E. Sapir (1921)

CHAPTER VI

Types of Linguistic Structure

So far, in dealing with linguistic form, we have been concerned only with single words and with the relations of words in sentences. We have not envisaged whole languages as conforming to this or that general type. Incidentally we have observed that one language runs to tight-knit synthesis where another contents itself with a more analytic, piece-meal handling of its elements, or that in one language syntactic relations appear pure which in another are combined with certain other notions that have something concrete about them, however abstract they may be felt to be in practice. In this way we may have obtained some inkling of what is meant when we speak of the general form of a language. For it must be obvious to any one who has thought about the question at all or who has felt something of the spirit of a foreign language that there is such a thing as a basic plan, a certain cut, to each language. This type or plan or structural "genius" of the language is something much more fundamental, much more pervasive, than any single feature of it that we can mention, nor can we gain an adequate idea of its nature by a mere recital of the sundry facts that make up the grammar of the language. When we pass from Latin to Russian, we feel that it is approximately the same horizon that

bounds our view, even though the near, familiar landmarks have changed. When we come to English, we seem to notice that the hills have dipped down a little, yet we recognize the general lay of the land. And when we have arrived at Chinese, it is an utterly different sky that is looking down upon us. We can translate these metaphors and say that all languages differ from one another but that certain ones differ far more than others. This is tantamount to saying that it is possible to group them into morphological types.

Strictly speaking, we know in advance that it is impossible to set up a limited number of types that would do full justice to the peculiarities of the thousands of languages and dialects spoken on the surface of the earth. Like all human institutions, speech is too variable and too elusive to be quite safely ticketed. Even if we operate with a minutely subdivided scale of types, we may be quite certain that many of our languages will need trimming before they fit. To get them into the scheme at all it will be necessary to overestimate the significance of this or that feature or to ignore, for the time being, certain contradictions in their mechanism. Does the difficulty of classification prove the uselessness of the task? I do not think so. It would be too easy to relieve ourselves of the burden of constructive thinking and to take the standpoint that each language has its unique history, therefore its unique structure. Such a standpoint expresses only a half truth. Just as similar social, economic, and religious institutions have grown up in different parts of the world from distinct historical antecedents, so also languages, traveling along different roads, have tended to converge toward similar forms. Moreover, the historical study of language has proven to us beyond all doubt that a language changes not only gradually but consistently, that it moves unconsciously from one type towards another, and that analogous trends are observable in remote quarters of the globe

From this it follows that broadly similar morphologies must have been reached by unrelated languages, independently and frequently. In assuming the existence of comparable types, therefore, we are not gainsaying the individuality of all historical processes; we are merely affirming that back of the face of history are powerful drifts that move language, like other social products, to balanced patterns, in other words, to types. As linguists we shall be content to realize that there are these types and that certain processes in the life of language tend to modify them. Why similar types should be formed, just what is the nature of the forces that make them and dissolve them—these questions are more easily asked than answered. Perhaps the psychologists of the future will be able to give us the ultimate reasons for the formation of linguistic types.

When it comes to the actual task of classification, we find that we have no easy road to travel. Various classifications have been suggested, and they all contain elements of value. Yet none proves satisfactory. They do not so much enfold the known languages in their embrace as force them down into narrow, straight-backed seats. The difficulties have been of various kinds. First and foremost, it has been difficult to choose a point of view. On what basis shall we classify? A language shows us so many facets that we may well be puzzled. And is one point of view sufficient? Secondly, it is dangerous to generalize from a small number of selected languages. To take, as the sum total of our material, Latin, Arabic, Turkish, Chinese, and perhaps Eskimo or Sioux as an afterthought, is to court disaster. We have no right to assume that a sprinkling of exotic types will do to supplement the few languages nearer home that we are more immediately interested in. Thirdly, the strong craving for a simple formula[1] has been the undoing of linguis-

[1] If possible, a triune formula.

There is something irresistible about a method of classification that starts with two poles, exemplified, say, by Chinese and Latin, clusters what it conveniently can about these poles, and throws everything else into a "transitional type." Hence has arisen the still popular classification of language into an "isolating" group, an "agglutinative" group, and an "inflective" group. Sometimes the languages of the American Indians are made to straggle along as an uncomfortable "polysynthetic" rear-guard to the agglutinative languages. There is justification for the use of all of these terms, though not perhaps in quite the spirit in which they are commonly employed. In any case it is very difficult to assign all known languages to one or other of these groups, the more so as they are not mutually exclusive. A language may be both agglutinative and inflective, or inflective and polysynthetic, or even polysynthetic and isolating, as we shall see a little later on.

