from Roman Jakobson, ON LANGUAGE

Two Aspects of Language and Two Types of Aphasic Disturbances

Jakobson starts here from the two axes of language: paradigmatic, which involves the association of substitutable entities (*in absentia*), and syntagmatic, which involves simultaneous or successive combinations (*in praesentia*). He argues that the paradigmatic-syntagmatic dichotomy covers two different realities of language, one of which is operational and the other structural. On the one hand, selection and combination are the two basic modes of behavior by which language users construct (encode) and understand (decode) linguistic messages. On the other hand, similarity and contiguity are the two relations that underlie language structures. Typically, elements in a selection set are associated by similarity, those in combination by contiguity. Applying these dichotomies to the study of abnormal speech behavior, Jakobson divides all aphasic disturbances into two major types: similarity disorders and contiguity disorders.

In the last section, he associates similarity and contiguity with the most common figures of speech: metaphor and metonymy. Metaphor, based on similarity, is the fundamental trope of poetry, since poetry is dominated by similarity relations of various sorts (see Chapter 4 and the Introduction). Metonymy, based on contiguity, is the major figure of prose, since prose uses contiguity relations (see RJ 1921a). Elaborating further on this bipolar structure of language, Jakobson shows that it is also a property of other semiotic systems.

This classic essay, which was first published in 1956, has served as a source of inspiration for linguists, aphasiologists, literary theorists, and

semioticians. Its importance is twofold: on the one hand, it proposes a unitary view of semiotics, since all sign systems share the two basic axes; on the other, it makes it clear that the same principles are at work in different areas of language structure, including phonology, morphology, syntax, semantics, and discourse.

The Linguistic Problems of Aphasia

If aphasia is a language disturbance, as the term itself suggests, then any description and classification of aphasic syndromes must begin with the question of what aspects of language are impaired in the various species of such a disorder. This problem, which was approached long ago by Hughlings Jackson (1915), cannot be solved without the participation of professional linguists familiar with the patterning and functioning of language.

To study adequately any breakdown in communication we must first understand the nature and structure of the particular mode of communication that has ceased to function. Linguistics is concerned with language in all its aspects—language in operation, language in drift (see Sapir 1921:chap. 7), language in the nascent state, and language in dissolution.

There are psychopathologists who assign a high importance to the linguistic problems involved in the study of language disturbances;[1] some of these questions have been touched upon in the best treatises on aphasia.[2] Yet, in most cases, this valid insistence on the linguist's contribution to the investigation of aphasia has been ignored. For instance, one book, dealing to a great extent with the complex and intricate problems of infantile aphasia, calls for the coordination of various disciplines and appeals for cooperation to otolaryngologists, pediatricians, audiologists, psychiatrists, and educators; but the science of language is passed over in silence, as if disorders in speech perception had nothing whatever to do with language (Myklebust 1954).

Linguists are also responsible for the delay in undertaking a joint inquiry into aphasia. Nothing comparable to the minute linguistic observations of infants of various countries has been performed with respect to aphasics. Nor has there been any attempt to reinterpret and systematize from the point of view of linguistics the multifarious clinical data on diverse types of aphasia. That this should be true is all the more surprising in view of the fact that, on the one hand, the amazing progress of structural linguistics has endowed the investigator with efficient tools and methods for the study of verbal regression and, on the other, the

aphasic disintegration of the verbal pattern may provide the linguist with new insights into the general laws of language.

The application of purely linguistic criteria to the interpretation and classification of aphasic facts can substantially contribute to the science of language and language disturbances, provided that linguists remain as careful and cautious when dealing with psychological and neurological data as they have been in their traditional field. First of all, they should be familiar with the technical terms and devices of the medical disciplines dealing with aphasia; then, they must submit the clinical case reports to thorough linguistic analysis; further, they should themselves work with aphasic patients in order to approach the cases directly and not only through a reinterpretation of prepared records which have been quite differently conceived and elaborated.

There is one level of aphasic phenomena where amazing agreement has been achieved between those psychiatrists and linguists who have tackled these problems, namely the disintegration of the sound pattern.[3] This dissolution exhibits a time order of great regularity. Aphasic regression has proved to be a mirror of the child's acquisition of speech sounds: it shows the child's development in reverse. Furthermore, comparison of child language and aphasia enables us to establish several *laws of implication*. The search for this order of acquisitions and losses and for the general laws of implication cannot be confined to the phonemic pattern but must be extended also to the grammatical system.[4]

The Twofold Character of Language

Speech implies a selection of certain linguistic entities and their combination into linguistic units of a higher degree of complexity. At the lexical level this is readily apparent: the speaker selects words and combines them into sentences according to the syntactic system of the language he is using; sentences in their turn are combined into utterances. But the speaker is by no means a completely free agent in his choice of words: his selection (except for the rare case of actual neology) must be made from the lexical storehouse which he and his addressee possess in common. The communication engineer most properly approaches the essence of the speech event when he assumes that in the optimal exchange of information the speaker and the listener have at their disposal more or less the same "filing cabinet of *prefabricated* representations": the addresser of a verbal message selects one of these "preconceived possibilities," and the addressee is supposed to make an identical choice from the same assembly of "possibilities already foreseen and provided

for" (MacKay 1952:183). Thus the efficiency of a speech event demands the use of a common code by its participants.

