

QUEST FOR THE ESSENCE OF LANGUAGE

Since “in human speech, different sounds have different meaning,” Leonard Bloomfield’s influential manual of 1933 concluded that “to study this coordination of certain sounds with certain meanings is to study language.” And one century earlier Wilhelm von Humboldt taught that “there is an apparent connection between sound and meaning which, however, only seldom lends itself to an exact elucidation, is often only glimpsed, and most usually remains obscure.” This connection and coordination have been an eternal crucial problem in the age-old science of language. How it was nonetheless temporarily forgotten by the linguists of the recent past may be illustrated by the repeated praises for the amazing novelty of Ferdinand de Saussure’s interpretation of the sign, in particular the verbal sign, as an indissoluble unity of two constituents—*signifiant* and *signifié*—although this conception jointly with its terminology was taken over entirely from the twelve-hundred-year-old Stoic theory. This doctrine considered the sign (*sêmeion*) as an entity constituted by the relation of the signifier (*sêmainon*) and the signified (*sêmainomenon*). The former was defined as “perceptible” (*aisthêton*) and the latter as “intelligible” (*noêton*) or, to use a more linguistic designation, “translatable.” In addition, the reference

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appeared to be clearly distinguished from meaning by the term *tynekhanon*. St. Augustine's writings exhibit an adaptation and further development of the Stoic inquiry into the action of signs (*sêmeiôsis*), with Latinized terms, in particular *signum* comprising both *signans* and *signatum*. Incidentally, this pair of correlative concepts and labels were adopted by Saussure only at the middle of his last course in general linguistics, maybe through the medium of H. Gomperz's *Noologie* (1908). The outlined doctrine underlies the medieval philosophy of language in its magnificent growth, depth and variety of approaches. The twofold character and the consequent "double cognition" of any sign, in Ockham's terms, was thoroughly assimilated by the scientific thought of the Middle Ages.

Perhaps the most inventive and versatile among American thinkers was Charles Sanders Peirce (1839-1914), so great that no university found a place for him. His first, perspicacious attempt at a classification of signs—"On a New List of Categories"—appeared in the *Proceedings of the American Academy of Arts and Sciences*, 1867, and forty years later, summing up his "life long study of the nature of signs" the author stated: "I am, as far as I know, a pioneer, or rather a backwoodsman, in the work of clearing and opening up what I call *semiotic*, that is, the doctrine of the essential nature and fundamental varieties of possible semiosis; and I find the field too vast, the labor too great, for a first-comer." He keenly realized the inadequacy of general theoretical premises in the research of his contemporaries. The very name for his science of signs goes back to the antique *sêmeiôtikê*; Peirce praised and widely utilized the experience of the ancient and medieval logicians, "thinkers of the highest order," while condemning severely the usual "barbarous rage" against "the marvellous acuteness of the Schoolmen." In 1903 he expressed a firm belief that if the early "doctrine of signs" had not been sunk but pursued with zeal and genius, the twentieth century might have opened with such vitally important special sciences as, for instance, linguistics "in a decidedly more advanced condition than there is much promise that they will have reached at the end of 1950."

From the end of the last century a similar discipline was fervently advocated by Saussure. Stimulated in turn by Greek

impetus, he called it semiology and expected this new branch of learning to elucidate the essence and governing laws of signs. In his view, linguistics was to become but a part of this general science and would determine what properties make language a separate system in the totality of "semiological facts." It would be interesting to find out whether there is some genetic relation or merely a convergence between the efforts of both scholars toward this comparative investigation of sign systems.

Half a century of Peirce's semiotic drafts are of epochal significance, and if they had not remained for the most part unpublished until the 1930's, or if at least the printed works had been known to linguists, they would certainly have exerted an unparalleled influence upon the international development of linguistic theory.