There is a fourth reason why the classification of languages has generally proved a fruitless undertaking. It is probably the most powerful deterrent of all to clear thinking. This is the evolutionary prejudice which instilled itself into the social sciences towards the middle of the last century and which is only now beginning to abate its tyrannical hold on our mind. Intermingled with this scientific prejudice and largely anticipating it was another, a more human one. The vast majority of linguistic theorists themselves spoke languages of a certain type, of which the most fully developed varieties were the Latin and Greek that they had learned in their childhood. It was not difficult for them to be persuaded that these familiar languages represented the "highest" development that speech had yet attained and that all other types were but steps on the way to this beloved "inflective" type. Whatever conformed to the pattern of Sanskrit and Greek and Latin and German was accepted as expressive of the "highest," whatever departed from it was

frowned upon as a shortcoming or was at best an interesting aberration.[2] Now any classification that starts with preconceived values or that works up to sentimental satisfactions is self-condemned as unscientific. A linguist that insists on talking about the Latin type of morphology as though it were necessarily the high-water mark of linguistic development is like the zoölogist that sees in the organic world a huge conspiracy to evolve the race-horse or the Jersey cow. Language in its fundamental forms is the symbolic expression of human intuitions. These may shape themselves in a hundred ways, regardless of the material advancement or backwardness of the people that handle the forms, of which, it need hardly be said, they are in the main unconscious. If, therefore, we wish to understand language in its true inwardness we must disabuse our minds of preferred "values" [3] and accustom ourselves to look upon English and Hottentot with the same cool, yet interested, detachment.

We come back to our first difficulty. What point of view shall we adopt for our classification? After all

[2] One celebrated American writer on culture and language delivered himself of the dictum that, estimable as the speakers of agglutinative languages might be, it was nevertheless a crime for an inflecting woman to marry an agglutinating man. Tremendous spiritual values were evidently at stake. Champions of the "inflective" languages are wont to glory in the very irrationalities of Latin and Greek, except when it suits them to emphasize their profoundly "logical" character. Yet the sober logic of Turkish or Chinese leaves them cold. The glorious irrationalities and formal complexities of many "savage" languages they have no stomach for. Sentimentalists are difficult people.

[3] I have in mind valuations of form as such. Whether or not a language has a large and useful vocabulary is another matter. The actual size of a vocabulary at a given time is not a thing of real interest to the linguist, as all languages have the resources at their disposal for the creation of new words, should need for them arise. Furthermore, we are not in the least concerned with whether or not a language is of great practical value or is the medium of a great culture. All these considerations, important from other standpoints, have nothing to do with form value.

that we have said about grammatical form in the preceding chapter, it is clear that we cannot now make the distinction between form languages and formless languages that used to appeal to some of the older writers. Every language can and must express the fundamental syntactic relations even though there is not a single affix to be found in its vocabulary. We conclude that every language is a form language. Aside from the expression of pure relation a language may, of course, be "formless"—formless, that is, in the mechanical and rather superficial sense that it is not encumbered by the use of non-radical elements. The attempt has sometimes been made to formulate a distinction on the basis of "inner form." Chinese, for instance, has no formal elements pure and simple, no "outer form," but it evidences a keen sense of relations, of the difference between subject and object, attribute and predicate, and so on. In other words, it has an "inner form" in the same sense in which Latin possesses it, though it is outwardly "formless" where Latin is outwardly "formal." On the other hand, there are supposed to be languages[4] which have no true grasp of the fundamental relations but content themselves with the more or less minute expression of material ideas, sometimes with an exuberant display of "outer form," leaving the pure relations to be merely inferred from the context. I am strongly inclined to believe that this supposed "inner formlessness" of certain languages is an illusion. It may well be that in these languages the relations are not expressed in as immaterial a way as in Chinese or even as in Latin,[5] or that the principle of order is subject to greater fluctuations than in Chinese, or that a tendency to complex derivations relieves the language of the necessity of expressing certain relations as explicitly as a more

[4] E.g., Malay, Polynesian.