"'Did you say *pig* or *fig?*' said the Cat. 'I said *pig,*' replied Alice" (Carroll 1866:chap. 6). In this peculiar utterance the feline addressee attempts to recapture a linguistic choice made by the addresser. In the common code of the Cat and Alice (spoken English), the difference between a stop and a continuant, other things being equal, may change the meaning of the message. Alice had used the distinctive feature stop versus continuant, rejecting the latter and choosing the former of the two opposites; and in the same act of speech she combined this solution with certain other simultaneous features, using the gravity and the tenseness of /p/ in contradistinction to the acuteness of /t/ and to the laxness of /b/. Thus all these attributes have been combined into a bundle of distinctive features, the so-called phoneme. The phoneme /p/ was then followed by the phonemes /ɪ/ and /g/, themselves bundles of simultaneously produced distinctive features. Hence the *concurrence* of simultaneous entities and the *concatenation* of successive entities are the two ways in which we speakers combine linguistic constituents.

Neither such bundles as /p/ or /f/ nor such sequences of bundles as /pɪg/ or /fɪg/ are invented by the speaker who uses them. Neither can the distinctive feature stop versus continuant nor the phoneme /p/ occur out of context. The stop feature appears in combination with certain other concurrent features, and the repertory of combinations of these features into phonemes such as /p/, /b/, /t/, /d/, /k/, /g/ is limited by the code of the given language. The code sets limitations on the possible combinations of the phoneme /p/ with other following and/or preceding phonemes; and only part of the permissible phoneme sequences are actually utilized in the lexical stock of a given language. Even when other combinations of phonemes are theoretically possible, the speaker, as a rule, is only a word user, not a word coiner. When faced with individual words, we expect them to be coded units. In order to grasp the word *nylon* one must know the meaning assigned to this vocable in the lexical code of modern English.

In any language there exist also coded word groups called "phrase words." The meaning of the idiom *how do you do* cannot be derived by adding together the meanings of its lexical constituents; the whole is not equal to the sum of its parts. Word groups which in this respect behave like single words are a common but nonetheless only marginal case. In order to comprehend the overwhelming majority of word groups, we need be familiar only with the constituent words and with the syntactic rules of their combination. Within these limitations we are free to put words in new contexts. Of course, this freedom is relative, and the pressure of current clichés upon our choice of combinations is consid-

erable. But the freedom to compose quite new contexts is undeniable, despite the relatively low statistical probability of their occurrence.

Thus, in the combination of linguistic units, there is an ascending scale of freedom. In the combination of distinctive features into phonemes, the freedom of the individual speaker is zero: the code has already established all the possibilities which may be utilized in the given language. Freedom to combine phonemes into words is circumscribed; it is limited to the marginal situation of word coinage. In forming sentences with words, the speaker is less constrained. And finally, in the combination of sentences into utterances, the action of compulsory syntactic rules ceases, and the freedom of any individual speaker to create novel contexts increases substantially, although again the numerous stereotyped utterances are not to be overlooked.

Any linguistic sign involves two modes of arrangement:

(1) *Combination.* Any sign is made up of constituent signs and/or occurs only in combination with other signs. This means that any linguistic unit at one and the same time serves as a context for simpler units and/or finds its own context in a more complex linguistic unit. Hence any actual grouping of linguistic units binds them into a superior unit: combination and contexture are two faces of the same operation.

(2) *Selection.* A selection between alternatives implies the possibility of substituting one for the other, equivalent in one respect and different in another. Actually, selection and substitution are two faces of the same operation.

The fundamental role which these two operations play in language was clearly realized by Ferdinand de Saussure. Yet of the two varieties of combination—concurrence and concatenation—it was only the latter, the temporal sequence, which was recognized by the Geneva linguist. Despite his own insight into the phoneme as a set of concurrent distinctive features (*éléments différentiels des phonèmes*), the scholar succumbed to the traditional belief in the linear character of language "which excludes the possibility of pronouncing two elements at the same time" (1966:170).

In order to delimit the two modes of arrangement we have described as combination and selection, de Saussure states that the former "is *in presentia:* it is based on two or several terms jointly present in an actual series," whereas the latter "connects terms *in absentia* as members of a virtual mnemonic series" (p. 123). That is to say, selection (and, correspondingly, substitution) deals with entities conjoined in the code but not in the given message, whereas, in the case of combination, the entities are conjoined in both or only in the actual message. The addressee perceives that the given utterance (message) is a *combination* of constituent parts (sentences, words, phonemes) *selected* from the repository of

all possible constituent parts (the code). The constituents of a context are in a state of *contiguity,* while in a substitution set signs are linked by various degrees of *similarity* which fluctuate between the equivalence of synonyms and the common core of antonyms.