Peirce likewise makes a clear-cut distinction between the "material qualities," the signans of any sign, and its "immediate interpretant," that is, the signatum. Signs (or *representamina* in Peirce's nomenclature) offer three basic varieties of semiosis, three distinct "representative qualities" based on different relationships between the signans and signatum. This difference enables him to discern three cardinal types of signs.

1) *Icon* acts chiefly by factual similarity between its signans and signatum, e.g., between the picture of an animal and the animal pictured; the former stands for the latter "merely because it resembles it."

2) *Index* acts chiefly by factual, existential contiguity between its signans and signatum, and "psychologically, the action of indices depends upon association by contiguity;" e.g., smoke is an index of a fire, and the proverbial knowledge that "where there is smoke, there is fire" permits any interpreter of smoke to infer the existence of fire irrespective of whether or not the fire was lighted intentionally in order to attract someone's attention; Robinson Crusoe found an index: its signans was a footprint in the sand, and the inferred signatum, the presence of some human creature on his island; the acceleration of pulse as a probable symptom of fever is, in Peirce's view, an index, and in such cases his semiotic actually merges with the medical inquiry into the symptoms of diseases which is labeled semeiotics, semeiology or symptomatology.

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3) *Symbol* acts chiefly by imputed, learned contiguity between signans and signatum. This connection “consists in its being a rule” and does not depend on the presence or absence of any similarity or physical contiguity. The knowledge of this conventional rule is obligatory for the interpreter of any given symbol, and solely and simply because of this rule the sign will be actually interpreted. Originally the word *symbol* was used in a similar sense also by Saussure and his disciples, yet later he objected to this term because it traditionally involves some natural bond between the signans and signatum (e.g., the symbol of justice, a pair of scales), and in his notes the conventional signs pertaining to a conventional system were tentatively labeled *seme*, while Peirce had selected the term *seme* for a special, quite different purpose. It suffices to confront Peirce’s use of the term *symbol* with the various meanings of *symbolism* to perceive the danger of annoying ambiguities; but the lack of a better substitute compels us for the time being to preserve the term introduced by Peirce.

The resumed semiotic deliberations revive the question, astutely discussed in *Cratylus*, Plato’s fascinating dialogue: does language attach form to content “by nature” (*physei*), as the title hero insists, or “by convention” (*thesei*), according to the counterarguments of Hermogenes. The moderator Socrates in Plato’s dialogue is prone to agree that representation by likeness is superior to the use of arbitrary signs, but despite the attractive force of likeness he feels obliged to accept a complementary factor—conventionality, custom, habit.

Among scholars who treated this question in the footsteps of Plato’s Hermogenes, a significant place belongs to the Yale linguist Dwight Whitney (1827-1894), who exerted a deep influence on European linguistic thought by promoting the thesis of language as a social institution. In his fundamental books of the 1860’s and 70’s, language was defined as a system of arbitrary and conventional signs (Plato’s *epitykhonta* and *synthêmata*). This doctrine was borrowed and expanded by F. de Saussure, and it entered into the posthumous edition of his *Cours de linguistique générale*, adjusted by his disciples C. Bally and A. Sechehaye (1916). The teacher declares: “On the essential point it seems to us that the American linguist is

right: language is a convention, and the nature of the sign that is agreed upon (*dont on est convenu*) remains indifferent." Arbitrariness is posited as the first of two basic principles for defining the nature of the verbal sign: "The bond uniting the signans with the signatum is arbitrary." The commentary points out that no one has controverted this principle "but it is often easier to discover a truth than to assign to it the appropriate place.

The principle stated dominates all the science of language [*la langue* in the Saussurian sense of this term, i.e., the verbal code] and its consequences are innumerable." In accord with Bally and Sechehaye, A. Meillet and J. Vendryès also emphasized the "absence of connection between meaning and sound," and Bloomfield echoed the same tenet: "The forms of language are arbitrary."