[5] Where, as we have seen, the syntactic relations are by no means free from an alloy of the concrete.

analytic language would have them expressed.[6] All this does not mean that the languages in question have not a true feeling for the fundamental relations. We shall therefore not be able to use the notion of "inner formlessness," except in the greatly modified sense that syntactic relations may be fused with notions of another order. To this criterion of classification we shall have to return a little later.

More justifiable would be a classification according to the formal processes[7] most typically developed in the language. Those languages that always identify the word with the radical element would be set off as an "isolating" group against such as either affix modifying elements (affixing languages) or possess the power to change the significance of the radical elements by internal changes (reduplication; vocalic and consonantal change; changes in quantity, stress, and pitch). The latter type might be not inaptly termed "symbolic" languages.[8] The affixing languages would naturally subdivide themselves into such as are prevailingly prefixing, like Bantu or Tlingit, and such as are mainly or entirely suffixing, like Eskimo or Algonkin or Latin. There are two serious difficulties with this fourfold classification (isolating, prefixing, suffixing, symbolic). In the first place, most languages fall into more than one of these groups. The Semitic languages, for instance, are prefixing, suffixing, and symbolic at one and

[6] Very much as an English *cod-liver oil* dodges to some extent the task of explicitly defining the relations of the three nouns. Contrast French *huile de foie de morue* "oil of liver of cod."

[7] See Chapter IV.

[8] There is probably a real psychological connection between symbolism and such significant alternations as *drink, drank, drunk* or Chinese *mai* (with rising tone) "to buy" and *mai* (with falling tone) "to sell." The unconscious tendency toward symbolism is justly emphasized by recent psychological literature. Personally I feel that the passage from *sing* to *sang* has very much the same feeling as the alternation of symbolic colors—e.g., green for safe, red for danger. But we probably differ greatly as to the intensity with which we feel symbolism in linguistic changes of this type.

the same time. In the second place, the classification in its bare form is superficial. It would throw together languages that differ utterly in spirit merely because of a certain external formal resemblance. There is clearly a world of difference between a prefixing language like Cambodgian, which limits itself, so far as its prefixes (and infixes) are concerned, to the expression of derivational concepts, and the Bantu languages, in which the prefixed elements have a far-reaching significance as symbols of syntactic relations. The classification has much greater value if it is taken to refer to the expression of relational concepts[9] alone. In this modified form we shall return to it as a subsidiary criterion. We shall find that the terms "isolating," "affixing," and "symbolic" have a real value. But instead of distinguishing between prefixing and suffixing languages, we shall find that it is of superior interest to make another distinction, one that is based on the relative firmness with which the affixed elements are united with the core of the word.[10]

There is another very useful set of distinctions that can be made, but these too must not be applied exclu-

[9] Pure or "concrete relational." See Chapter V.

[10] In spite of my reluctance to emphasize the difference between a prefixing and a suffixing language, I feel that there is more involved in this difference than linguists have generally recognized. It seems to me that there is a rather important psychological distinction between a language that settles the formal status of a radical element before announcing it—and this, in effect, is what such languages as Tlingit and Chinook and Bantu are in the habit of doing—and one that begins with the concrete nucleus of a word and defines the status of this nucleus by successive limitations, each curtailing in some degree the generality of all that precedes. The spirit of the former method has something diagrammatic or architectural about it, the latter is a method of pruning afterthoughts. In the more highly wrought prefixing languages the word is apt to affect us as a crystallization of floating elements, the words of the typical suffixing languages (Turkish, Eskimo, Nootka) are "determinative" formations, each added element determining the form of the whole anew. It is so difficult in practice to apply these elusive, yet important, distinctions that an elementary study has no recourse but to ignore them.