These two operations provide each linguistic sign with two sets of "interpretants," to utilize the effective concept introduced by Charles Sanders Peirce (1932, 1934). There are two references which serve to interpret the sign—one to the code and the other to the context, whether coded or free, and in each of these ways the sign is related to another set of linguistic signs, through an *alternation* in the former case and through an *alignment* in the latter. A given significative unit may be replaced by other, more explicit signs of the same code, whereby its general meaning is revealed, while its contextual meaning is determined by its connection with other signs within the same sequence.

The constituents of any message are necessarily linked with the code by an internal relation and with the message by an external relation. Language in its various aspects deals with both modes of relation. Whether messages are exchanged or communication proceeds unilaterally from the addresser to the addressee, there must be some kind of contiguity between the participants of any speech event to assure the transmission of the message. The separation in space, and often in time, between two individuals, the addresser and the addressee, is bridged by an internal relation: there must be a certain equivalence between the symbols used by the addresser and those known and interpreted by the addressee. Without such an equivalence the message is fruitless: even when it reaches the receiver it does not affect him.

The Similarity Disorder

It is clear that speech disturbances may affect in varying degrees the individual's capacity for combination and selection of linguistic units, and indeed the question of which of these two operations is chiefly impaired proves to be of far-reaching significance in describing, analyzing, and classifying the diverse forms of aphasia. This dichotomy is perhaps even more suggestive than the classical distinction between *emissive* and *receptive* aphasia,[5] indicating which of the two functions in speech exchange, the encoding or the decoding of verbal messages, is particularly affected.

Head (1926) attempted to classify cases of aphasia into definite groups, and to each of these varieties he assigned "a name chosen to signify the most salient defect in the management and comprehension of words and phrases." Following this device, we distinguish two basic types of

aphasia—depending on whether the major deficiency lies in selection and substitution, with relative stability of combination and contexture; or conversely, in combination and contexture, with relative retention of normal selection and substitution. In outlining these two opposite patterns of aphasia, I shall utilize mainly Goldstein's data (1948).

For aphasics of the first type (selection deficiency), the context is the indispensable and decisive factor. When presented with scraps of words or sentences, such a patient readily completes them. His speech is merely reactive: he easily carries on conversation but has difficulties in starting a dialogue; he is able to reply to a real or imaginary addresser when he is, or imagines himself to be, the addressee of the message. It is particularly hard for him to perform, or even to understand, such a closed discourse as the monologue. The more his utterances are dependent on the context, the better he copes with his verbal task. He feels unable to utter a sentence which responds neither to the cue of his interlocutor nor to the actual situation. The sentence "it rains" cannot be produced unless the utterer sees that it is actually raining. The deeper the utterance is embedded in the verbal or nonverbalized context, the higher are the chances of its successful performance by this class of patients.

Likewise, the more a word is dependent on the other words of the same sentence and the more it refers to the syntactic context, the less it is affected by the speech disturbance. Therefore words syntactically subordinated by grammatical agreement or government are more tenacious, whereas the main subordinating agent of the sentence, namely the subject, tends to be omitted. As long as beginning is the patient's main difficulty, it is obvious that he will fail precisely at the starting point, the cornerstone of the sentence pattern. In this type of language disturbance, sentences are conceived as elliptical sequels to be supplied from antecedent sentences uttered, if not imagined, by the aphasic himself or received by him from the other partner in the colloquy, actual if not imaginary. Key words may be dropped or superseded by abstract anaphoric substitutes (cf. Bloomfield 1933:chap. 15). A specific noun, as Freud (1953:22) noticed, is replaced by a very general one, for instance *machin* or *chose* (thing) in the speech of French aphasics. In a dialectal German sample of "amnesic aphasia" observed by Goldstein (1948:246–248), *Ding* (thing) or *Stückel* (piece) was substituted for all inanimate nouns, and *überfahren* (perform) for verbs which were identifiable from the context or situation and therefore appeared superfluous to the patient.

Words with an inherent reference to the context, such as pronouns and pronominal adverbs, and words serving merely to construct the context, such as connectives and auxiliaries, are particularly prone to survive. A typical utterance of a German patient, recorded by Quensel and quoted by Goldstein (p. 302), will serve as illustration: "Ich bin doch

hier unten, na wenn ich gewesen bin ich wees nicht, we das, nu wenn ich, ob das nun doch, noch, ja. Was Sie her, wenn ich, och ich weess nicht, we das hier war ja." (But I am here below, well if I have been I know not, who that, now if I, if that now but, still, yes. What you here, if I, oh I know not, who that here was yes.) Thus only the framework, the connecting links of communication, is spared by this type of aphasia at its critical stage.

In the theory of language, since the early Middle Ages, it has repeatedly been asserted that the word out of context has no meaning. The validity of this statement is, however, confined to aphasia or, more exactly, to one type of aphasia. In the pathological cases under discussion, an iso-lated word means actually nothing but "blab." As numerous tests have disclosed, for such patients two occurrences of the same word in two different contexts are mere homonyms. Since distinctive vocables carry a higher amount of information than homonyms, some aphasics of this type tend to supplant the contextual variants of one word by different terms, each of them specific for the given environment. Thus Goldstein's patient never uttered the word *knife* alone but, according to its use and surroundings, alternately called the knife *pencil-sharpener, apple-parer, bread-knife, knife-and-fork* (p. 62); so the word *knife* was changed from a free form, capable of occurring alone, into a bound form.