As a matter of fact, the agreement with the Saussurian dogma of arbitrary sign was far from unanimous. In Otto Jespersen's opinion (1916) the role of arbitrariness in language was excessively overstated and neither Whitney nor Saussure succeeded in solving the problem of relationship between sound and meaning. J. Damourette, E. Pichon's and D. L. Bolinger's rejoinders were identically entitled: "Le signe n'est pas arbitraire" (1927), "The sign is not arbitrary" (1949). E. Benveniste in his timely essay "Nature du signe linguistique" (1939) brought out the crucial fact that only for a detached, alien onlooker is the bond between the signans and signatum a mere contingency, whereas for the native user of the same language this relation changes into a necessity.

Saussure's fundamental request for an intrinsic linguistic analysis of any idiosynchronic system obviously invalidates the reference to sound and meaning differences in space and time as an argument for the arbitrary connection between both constituents of the verbal sign. The Swiss-German peasant woman who allegedly asked why cheese is called *fromage* by her French countrymen—"Käse ist doch viel natürlicher!"—displayed a much more Saussurian attitude than those who assert that every word is an arbitrary sign instead of which any other could be used for the same purpose. But is this natural necessity due exclusively to pure habit? Do verbal signs—for they are

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symbols—act “by virtue only of there being a habit that associates” their signatum with their signans?

One of the most important features of Peirce’s semiotic classification is his shrewd cognizance that the difference between the three basic classes of signs is merely a difference in relative hierarchy. It is not the presence or absence of similarity or contiguity between the signans and signatum, nor the purely factual or purely imputed, habitual connection between both constituents which underlies the division of signs into icons, indices and symbols, but merely the predominance of one of these factors over the others. Thus the scholar refers to “icons in which the likeness is aided by conventional rules,” and one may recollect the diverse techniques of perspective which the spectator must learn in order to apprehend paintings of dissimilar artistic schools; the differences in the size of figures have divergent meanings in the various pictorial codes; in certain medieval traditions of painting, villains are specifically and consistently represented in profile, and in ancient Egyptian art only en face. Peirce claims that “it would be difficult, if not impossible, to instance an absolutely pure index, or to find any sign absolutely devoid of the indexical quality.” Such a typical index as a pointing finger carries dissimilar connotations in different cultures; for instance, in certain South African tribes the object pointed at is thus damned. On the other hand, “the symbol will involve a sort of index,” and “without indices it is impossible to designate what one is talking about.”

Peirce’s concern with different ranks of coassistance of the three functions in all three types of signs, and in particular his scrupulous attention to the indexical and iconic components of verbal symbols, is intimately linked with his thesis that “the most perfect of signs” are those in which the iconic, indexical, and symbolic characters “are blended as equally as possible.” Conversely, Saussure’s insistence on the conventionality of language is bound to his assertion that “The entirely arbitrary signs are the most appropriate to fulfill the optimum semiotic process.”

The indexical elements of language were discussed in my study “Shifters, Verbal Categories, and the Russian Verb” (1957); now let us attempt to approach the linguistic pattern in its iconic aspect and to give an answer to Plato’s question, by

what kind of imitation (*mimêsis*) does language attach the signans to the signatum.

The chain of verbs—*Veni, vidi, vici*—informs us about the order of Caesar's deeds first and foremost because the sequence of co-ordinate preterits is used to reproduce the succession of reported occurrences. The temporal order of speech events tends to mirror the order of narrated events in time or in rank. Such a sequence as "the President and the Secretary of State attended the meeting" is far more usual than the reverse, because the initial position in the clause reflects the priority in official standing.