sively, or our classification will again be superficial. I refer to the notions of "analytic," "synthetic," and "polysynthetic." The terms explain themselves. An analytic language is one that either does not combine concepts into single words at all (Chinese) or does so economically (English, French). In an analytic language the sentence is always of prime importance, the word is of minor interest. In a synthetic language (Latin, Arabic, Finnish) the concepts cluster more thickly, the words are more richly chambered, but there is a tendency, on the whole, to keep the range of concrete significance in the single word down to a moderate compass. A polysynthetic language, as its name implies, is more than ordinarily synthetic. The elaboration of the word is extreme. Concepts which we should never dream of treating in a subordinate fashion are symbolized by derivational affixes or "symbolic" changes in the radical element, while the more abstract notions, including the syntactic relations, may also be conveyed by the word. A polysynthetic language illustrates no principles that are not already exemplified in the more familiar synthetic languages. It is related to them very much as a synthetic language is related to our own analytic English.[11] The three terms are purely quantitative—and relative, that is, a language may be "analytic" from one standpoint, "synthetic" from another. I believe the terms are more useful in defining certain drifts than as absolute counters. It is often illuminating to point out that a language has been becoming more and more analytic in the course of its history or that it shows signs of having crystallized from a simple analytic base into a highly synthetic form.[12]

[11] English, however, is only analytic in tendency. Relatively to French, it is still fairly synthetic, at least in certain aspects.

[12] The former process is demonstrable for English, French, Danish, Tibetan, Chinese, and a host of other languages. The latter tendency may be proven, I believe, for a number of American Indian languages, e.g., Chinook, Navaho. Underneath their present moderately polysynthetic form is discernible an analytic base that in the one case may be roughly described as English-like, in the other, Tibetan-like.

We now come to the difference between an "inflective" and an "agglutinative" language. As I have already remarked, the distinction is a useful, even a necessary, one, but it has been generally obscured by a number of irrelevancies and by the unavailing effort to make the terms cover all languages that are not, like Chinese, of a definitely isolating cast. The meaning that we had best assign to the term "inflective" can be gained by considering very briefly what are some of the basic features of Latin and Greek that have been looked upon as peculiar to the inflective languages. First of all, they are synthetic rather than analytic. This does not help us much. Relatively to many another language that resembles them in broad structural respects, Latin and Greek are not notably synthetic; on the other hand, their modern descendants, Italian and Modern Greek, while far more analytic[13] than they, have not departed so widely in structural outlines as to warrant their being put in a distinct major group. An inflective language, we must insist, may be analytic, synthetic, or polysynthetic.

Latin and Greek are mainly affixing in their method, with the emphasis heavily on suffixing. The agglutinative languages are just as typically affixing as they, some among them favoring prefixes, others running to the use of suffixes. Affixing alone does not define inflection. Possibly everything depends on just what kind of affixing we have to deal with. If we compare our English words *farmer* and *goodness* with such words as *height* and *depth*, we cannot fail to be struck by a notable difference in the affixing technique of the two sets. The *-er* and *-ness* are affixed quite mechanically to radical elements which are at the same time independent words (*farm, good*). They are in no sense independently significant elements, but they convey their meaning (agentive, abstract quality) with

[13] This applies more particularly to the Romance group: Italian, Spanish, Portuguese, French, Roumanian. Modern Greek is not so clearly analytic.

unfailing directness. Their use is simple and regular and we should have no difficulty in appending them to any verb or to any adjective, however recent in origin. From a verb *to camouflage* we may form the noun *camouflager* "one who camouflages," from an adjective *jazzy* proceeds with perfect ease the noun *jazziness*. It is different with *height* and *depth*. Functionally they are related to *high* and *deep* precisely as is *goodness* to *good*, but the degree of coalescence between radical element and affix is greater. Radical element and affix, while measurably distinct, cannot be torn apart quite so readily as could the *good* and *-ness* of *goodness*. The *-t* of *height* is not the typical form of the affix (compare *strength, length, filth, breadth, youth*), while *dep-* is not identical with *deep*. We may designate the two types of affixing as "fusing" and "juxtaposing." The juxtaposing technique we may call an "agglutinative" one, if we like.

Is the fusing technique thereby set off as the essence of inflection? I am afraid that we have not yet reached our goal. If our language were crammed full of coalescences of the type of *depth*, but if, on the other hand, it used the plural independently of verb concord (e.g., *the books falls* like *the book falls*, or *the book fall* like *the books fall*), the personal endings independently of tense (e.g., *the book fells* like *the book falls*, or *the book fall* like *the book fell*), and the pronouns independently of case (e.g., *I see he* like *he sees me*, or *him see the man* like *the man sees him*), we should hesitate to describe it as inflective. The mere fact of fusion does not seem to satisfy us as a clear indication of the inflective process. There are, indeed, a large number of languages that fuse radical element and affix in as complete and intricate a fashion as one could hope to find anywhere without thereby giving signs of that particular kind of formalism that marks off such languages as Latin and Greek as inflective.