"I have a good apartment, entrance hall, bedroom, kitchen," Gold-stein's patient says. "There are also big apartments, only in the rear live bachelors." A more explicit form, the word group *unmarried people,* could have been substituted for *bachelors,* but this univerbal term was selected by the speaker. When repeatedly asked what a bachelor was, the patient did not answer and was "apparently in distress" (p. 270). A reply like "a bachelor is an unmarried man" or "an unmarried man is a bachelor" would present an equational predication and thus a projection of a substitution set from the lexical code of the English language into the context of the given message. The equivalent terms become two correlated parts of the sentence and consequently are tied by contiguity. The patient was able to select the appropriate term *bachelor* when it was supported by the context of a customary conversation about "bachelor apartments" but was incapable of utilizing the substitution set *bachelor* = *unmarried man* as the topic of a sentence because the ability for auton-omous selection and substitution had been affected. The equational sen-tence vainly demanded from the patient carries as its sole information: "*bachelor* means an unmarried man" or "an unmarried man is called a *bachelor.*"

The same difficulty arises when the patient is asked to name an object pointed to or handled by the examiner. The aphasic with a defect in substitution will not supplement the pointing or handling gesture of the

examiner with the name of the object pointed to. Instead of saying, "This is [called] a pencil," he will merely add an elliptical note about its use: "To write." If one of the synonymic signs is present (for instance, the word *bachelor* or the pointing to the pencil), then the other sign (such as the phrase *unmarried man* or the word *pencil*) becomes redundant and consequently superfluous. For the aphasic, both signs are in complementary distribution: if one is performed by the examiner, the patient will avoid its synonym: "I understand everything" or "Ich weiss es schon" will be his typical reaction. Likewise, the picture of an object will cause suppression of its name: a verbal sign is supplanted by a pictorial sign. When the picture of a compass was presented to a patient of Lotmar's, he responded: "Yes, it's a . . . I know what it belongs to, but I cannot recall the technical expression . . . Yes . . . direction . . . to show direction . . . a magnet points to the north" (1933:104). Such patients fail to shift, as Peirce would say, from an index or icon to a corresponding verbal symbol (1932:§§274–307).

Even simple repetition of a word uttered by the examiner seems to the patient unnecessarily redundant, and despite instructions received he is unable to repeat it. Told to repeat the word *no,* Head's patient replied "No, I don't know how to do it." While spontaneously using the word in the context of his answer ("No, I don't . . ."), he could not produce the purest form of equational predication, the tautology $a = a$: /no/ is /no/.

One of the important contributions of symbolic logic to the science of language is its emphasis on the distinction between "object language" and "metalanguage." As Carnap states, "In order to speak *about* any *object language,* we need a *metalanguage*" (1947:4). On these two different levels of language the same linguistic stock may be used; thus we may speak in English (as metalanguage) about English (as object language) and interpret English words and sentences by means of English synonyms, circumlocutions, and paraphrases. Obviously such operations, labeled "metalinguistic" by the logicians, are not their invention; far from being confined to the sphere of science, they prove to be an integral part of our customary linguistic activities. The participants in a dialogue often check whether they are using the same code. "Do you follow me? Do you see what I mean?" the speaker asks, or the listener himself breaks in with "What do you mean?" Then, by replacing the questionable sign with another sign from the same linguistic code or with a whole group of code signs, the sender of the message seeks to make it more accessible to the decoder.

The interpretation of one linguistic sign through other, in some respect homogeneous, signs of the same language is a metalinguistic operation which also plays an essential role in children's language learning. Obser-

vations have disclosed what a considerable place talk about language occupies in the verbal behavior of preschool children.[6] Recourse to metalanguage is necessary both for the acquisition of language and for its normal functioning. The aphasic defect in the "capacity of naming" is properly a loss of metalanguage. As a matter of fact, the examples of equational predication sought in vain from the patients cited above are metalinguistic propositions referring to the English language. Their explicit wording would be: "In the code we use, the name of the indicated object is *pencil*"; or "In the code we use, the word *bachelor* and the circumlocution *unmarried man* are equivalent."

Such an aphasic can switch neither from a word to its synonyms or circumlocutions nor to its heteronyms (equivalent expressions in other languages). Loss of bilingualism and confinement to a single dialectal variety of a single language is a symptomatic manifestation of this disorder.