The correspondence in order between the signans and signatum finds its right place among the "fundamental varieties of possible semiosis" which were outlined by Peirce. He singled out two distinct subclasses of icons—*images* and *diagrams*. In images the signans represents the "simple qualities" of the signatum, whereas for diagrams the likeness between the signans and signatum consists "only in respect to the relations of their parts." Peirce defined a diagram as "a *representamen* which is predominantly an icon of relation and is aided to be so by conventions." Such an "icon of intelligible relations" may be exemplified by two rectangles of different size which exhibit a quantitative comparison of steel production in the USA and the USSR. The relations in the signans correspond to the relations in the signatum. In such a typical diagram as statistical curves the signans presents an iconic analogy with the signatum as to the relations of their parts. If a chronological diagram symbolizes the ratio of increase in population by a dotted line and mortality by a continuous line, these are, in Peirce's parlance, "symbolide features." Theory of diagrams occupies an important place in Peirce's semiotic research; he acknowledges their considerable merits which spring from their being "veridically iconic, naturally analogous to the thing represented." The discussion of different sets of diagrams leads him to the ascertainment that "every algebraic equation is an icon, insofar as it exhibits by means of the algebraic signs (which are not themselves icons) the relations of the quantities concerned." Any algebraic formula appears to be an icon, "rendered such by the rules of commutation, association, and distribution of the

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symbols." Thus "algebra is but a sort of diagram," and "language is but a kind of algebra." Peirce vividly conceived that "the arrangement of the words in the sentence, for instance, must serve as *icons*, in order that the sentence may be understood.

When discussing the grammatical universals and near-universals detected by J. H. Greenberg, I noted that the order of meaningful elements by virtue of its palpably iconic character displays a particularly clear-cut universalistic propensity (cf. the report *Universals of Language*, ed. by J. H. Greenberg, 1963). Precisely therefore the precedence of the conditional clause, with regard to the conclusion, is the only admitted or primary, neuter, nonmarked order in the conditional sentences of all languages. If almost everywhere, again according to Greenberg's data, the only, or at least the predominant, basic order in declarative sentences with nominal subject and object is one in which the former precedes the latter, this grammatical process obviously reflects the hierarchy of the grammatical concepts. The subject on which the action is predicated is, in Edward Sapir's terms, "conceived of as the starting point, the 'doer' of the action" in contradistinction to "the end point, the 'object' of the action." The subject, the only independent term in the clause, singles out what the message is about. Whatever the actual rank of the agent, he is necessarily promoted to hero of the message as soon as he assumes the role of its subject. "The subordinate obeys the principal." Notwithstanding the table of ranks, attention is first of all focused on the subordinate as agent, turns thereupon to the undergoer, the "goal" of his action, the principal obeyed. If, however, instead of an action effected, the predicate outlines an action undergone, the role of subject is assigned to the patient: "The principal is obeyed by the subordinate." The inmissibility of the subject and the optional character of the object underscore the hierarchy discussed: "The subordinate obeys; the principal is obeyed." As centuries of grammatical and logical scrutiny have brought to light, predication is so cardinally different from all other semantic acts that the forced reasoning intended to level subject and object must be categorically rejected.

The investigation of diagrams has found further development in modern graph theory. When reading the stimulating book

Structural Models (1965) by F. Harary, R. Z. Norman, and D. Cartwright, with its thorough description of manifold directed graphs, the linguist is struck by their conspicuous analogies with the grammatical patterns. The isomorphic composition of the signans and signatum displays in both semiotic fields very similar devices which facilitate an exact transposition of grammatical, especially syntactic, structures into graphs. Such linguistic properties as the connectedness of linguistic entities with each other and with the initial and final limit of the sequence, the immediate neighborhood and distance, the centrality and peripherality, the symmetrical and asymmetrical relations, and the elliptic removal of single components find their close equivalents in the constitution of graphs. The literal translation of an entire syntactic system into a set of graphs permits us to detach the diagrammatic, iconic forms of relations from the strictly conventional, symbolic features of that system.

