lets us draw an inference about his background. He habitually exaggerates the unique features of lin-guistic phenomena and the concomitant peculiar difficulties of linguistics. For example, he tells us that 'en zoologie, c'est l'animal qui s'offre dès le premier instant' whereas 'la langue présente donc ce caractère étrange et frappant de ne pas offrir d'entités perceptibles de prime abord' (149). But if the linguist is offered a multiplicity of objects—languages, utterances, words, morphemes, sounds—equally the zoologist has to contend with species, individuals, systems (the vascular system), organs (the heart), tissues, cells, and the parts of cells.

The *Cours* (114) tells us that astronomy, geology and even political history (cf. 116d–7) do not need to be divided into a synchronic and a diachronic part, and presumably de Saussure would have said the same of zoology; but in fact zoology is divided into a synchronic and a diachronic part; indeed, into two parts each. Each species can be studied synchronically, as a fixed type, and diachronically, as a product of evolution. The diachronic study is called phylogeny. Then again, anatomy studies the members of each species in one stage of their lives (e.g. the mature adult stage), embryology their development from inception onward.

Further, de Saussure approves (25, 110e) Whitney's conception of language as a social institution, but insists upon a differentia: language is *purely* conventional and traditional, unlike manners, ethical institutions, economic set-ups and so on; there is no rational norm to regulate its changes either by arresting or by hastening and guiding them (105d, 106d, 110d, 116b). Later, to be sure, this broadly sweeping statement is, if not retracted, at least reinterpreted: there is no rational norm to stay or encourage the changes of simple signs (morphemes), nor the concomitant changes in syntagms, but there is a norm which can lead to further changes. And analogical remodeling is precisely the result of applying this norm.

So language is not so different from other institutions after all. And it may be asked whether de Saussure has not exaggerated the extent to which institutions other than sign systems are shaped by rational criticism, and subject to the deliberate volition of the community; and whether on the other hand, quite apart from analogy, he has not underplayed the element of natural symbolism, i.e. of onomatopy, in language.

In fine, language (*le langage*), the immediately given object of linguistics, is as complex as the immediately given object of zoology or of any other science, but no more so. Its complexity begets the problem of finding an object at once integral and concrete, but at the same time it also furnishes the solution. For language is an assemblage of facts some of which can be considered apart from others; this is why langue, altho in one sense an abstraction, is also concrete. For it is self-contained. And it is in this sense that, to repeat a passage that we have already quoted at the beginning of our paper (§2), 'bien loin que l'objet précède le point de vue, on dirait que c'est le point de vue qui crée l'objet.'

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