According to an old but recurrent bias, a single individual's way of speaking at a given time, labeled "idiolect," has been viewed as the only concrete linguistic reality. In one discussion of this concept the following objections were raised:

> Everyone, when speaking to another person, tries, deliberately or involuntarily, to hit upon a common vocabulary; either to please or simply to be understood or, finally, to bring him out, he uses the terms of his addressee. There is no such thing as private property in language: everything is socialized. Verbal exchange, like any form of intercourse, requires at least two communicators, and idiolect proves to be a somewhat perverse fiction. (RJ 1953c:559)

This statement needs, however, one reservation: for an aphasic who has lost the capacity for code switching, the idiolect indeed becomes the sole linguistic reality. As long as he does not regard another's speech as a message addressed to him in his own verbal pattern, he feels, as a patient of Hemphil and Stengel (1940) expressed it: "I can hear you dead plain but I cannot get what you say . . . I hear your voice but not the words . . . It does not pronounce itself." He considers the other's utterance to be either gibberish or at least in an unknown language.

As noted above, it is the external relation of contiguity which unites the constituents of a context, and the internal relation of similarity which underlies the substitution set. Hence, for an aphasic with impaired substitution and intact contexture, operations involving similarity yield to those based on contiguity. It could be predicted that under these conditions any semantic grouping would be guided by spatial or temporal contiguity rather than by similarity. Actually Goldstein's tests justify such an expectation: a female patient of this type, when asked to list a few names of animals, disposed them in the same order in which she had

seen them in the zoo; similarly, despite instructions to arrange certain objects according to color, size, and shape, she classified them on the basis of their spatial contiguity as home things, office materials, etc. and justified this grouping by a reference to a display window where "it does not matter what the things are" (they do not have to be similar; 1948:61–62, 263–265). The same patient was willing to name the primary hues—red, yellow, green, and blue—but declined to extend these names to the transitional varieties (pp. 268–269), since, for her, words had no capacity to assume additional, shifted meanings associated by similarity with their primary meaning.

One must agree with Goldstein's observation that patients of this type "grasped the words in their literal meaning but could not be brought to understand the metaphoric character of the same words" (p. 270). It would, however, be an unwarranted generalization to assume that figurative speech is altogether incomprehensible to them. Of the two polar figures of speech, metaphor and metonymy, the latter, based on contiguity, is widely employed by aphasics whose selective capacities have been affected. *Fork* is substituted for *knife, table* for *lamp, smoke* for *pipe, eat* for *toaster.* A typical case is reported by Head: "When he failed to recall the name for 'black,' he described it as 'What you do for the dead'; this he shortened to 'dead'" (1926:198). Such metonymies may be characterized as projections from the line of a habitual context into the line of substitution and selection: a sign (*fork*) which usually occurs together with another sign (*knife*) may be used instead of this sign. Phrases like *knife and fork, table lamp, to smoke a pipe* induced the metonymies *fork, table, smoke;* the relation between the use of an object (toast) and the means of its production underlies the metonymy *eat* for *toaster.* "When does one wear black?"—"When mourning the dead": in place of naming the color, the cause of its traditional use is designated. The escape from sameness to contiguity is particularly striking in such cases as Goldstein's patient who would answer with a metonymy when asked to repeat a given word and, for instance, would say *glass* for *window* and *heaven* for *God* (1948:280).

When the selective capacity is strongly impaired and the gift for combination at least partly preserved, then contiguity determines the patient's whole verbal behavior, and we may designate this type of aphasia "similarity disorder."

The Contiguity Disorder

From 1864 on it was repeatedly pointed out in Hughlings Jackson's pioneer contributions to the modern study of language and language disturbances:

> It is not enough to say that speech consists of words. It consists of
> words referring to one another in a particular manner; and, without
> a proper interrelation of its parts, a verbal utterance would be a mere
> succession of names embodying no proposition. (1868:66)

> Loss of speech is the loss of power to propositionize . . . Speech-
> lessness does not mean entire wordlessness. (1879:114)

Impairment of the ability to propositionize or, generally speaking, to
combine simpler linguistic entities into more complex units, is actually
confined to one type of aphasia, the opposite of the type discussed in the
preceding section. There is no wordlessness, since the entity preserved
in most of such cases is the word, which can be defined as the highest
among the linguistic units compulsorily coded—we compose our own
sentences and utterances out of the word stock supplied by the code.

This contexture-deficient aphasia, which could be termed the "conti-
guity disorder," diminishes the extent and variety of sentences. The
syntactic rules organizing words into higher units are lost; this loss, called
"agrammatism," causes the degeneration of the sentence into a mere
"word heap," to use Jackson's image (1866). Word order becomes cha-
otic; the ties of grammatical coordination and subordination, whether
concord or government, are dissolved. As might be expected, words
endowed with purely grammatical functions, like conjunctions, preposi-
tions, pronouns, and articles, disappear first, giving rise to the so-called
telegraphic style, whereas in the case of a similarity disorder they are
the most resistant. The less a word depends grammatically on the context,
the stronger is its tenacity in the speech of aphasics with a contiguity
disorder and the earlier it is dropped by patients with a similarity disorder.
Thus the "kernel subject word" is the first to fall out of the sentence in
cases of similarity disorder, and conversely, it is the least destructible in
the opposite type of aphasia.