What is true of fusion is equally true of the "symbolic" processes.[14] There are linguists that speak of alternations like *drink* and *drank* as though they represented the high-water mark of inflection, a kind of spiritualized essence of pure inflective form. In such Greek forms, nevertheless, as *pepomph-a* "I have sent," as contrasted with *pemp-o* "I send," with its trebly symbolic change of the radical element (reduplicating *pe-*, change of *e* to *o*, change of *p* to *ph*), it is rather the peculiar alternation of the first person singular *-a* of the perfect with the *-o* of the present that gives them their inflective cast. Nothing could be more erroneous than to imagine that symbolic changes of the radical element, even for the expression of such abstract concepts as those of number and tense, are always associated with the syntactic peculiarities of an inflective language. If by an "agglutinative" language we mean one that affixes according to the juxtaposing technique, then we can only say that there are hundreds of fusing and symbolic languages—non-agglutinative by definition—that are, for all that, quite alien in spirit to the inflective type of Latin and Greek. We can call such languages inflective, if we like, but we must then be prepared to revise radically our notion of inflective form.

It is necessary to understand that fusion of the radical element and the affix may be taken in a broader psychological sense than I have yet indicated. If every noun plural in English were of the type of *book: books*, if there were not such conflicting patterns as *deer: deer, ox: oxen, goose: geese* to complicate the general form picture of plurality, there is little doubt that the fusion of the elements *book* and *-s* into the unified word *books* would be felt as a little less complete than it actually is. One reasons, or feels, unconsciously about the matter somewhat as follows: —If the form pattern represented by the word *books*

[14] See pages 126, 127.

is identical, as far as use is concerned, with that of the word *oxen*, the pluralizing elements *-s* and *-en* cannot have quite so definite, quite so autonomous, a value as we might at first be inclined to suppose. They are plural elements only in so far as plurality is predicated of certain selected concepts. The words *books* and *oxen* are therefore a little other than mechanical combinations of the symbol of a thing (*book*, *ox*) and a clear symbol of plurality. There is a slight psychological uncertainty or haze about the juncture in *book-s* and *ox-en*. A little of the force of *-s* and *-en* is anticipated by, or appropriated by, the words *book* and *ox* themselves, just as the conceptual force of *-th* in *dep-th* is appreciably weaker than that of *-ness* in *good-ness* in spite of the functional parallelism between *depth* and *goodness*. Where there is uncertainty about the juncture, where the affixed element cannot rightly claim to possess its full share of significance, the unity of the complete word is more strongly emphasized. The mind must rest on something. If it cannot linger on the constituent elements, it hastens all the more eagerly to the acceptance of the word as a whole. A word like *goodness* illustrates "agglutination," *books* "regular fusion," *depth* "irregular fusion," *geese* "symbolic fusion" or "symbolism." [15]

The psychological distinctness of the affixed elements in an agglutinative term may be even more marked than in the *-ness* of *goodness*. To be strictly accurate, the significance of the *-ness* is not quite as inherently determined, as autonomous, as it might be. It is at the mercy of the preceding radical element to this extent, that it requires to be preceded by a particular type of such element, an adjective. Its own power is thus, in a manner, checked in advance. The fusion here, however, is so vague and elementary, so much a matter of course in the great majority of all cases of affixing, that it is natural to overlook its reality and to emphasize rather the juxtaposing or agglutinative nature of the affixing process. If the *-ness* could be affixed as an abstractive element to each and every type of radical element, if we could say *fightness* ("the act or quality of fighting") or *waterness* ("the quality or state of water") or *awayness* ("the state of being away") as we can say *goodness* ("the state of being good"), we should have moved appreciably nearer the agglutinative pole. A language that runs to synthesis of this loose-jointed sort may be looked upon as an example of the ideal agglutinative type, particularly if the concepts expressed by the agglutinated elements are relational or, at the least, belong to the abstracter class of derivational ideas.

[15] The following formulæ may prove useful to those that are mathematically inclined. Agglutination: $c = a + b$; regular fusion: $c = a + (b - x) + x$; irregular fusion: $c = (a - x) + (b - y) + (x + y)$; symbolism: $c = (a - x) + x$. I do not wish to imply that there is any mystic value in the process of fusion. It is quite likely to have developed as a purely mechanical product of phonetic forces that brought about irregularities of various sorts.