Not only the combination of words into syntactic groups but also the combination of morphemes into words exhibits a clear-cut diagrammatic character. Both in syntax and in morphology any relation of parts and wholes agrees with Peirce's definition of diagrams and their iconic nature. The substantial semantic contrast between roots as lexical and affixes as grammatical morphemes finds a graphic expression in their different position within the word; affixes, particularly inflectional suffixes, in languages where they exist, habitually differ from the other morphemes by a restricted and selected use of phonemes and their combinations. Thus the only consonants utilized in the productive inflectional suffixes of English are the dental continuant and stop, and their cluster *-st*. Of the 24 obstruents of the Russian consonantal pattern, only four phonemes, saliently opposed to each other, function in the inflectional suffixes.

Morphology is rich in examples of alternate signs which exhibit an equivalent relation between their signantia and signata. Thus, in various Indo-European languages, the positive, comparative, and superlative degrees of adjectives show a gradual increase in the number of phonemes, e.g., *high-higher-highest*, *altus-altior-altissimus*. In this way the signantia reflect the gradation gamut of the signata.

There are languages where the plural forms are distinguished

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from the singular by an additional morpheme, whereas, according to Greenberg, there is no language in which this relation would be the reverse and, in contradistinction to the singular forms, the plural ones would be totally devoid of such an extra morpheme. The signans of the plural tends to echo the meaning of a numeral increment by an increased length of the form. Cf. the finite verbal forms of the singular and the corresponding plural forms with longer endings: 1. *je finis—nous finissons*, 2. *tu finis—vous finissez*, 3. *il finit—ils finissent*; or in Polish: 1. *znam* (I know)—*znamy*, 2. *znasz—znacie*, 3. *zna—znają*. In the declension of Russian nouns the real (non-zero) endings are longer in the plural than in the singular form of the same grammatical case. When one traces the varied historical processes which persistently built up the diagram—longer plural/shorter singular forms—in diverse Slavic languages, these and many similar facts of linguistic experience prove to be at variance with the Saussurian averment that “in the sound structure of the signans there is nothing which would bear any resemblance to the value or meaning of the sign.”

Saussure himself attenuated his “fundamental principle of arbitrariness” by making a distinction between the “radically” and “relatively” arbitrary elements of language. He assigned to the latter category those signs which may be dissociated on the syntagmatic axis into constituents identifiable on the paradigmatic axis. Yet also such forms as the French *berger* (from *berbicularius*) ‘shepherd’, in Saussure’s view “completely unmotivated,” could undergo a similar analysis, since *-er* is associated with the other specimens of this agentive suffix and occupies the same place in other words of the same paradigmatic series as *vacher* ‘cowboy’, etc. Furthermore, the search for the connection between the signans and signatum of the grammatical morphemes must involve not only the instances of their complete formal identity but also such situations where different affixes share a certain grammatical function and one constant phonemic feature. Thus the Polish instrumental case in its various endings for the different genders, numbers, and parts of speech consistently contains the nasality feature in its last consonant or vowel. In Russian the phoneme *m* (represented by two automatic alternants—one with and the other without palatalization) occurs

in the endings of marginal cases (instrumental, dative, locative), but never in other classes of grammatical cases. Hence separate phonemes or distinctive features within grammatical morphemes may serve as autonomous indicators of certain grammatical categories. Saussure's remark about "the role of relative motivation" may be applied to such performances of morphemic sub-units: "The mind manages to introduce a principle of order and regularity in certain parts of the body of signs."

Saussure described two drifts in language—the tendency to use the lexical tool, that is, the unmotivated sign, and the preference given to the grammatical instrument, in other words, to the constructional rule. Sanskrit appeared to him a specimen of an ultragrammatical, maximally motivated system, whereas in French as compared to Latin he found that "absolute arbitrariness which, in point of fact, is the proper condition of the verbal sign." It is noteworthy that Saussure's classification had recourse to morphological criteria only, while syntax was actually laid aside. This oversimplified bipolar scheme is substantially amended by Peirce's, Sapir's, and Whorf's insight into wider, syntactic problems. In particular, Benjamin Whorf, with his emphasis on "the algebraic nature of language," knew how to abstract from individual sentences the "designs of sentence structure" and argued that "the *patternment* aspect of language always overrides and controls the *lexation* or name-giving aspect." Thus the distinctly diagrammatic constituents in the system of verbal symbols are universally superimposed upon the vocabulary.