The type of aphasia affecting contexture tends to give rise to infantile
one-sentence utterances and one-word sentences. Only a few longer,
stereotyped, ready-made sentences manage to survive. In advanced cases
of this disease, each utterance is reduced to a single one-word sentence.
While contexture disintegrates, the selective operation goes on. "To say
what a thing is, is to say what it is like," Jackson notes (1879:125). The
patient confined to the substitution set (once contexture is deficient) deals
with similarities, and his approximate identifications are of a metaphoric
nature, contrary to the metonymic ones familiar to the opposite type of
aphasics. *Spyglass* for *microscope* or *fire* for *gaslight* are typical exam-
ples of such quasi-metaphoric expressions, as Jackson termed them,
since, in contradistinction to rhetoric or poetic metaphors, they present
no deliberate transfer of meaning.

In a normal language pattern, the word is at the same time both a

constituent part of a superimposed context, the sentence, and itself a context superimposed on ever smaller constituents, morphemes (minimum units endowed with meaning) and phonemes. We have discussed the effect of contiguity disorder on the combination of words into higher units. The relationship between the word and its constituents reflects the same impairment, yet in a somewhat different way. A typical feature of agrammatism is the abolition of inflection: there appear such "unmarked" categories as the infinitive in the place of diverse finite verbal forms and, in languages with declension, the nominative instead of all the oblique cases. These defects are due partly to the elimination of government and concord, partly to the loss of ability to dissolve words into stem and desinence. Finally, a paradigm (in particular a set of grammatical cases such as *he-his-him* or of tenses such as *he votes--he voted*) present the same semantic content from different points of view associated with each other by contiguity; so there is one more impetus for aphasics with a contiguity disorder to dismiss such sets.

Also, as a rule, words derived from the same root, such as *grant-grantor-grantee,* are semantically related by contiguity. The patients under discussion are inclined to drop either the derivative words or the combination of a root with a derivational suffix, and even a compound of two words becomes irresolvable for them. Patients who understood and uttered such compounds as *Thanksgiving* or *Battersea,* but were unable to grasp or say *thanks* and *giving* or *batter* and *sea,* have often been cited. As long as the sense of derivation is still alive, so that this process is still used for creating innovations in the code, one can observe a tendency toward oversimplification and automatism: if the derivative word constitutes a semantic unit which cannot be entirely inferred from the meaning of its components, the Gestalt is misunderstood. Thus the Russian word *mokr-íca* signifies "wood-louse," but a Russian aphasic interpreted it as "something humid," especially "humid weather," since the root *mokr-* means "humid" and the suffix *-ica* designates a carrier of the given property, as in *nelépica* (something absurd), *svetlíca* (light room), *temníca* (dungeon, lit. dark room).

When, before World War II, phonemics was the most controversial area in the science of language, doubts were expressed by some linguists as to whether phonemes really play an autonomous part in our verbal behavior. It was even suggested that the meaningful (significative) units of the linguistic code, such as morphemes or rather words, are the minimal entities with which we actually deal in a speech event, whereas the merely distinctive units, such as phonemes, are an artificial construct to facilitate the scientific description and analysis of a language. This view, which was stigmatized by Sapir (1949a:46–60) as "the reverse of realistic," remains, however, perfectly valid with respect to a certain

pathological type: in one variety of aphasia, which sometimes has been labeled "atactic," the word is the sole linguistic unity preserved. The patient has only an integral, indissolvable image of any familiar word, and all other sound-sequences are either alien and inscrutable to him, or he merges them into familiar words by disregarding their phonetic deviations. One of Goldstein's patients "perceived some words, but . . . the vowels and consonants of which they consisted were not perceived" (1948:218). A French aphasic recognized, understood, repeated, and spontaneously produced the word *café* (coffee) or *pavé* (roadway) but was unable to grasp, discern, or repeat such nonsensical sequences as *féca, faké, kéfa, pafé*. None of these difficulties exists for a normal French-speaking listener as long as the sound sequences and their components fit the French phonemic pattern. Such a listener may even apprehend these sequences as words unknown to him but plausibly belonging to the French vocabulary and presumably different in meaning, since they differ from each other either in the order of their phonemes or in the phonemes themselves.

If an aphasic becomes unable to resolve the word into its phonemic constituents, his control over its construction weakens, and perceptible damage to phonemes and their combinations easily follows. The gradual regression of the sound pattern in aphasics regularly reverses the order of children's phonemic acquisitions. This regression involves an inflation of homonyms and a decrease of vocabulary. If this twofold—phonemic and lexical—disablement progresses further, the last residues of speech are one-phoneme, one-word, one-sentence utterances: the patient relapses into the initial phases of an infant's linguistic development or even to the prelingual stage: he faces *aphasia universalis,* the total loss of the power to use or apprehend speech.

The separateness of the two functions—one distinctive and the other significative—is a peculiar feature of language as compared to other semiotic systems. There arises a conflict between these two levels of language when the aphasic deficient in contexture exhibits a tendency to abolish the hierarchy of linguistic units and to reduce their scale to a single level. The last level to remain is either a class of significative values, the word, as in the cases touched upon, or a class of distinctive values, the phoneme. In the latter case the patient is still able to identify, distinguish, and reproduce phonemes, but loses the capacity to do the same with words. In an intermediate case, words are identified, distinguished, and reproduced; according to Goldstein's acute formulation, they "may be grasped as known but not understood" (p. 90). Here the word loses its normal significative function and assumes the purely distinctive function which normally pertains to the phoneme.