Instructive forms may be cited from Nootka. We shall return to our "fire in the house." [16] The Nootka word *inikw-ihl* "fire in the house" is not as definitely formalized a word as its translation suggests. The radical element *inikw-* "fire" is really as much of a verbal as of a nominal term; it may be rendered no by "fire," now by "burn," according to the syntac exigencies of the sentence. The derivational eler *-ihl* "in the house" does not mitigate this vag or generality; *inikw-ihl* is still "fire in the house" or "burn in the house." It may be definitely nominalized or verbalized by the affixing of elements that are exclusively nominal or verbal in force. For example, *inikw-ihl-'i*, with its suffixed article, is a clear-cut nominal form: "the burning in the house, the fire in the house"; *inikw-ihl-ma*, with its indicative suffix, is just as clearly verbal: "it burns in the house." How

[16] See page 104.

weak must be the degree of fusion between "fire in the house" and the nominalizing or verbalizing suffix is apparent from the fact that the formally indifferent *inikwihl* is not an abstraction gained by analysis but a full-fledged word, ready for use in the sentence. The nominalizing *-'i* and the indicative *-ma* are not fused form-affixes, they are simply additions of formal import. But we can continue to hold the verbal or nominal nature of *inikwihl* in abeyance long before we reach the *-'i* or *-ma*. We can pluralize it: *inikw-ihl-'minih;* it is still either "fires in the house" or "burn plurally in the house." We can diminutivize this plural: *inikw-ihl-'minih-'is,* "little fires in the house" or "burn plurally and slightly in the house." What if we add the preterit tense suffix *-it*? Is not *inikw-ihl-'minih-'is-it* necessarily a verb: "several small fires were burning in the house"? It is not. It may still be nominalized; *inikwihl'minih'isit-'i* means "the former small fires in the house, the little fires that were once burning in the house." It is not an unambiguous verb until it is given a form that excludes every other possibility, as in the indicative *inikwihl-minih'isit-a* "several small fires were burning in the house." We recognize at once that the elements *-ihl, -'minih, -'is,* and *-it,* quite aside from the relatively concrete or abstract nature of their content and aside, further, from the degree of their outer (phonetic) cohesion with the elements that precede them, have a psychological independence that our own affixes never have. They are typically agglutinated elements, though they have no greater external independence, are no more capable of living apart from the radical element to which they are suffixed, than the *-ness* and *goodness* or the *-s* of *books.* It does not follow that an agglutinative language may not make use of the principle of fusion, both external and psychological, or even of symbolism to a considerable extent. It is a question of tendency. Is the formative slant clearly towards the agglutinative method? Then the language is "agglutinative." As such, it may be

prefixing or suffixing, analytic, synthetic, or polysynthetic.

To return to inflection. An inflective language like Latin or Greek uses the method of fusion, and this fusion has an inner psychological as well as an outer phonetic meaning. But it is not enough that the fusion operate merely in the sphere of derivational concepts (group II),[17] it must involve the syntactic relations, which may either be expressed in unalloyed form (group IV) or, as in Latin and Greek, as "concrete relational concepts" (group III).[18] As far as Latin and Greek are concerned, their inflection consists essentially of the fusing of elements that express logically impure relational concepts with radical elements and with elements expressing derivational concepts. Both fusion as a general method and the expression of relational concepts in the word are necessary to the notion of "inflection."

[17] See Chapter V.

[18] If we deny the application of the term "inflective" to fusing languages that express the syntactic relations in pure form, that is, without the admixture of such concepts as number, gender, and tense, merely because such admixture is familiar to us in Latin and Greek, we make of "inflection" an even more arbitrary concept than it need be. At the same time it is true that the method of fusion itself tends to break down the wall between our conceptual groups II and IV, to create group III. Yet the possibility of such "inflective" languages should not be denied. In modern Tibetan, for instance, in which concepts of group II are but weakly expressed, if at all, and in which the relational concepts (e.g., the genitive, the agentive or instrumental) are expressed without alloy of the material, we get many interesting examples of fusion, even of symbolism. *Mi di,* e.g., "man this, the man" is an absolutive form which may be used as the subject of an intransitive verb. When the verb is transitive (really passive), the (logical) subject has to take the agentive form. *Mi di* then becomes *mi di* "by the man," the vowel of the demonstrative pronoun (or article) being merely lengthened. (There is probably also a change in the tone of the syllable.) This, of course, is of the very essence of inflection. It is an amusing commentary on the insufficiency of our current linguistic classification, which considers "inflective" and "isolating" as worlds asunder, that modern Tibetan may be not inaptly described as an isolating language, aside from such examples of fusion and symbolism as the foregoing.