When abandoning grammar and approaching the strictly lexical problems of roots and further indissociable one-morpheme words (the lexicon's *stoikheia* and *prôta onomata*, as they are labeled in *Cratylus*), we must ask ourselves, as did the participants of Plato's dialogue, whether at this point it would be advisable to stop and abandon the discussion of the internal connection between signans and signatum or whether, without clever evasions, one must "play the game till the end and investigate these questions vigorously."

In French *ennemi*, as stated by Saussure, "*ne se motive par rien*," yet in the expression *ami et ennemi* a Frenchman can hardly overlook the affinity of both juxtaposed rhyme words. *Father*, *mother*, and *brother* are indivisible into root and suffix,

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but the second syllable of these kinship terms is felt as a kind of phonemic allusion to their semantic proximity. There are no synchronic rules which would govern the etymological connection between *ten*, *-teen*, and *-ty*, as well as between *three*, *thirty*, and *third* or *two*, *twelve*, *twenty*, *twi-* and *twin*, but nevertheless an obvious paradigmatic relationship continues to bind these forms into serried families. However opaque is the vocable *eleven*, a slight connection with the sound shape of *twelve* supported by the immediate neighborhood of both numerals is still seizable.

A vulgarized application of information theory could prompt us to expect a tendency toward dissimilation of contiguous numerals, like the change of *zwei* (2) into *zwou* introduced by the Berlin telephone directory to avoid any confusion with *drei* (3). However, in various languages an opposite, assimilatory tendency prevails among adjacent cardinals. Thus Russian attests a gradual attraction within every pair of simple numerals, e.g., *sem'* (7)—*vosem'* (8), *devjat'* (9)—*desjat'* (10). The similarity of signantia enforces the junction of the paired numerals.

Coinages such as *slithy* from *slimy* and *lithe*, and multiform varieties of blends and portmanteaus display a mutual adhesion of simple words resulting in a joint interaction of their signantia and signata.

D. L. Bolinger's paper cited above convincingly documents "the vast importance of cross influences" between sound and meaning and the "constellations of words having similar meanings tied to similar sounds" whatever the origin of such constellations may be (e.g., *bash*, *mash*, *smash*, *crash*, *dash*, *lash*, *bash*, *rash*, *brash*, *clash*, *trash*, *plash*, *splash*, and *flash*). Such vocables border upon onomatopoeic words where again the genetic questions are quite immaterial for synchronic analysis.

Paronomasia, a semantic confrontation of phonemically similar words irrespective of any etymological connection, plays a considerable role in the life of language. A vocalic apophony underlies the punning title of a magazine article "Multilateral Force or Farce?" In the Russian proverb "*Sila solómu lómit*" ('power breaks straw') the connection between the predicate *lómit* and the object *solómu* is internalized by a quasi incorporation of the root *lóm-* into the root *solóm-*; the phoneme *l*

adjacent to the stressed vowel pervades and unites the three parts of the sentence; both consonants of the subject *sila* are repeated in the same order by the object which, so to say, synthesizes the phonemic make-up of the initial and final word of the proverb. Yet on a plain, lexical level the interplay of sound and meaning has a latent and virtual character, whereas in syntax and morphology (both inflection and derivation) the intrinsic, diagrammatic correspondence between the signans and signatum is patent and obligatory.

A partial similarity of two signata may be represented by a partial similarity of signantia, as in the instances discussed above, or by a total identity of signantia, as in the case of lexical tropes. *Star* means either a celestial body or a person—both of pre-eminent brightness. A hierarchy of two meanings—one primary, central, proper, context-free; and the other secondary, marginal, figurative, transferred, contextual—is a characteristic feature of such asymmetrical couples. The metaphor (or metonymy) is an assignment of a signans to a secondary signatum associated by similarity (or contiguity) with the primary signatum.