The Metaphoric and Metonymic Poles

The varieties of aphasia are numerous and diverse, but all of them lie between the two polar types just described. Every form of aphasic disturbance consists in some impairment, more or less severe, of the faculty either for selection and substitution or for combination and contexture. The former affliction involves a deterioration of metalinguistic operations, while the latter damages the capacity for maintaining the hierarchy of linguistic units. The relation of similarity is suppressed in the former, the relation of contiguity in the latter type of aphasia. Metaphor is alien to the similarity disorder, and metonymy to the contiguity disorder.

The development of a discourse may take place along two different semantic lines: one topic may lead to another either through their similarity or through their contiguity. The metaphoric way would be the most appropriate term for the first case and the metonymic way for the second, since they find their most condensed expression in metaphor and metonymy respectively. In aphasia one or the other of these two processes is restricted or totally blocked—an effect which makes the study of aphasia particularly illuminating for the linguist. In normal verbal behavior both processes are continually operative, but careful observation will reveal that under the influence of a cultural pattern, personality, and verbal style, preference is given to one of the two processes over the other.

In a well-known psychological test, children are confronted with some noun and told to utter the first verbal response that comes into their heads. In this experiment two opposite linguistic predilections are invariably exhibited: the response is intended either as a substitute for or as a complement to the stimulus. In the latter case the stimulus and the response together form a proper syntactic construction, most usually a sentence. These two types of reaction have been labeled "substitutive" and "predicative."

To the stimulus *hut* one response was *burnt out;* another, *is a poor little house.* Both reactions are predicative; but the first creates a purely narrative context, while in the second there is a double connection with the subject *hut:* on the one hand, a positional (namely, syntactic) contiguity, and on the other, a semantic similarity.

The same stimulus produced the following substitutive reactions: the tautology *hut;* the synonyms *cabin* and *hovel;* the antonym *palace;* and the metaphors *den* and *burrow.* The capacity of two words to replace one another is an instance of positional similarity; in addition, all these responses are linked to the stimulus by semantic similarity (or contrast). Metonymical responses to the same stimulus, such as *thatch, litter,* or

poverty, combine and contrast the positional similarity with semantic contiguity.

In manipulating these two kinds of connection (similarity and contiguity) in both their aspects (positional and semantic)—selecting, combining, and ranking them—an individual exhibits his personal style, his verbal predilections and preferences.

In verbal art the interaction of these two elements is especially pronounced. Rich material for the study of this relationship is to be found in verse patterns which require a compulsory parallelism between adjacent lines, for example in biblical poetry or in the Finnic and, to some extent, the Russian oral traditions. This provides an objective criterion of what in the given speech community acts as a correspondence. Since on any verbal level—morphemic, lexical, syntactic, and phraseological —either of these two relations (similarity and contiguity) can appear, and each in either of two aspects, an impressive range of possible configurations is created. Either of the two gravitational poles may prevail. In Russian lyrical songs, for example, metaphoric constructions predominate, while in the heroic epics the metonymic way is preponderant.

In poetry there are various motives which determine the choice between these alternants. The primacy of the metaphoric process in the literary schools of Romanticism and Symbolism has been repeatedly acknowledged, but it is still insufficiently realized that it is the predominance of metonymy which underlies and actually predetermines the so-called Realist trend, which belongs to an intermediary stage between the decline of Romanticism and the rise of Symbolism and is opposed to both. Following the path of contiguous relationships, the Realist author metonymically digresses from the plot to the atmosphere and from the characters to the setting in space and time. He is fond of synecdochic details. In the scene of Anna Karenina's suicide Tolstoj's artistic attention is focused on the heroine's handbag; and in *War and Peace* the synecdoches "hair on the upper lip" and "bare shoulders" are used by the same writer to stand for the female characters to whom these features belong.

The alternative predominance of one or the other of these two processes is by no means confined to verbal art. The same oscillation occurs in sign systems other than language.[7] A salient example from the history of painting is the manifestly metonymic orientation of Cubism, where the object is transformed into a set of synecdoches; the Surrealist painters responded with a patently metaphoric attitude. Ever since the productions of D. W. Griffith, the art of the cinema, with its highly developed capacity for changing the angle, perspective, and focus of shots, has broken with the tradition of the theater and ranged an unprecedented variety of synecdochic close-ups and metonymic setups in general. In

such motion pictures as those of Charlie Chaplin and Eisenstein (1950), these devices in turn were overlayed by a novel, metaphoric montage with its lap dissolves—the filmic similes (see Balazs 1952).

The bipolar structure of language (or other semiotic systems) and, in aphasia, the fixation on one of these poles to the exclusion of the other require systematic comparative study. The retention of either of these alternatives in the two types of aphasia must be confronted with the predominance of the same pole in certain styles, personal habits, current fashions, etc. A careful analysis and comparison of these phenomena with the whole syndrome of the corresponding type of aphasia is an imperative task for joint research by experts in psychopathology, psychology, linguistics, poetics, and semiotics, the general science of signs. The dichotomy discussed here appears to be of primal significance and consequence for all verbal behavior and for human behavior in general.[8]

To indicate the possibilities of the projected comparative research, I choose an example from a Russian folktale which employs parallelism as a comic device: "Thomas is a bachelor; Jeremiah is unmarried" (*Fomá xólost; Erjóma neženát*). Here the predicates in the two parallel clauses are associated by similarity: they are in fact synonymous. The subjects of both clauses are masculine proper names and hence morphologically similar, while on the other hand they denote two contiguous heroes of the same tale, created to perform identical actions and thus to justify the use of synonymous pairs of predicates. A somewhat modified version of the same construction occurs in a familiar wedding song in which each of the wedding guests is addressed in turn by his first name and patronymic: "Gleb is a bachelor; Ivanovič is unmarried." While both predicates here are again synonyms, the relationship between the two subjects is changed: both are proper names denoting the same man and are normally used contiguously as a mode of polite address.

In the quotation from the folktale, the two parallel clauses refer to two separate facts, the marital status of Thomas and the similar status of Jeremiah. In the verse from the wedding song, however, the two clauses are synonymous: they redundantly reiterate the celibacy of the same hero, splitting him into two verbal hypostases.

The Russian novelist Gleb Ivanovič Uspenskij (1840–1902) in the last years of his life suffered from a mental illness involving a speech disorder. His first name and patronymic, *Gleb Ivanovič,* traditionally combined in polite intercourse, for him split into two distinct names designating two separate beings: Gleb was endowed with all his virtues, while Ivanovič, the name relating a son to his father, became the incarnation of all Uspenskij's vices. The linguistic aspect of this split personality is the patient's inability to use two symbols for the same thing, and it is thus a similarity disorder. Since the similarity disorder is bound up with the

metonymic bent, an examination of the literary manner Uspenskij had employed as a young writer takes on particular interest. And the study of Anatolij Kamegulov (1930), who analyzed Uspenskij's style, bears out our theoretical expectations. He shows that Uspenskij had a particular penchant for metonymy, and especially for synecdoche, and that he carried it so far that "the reader is crushed by the multiplicity of detail unloaded on him in a limited verbal space, and is physically unable to grasp the whole, so that the portrait is often lost" (pp. 65 and 145).[9]

To be sure, the metonymic style in Uspenskij is obviously prompted by the prevailing literary canon of his time, late nineteenth-century "realism"; but the personal stamp of Gleb Ivanovič made his pen particularly suitable for this artistic trend in its extreme manifestations and finally left its mark upon the verbal aspect of his mental illness.

A competition between both devices, metonymic and metaphoric, is manifest in any symbolic process, be it intrapersonal or social. Thus in an inquiry into the structure of dreams, the decisive question is whether the symbols and the temporal sequences used are based on contiguity (Freud's metonymic "displacement" and synecdochic "condensation") or on similarity (Freud's "identification and symbolism" [Freud 1955]). The principles underlying magic rites have been resolved by Frazer (1950: chap. 3) into two types: charms based on the law of similarity and those founded on association by contiguity. The first of these two great branches of sympathetic magic has been called "homeopathic" or "imitative," and the second, "contagious" magic. This bipartition is indeed illuminating. Nonetheless, for the most part, the question of the two poles is still neglected, despite its wide scope and importance for the study of any symbolic behavior, especially verbal, and of its impairments. What is the main reason for this neglect?

Similarity in meaning connects the symbols of a metalanguage with the symbols of the language referred to. Similarity connects a metaphoric term with the term for which it is substituted. Consequently, when constructing a metalanguage to interpret tropes, the researcher possesses more homogeneous means to handle metaphor, whereas metonymy, based on a different principle, easily defies interpretation. Therefore nothing comparable to the rich literature on metaphor (Stutterheim 1941) can be cited for the theory of metonymy. For the same reason, it is generally realized that Romanticism is closely linked with metaphor, whereas the equally intimate ties of Realism with metonymy usually remain unnoticed. Not only the tool of the observer but also the object of observation are responsible for the preponderance of metaphor over metonymy in scholarship. Since poetry is focused upon the sign, and pragmatic prose primarily upon the referent, tropes and figures were studied mainly as poetic devices. The principle of similarity underlies

poetry; the metrical parallelism of lines or the phonic equivalence of rhyming words prompts the question of semantic similarity and contrast; there exist, for instance, grammatical and antigrammatical but never agrammatical rhymes. Prose, on the contrary, is forwarded essentially by contiguity. Thus for poetry, metaphor—and for prose, metonymy—is the line of least resistance, and consequently the study of poetical tropes is directed chiefly toward metaphor. The actual bipolarity has been artificially replaced in these studies by an amputated, unipolar scheme which, strikingly enough, coincides with one of the two aphasic patterns, namely with the contiguity disorder.