The grammatical alternations within the roots carry us again into the domain of regular morphological processes. The selection of alternating phonemes may be purely conventional, as for instance the use of front vowels in the Yiddish “umlaut” plurals quoted by Sapir: *tog* ‘day’—*teg* ‘days’, *fus* ‘foot’—*fis* ‘feet’, etc. There are, however, specimens of analogous grammatical “diagrams” with a manifestly iconic value in the alternants themselves, as for instance the partial or entire reduplication of the root in the plural, iterative, durative or augmentative forms of various African and American languages. In Basque dialects palatalization which heightens the tonality of consonants brings about the concept of diminution. The replacement of grave vowels or consonants by acute, compact by diffuse, continuous consonants by discontinuous, and unchecked by checked (glottalized), which is used in a few American languages for “the addition to the meaning of the word of a diminutive idea,” and the reverse substitutions in order to express an augmentative, intensive grade, are based on the latent synesthetic value inherent in certain phonemic oppositions. This value, easily detectable by tests and experiments in sound perception and particularly

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manifest in children's language, may build scales of "diminutivized" or "augmentativized" meanings as opposed to the neutral one. The presence of a grave or acute phoneme in the root of a Dakota or Chinookan word does not signal by itself a higher or lower degree of intensity, whereas the co-existence of two alternant sound forms of one and the same root creates a diagrammatic parallelism between the opposition of two tonal levels in the signantia and of two grading values in the respective signata.

Apart from these relatively rare instances of grammatical utilization, the autonomous iconic value of phonemic oppositions is damped down in purely cognitive messages but becomes particularly apparent in poetic language. Stéphane Mallarmé, amazingly sensitive to the sound texture of language, observed in his essay *Crise de vers* that the word *ombre* is actually shady, but *ténèbres* (with its acute vowels) suggests no darkness, and he felt deeply deceived by the perverse attribution of the meanings 'day' to the word *jour* and 'night' to the word *nuit* in spite of the obscure timbre of the former and the light one of the latter. Verse, however, as the poet claimed, *rémunère le défaut des langues*. A perusal of nocturnal and diurnal images in French poetry shows how *nuit* darkens and *jour* brightens when the former is surrounded by a context of grave and flat vowels, and when the latter dissolves in a sequence of acute phonemes. Even in usual speech a suitable phonemic environment, as the semanticist Stephen Ullmann remarked, can reinforce the expressive quality of a word. If the distribution of vowels between the Latin *dies* and *nox* or between the Czech *den* and *noc* fits the poetic chiaroscuro, French poetry drapes the "contradictory" vocables or replaces the imagery of daylight and nightly darkness by the contrast of heavy, stifling day and airy night, for this contrast is supported by another synesthetic connotation which associates the low tonality of the grave phonemes with heaviness and correspondingly the high tonality of the acute phonemes with light weight.

Poetic language reveals two effective causes in sound texture—the selection and constellation of phonemes and their components; the evocative power of these two factors, although concealed, is still implicit in our customary verbal behavior.

The final chapter of Jules Romains' novel *Les amours enfantines* is entitled "Rumeur de la rue Réaumur." The name of this Paris street is said by the writer to resemble a song of wheels and walls and various other forms of urban trepidation, vibration and rumbling. These motifs, tightly fused with the book's theme of flux and reflux, are embodied in the sound shape of *rue Réaumur*. Among the consonantal phonemes of this name there are only sonorants; the sequence consists of four sonorants (S) and four vowels (V): SVSV—VSVS, a mirror symmetry, with the group *ru* at the beginning and its reversal *ur* at the end. The initial and final syllables of the name are thrice echoed by the verbal environment: *rue Réaumur, ru-meur, roues... murailles, trépidation d'immeubles*. The vowels of these corresponding syllables display three phonemic oppositions: 1) grave (back) versus acute (front); 2) flat (rounded) versus nonflat (unrounded); 3) diffuse (close) versus nondiffuse (open):

	ru	meur	ru	ré	au	mur	rou	mur	ré	meu
grave	- -		- -		+	-	+	-	- -	
flat	+ +		+	-	+ +		+ +		-	+
diffuse	+	-	+	- -		+	+ +		- -	

The cunning intertexture of identical and contrasting features in this "song of wheels and walls," prompted by a hackneyed street sign, gives a decisive answer to Pope's claim: "The sound must be an echo to the sense."

When postulating two primordial linguistic characters—the arbitrariness of the sign and the linearity of the signans—Saussure attributed to both of them an equally fundamental importance. He was aware that if they are true, these laws would have "incalculable consequences" and determine "the whole mechanism of language." However, the "system of diagrammatization," patent and compulsory in the entire syntactic and morphological pattern of language, yet latent and virtual in its lexical aspect, invalidates Saussure's dogma of arbitrariness, while

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the other of his two “general principles”—the linearity of the signans—has been shaken by the dissociation of phonemes into distinctive features. With the removal of these fundamentals their corollaries in turn demand revision.

Thus Peirce’s graphic and palpable idea that “a symbol may have an icon or [let us rewrite this conjunction in an up-to-date style: and/or] an index incorporated into it” opens new, urgent tasks and far-reaching vistas to the science of language. The precepts of this “backwoodsman in semiotic” are fraught with vital consequences for linguistic theory and praxis. The iconic and indexical constituents of verbal symbols have too often remained underestimated or even disregarded; on the other hand, the predominantly symbolic character of language and its subsequent cardinal difference from the other, chiefly indexical or iconic, sets of signs likewise await due consideration in modern linguistic methodology.

The *Metalogicus* by John of Salisbury supplied Peirce with his favorite quotation: “*Nominantur singularia, sed universalia significantur.*” How many futile and trivial polemics could have been avoided among students of language if they had mastered Peirce’s *Speculative Grammar*, and particularly its thesis that “a genuine symbol is a symbol that has a general meaning” and that this meaning in turn “can only be a symbol,” since “*omne symbolum de simbolo.*” A symbol is not only incapable of indicating any particular thing and necessarily “denotes a kind of thing” but “it is itself a kind and not a single thing.” A symbol, for instance a word, is a “general rule” which signifies only through the different instances of its application, namely the pronounced or written—thinglike—*replicas*. However varied these embodiments of the word, it remains in all these occurrences “one and the same word.”

The prevalently symbolic signs are the only ones which through their possession of general meaning are able to form propositions, whereas “icons and indices assert nothing.” One of Charles Peirce’s posthumous works, the book *Existential Graphs* with his subtitle “My chef d’oeuvre,” concludes the analysis and classification of signs with a succinct outlook toward the creative power (*energeia*) of language: “Thus the mode of being of the symbol is different from that of the icon and from

that of the index. An icon has such being as belongs to past experience. It exists only as an image in the mind. An index has the being of present experience. The being of a symbol consists in the real fact that something surely will be experienced if certain conditions be satisfied. Namely, it will influence the thought and conduct of its interpreter. Every word is a symbol. Every sentence is a symbol. Every book is a symbol...The value of a symbol is that it serves to make thought and conduct rational and enables us to predict the future." This idea was repeatedly broached by the philosopher: to the indexical *hic et nunc* he persistently opposed the "general law" which underlies any symbol: "Whatever is truly general refers to the indefinite future, for the past contains only a certain collection of such cases that have occurred. The past is actual fact. But a general law cannot be fully realized. It is a potentiality; and its mode of being is *esse in futuro*." Here the thought of the American logician crosses paths with the vision of Velimir Khlebnikov, the most original poet of our century, in whose commentary of 1919 to his own works one reads: "I have realized that the homeland of creation lies in the future; thence wafts the wind from the gods of the word."