But to have thus defined inflection is to doubt the value of the term as descriptive of a major class. Why emphasize both a technique and a particular content at one and the same time? Surely we should be clear in our minds as to whether we set more store by one or the other. "Fusional" and "symbolic" contrast with "agglutinative," which is not on a par with "inflective" at all. What are we to do with the fusional and symbolic languages that do not express relational concepts in the word but leave them to the sentence? And are we not to distinguish between agglutinative languages that express these same concepts in the word —in so far inflective-like—and those that do not? We dismissed the scale: analytic, synthetic, polysynthetic, as too merely quantitative for our purpose. Isolating, affixing, symbolic—this also seemed insufficient for the reason that it laid too much stress on technical externals. Isolating, agglutinative, fusional, and symbolic is a preferable scheme, but still skirts the external. We shall do best, it seems to me, to hold to "inflective" as a valuable suggestion for a broader and more consistently developed scheme, as a hint for a classification based on the nature of the concepts expressed by the language. The other two classifications, the first based on degree of synthesis, the second on degree of fusion, may be retained as intercrossing schemes that give us the opportunity to subdivide our main conceptual types.

It is well to recall that all languages must needs express radical concepts (group I) and relational ideas (group IV). Of the two other large groups of concepts —derivational (group II) and mixed relational (group III)—both may be absent, both present, or only one present. This gives us at once a simple, incisive, and absolutely inclusive method of classifying all known languages. They are:

A. Such as express only concepts of groups I and IV; in other words, languages that keep the syntactic relations pure and that do not possess the power to modify the significance of their radical elements by means of affixes or internal changes.[19] We may call these *Pure-relational non-deriving languages* or, more tersely, *Simple Pure-relational languages.* These are the languages that cut most to the bone of linguistic expression.

B. Such as express concepts of groups I, II, and IV; in other words, languages that keep the syntactic relations pure and that also possess the power to modify the significance of their radical elements by means of affixes or internal changes. These are the *Pure-relational deriving languages* or *Complex Pure-relational languages.*

C. Such as express concepts of groups I and III;[20] in other words, languages in which the syntactic relations are expressed in necessary connection with concepts that are not utterly devoid of concrete significance but that do not, apart from such mixture, possess the power to modify the significance of their radical elements by means of affixes or internal changes.[21] These are the *Mixed-relational non-deriv-*

[19] I am eliminating entirely the possibility of compounding two or more radical elements into single words or word-like phrases (see pages 64-67). To expressly consider compounding in the present survey of types would be to complicate our problem unduly. Most languages that possess no derivational affixes of any sort may nevertheless freely compound radical elements (independent words). Such compounds often have a fixity that simulates the unity of single words.

[20] We may assume that in these languages and in those of type D all or most of the relational concepts are expressed in "mixed" form, that such a concept as that of subjectivity, for instance, cannot be expressed without simultaneously involving number or gender or that an active verb form must be possessed of a definite tense. Hence group III will be understood to include, or rather absorb, group IV. Theoretically, of course, certain relational concepts may be expressed pure, others mixed, but in practice it will not be found easy to make the distinction.

[21] The line between types C and D cannot be very sharply drawn. It is a matter largely of degree. A language of markedly mixed-relational type, but of little power of derivation pure and simple, such as Bantu or French, may be conveniently put into type C, even though it is not devoid of a number of derivational affixes. Roughly speaking, languages of type C may be considered as highly analytic ("purified") forms of type D.

ing languages or *Simple Mixed-relational languages.*

D. Such as express concepts of groups I, II, and III; in other words, languages in which the syntactic relations are expressed in mixed form, as in C, and that also possess the power to modify the significance of their radical elements, by means of affixes or internal changes. These are the *Mixed-relational deriving languages* or *Complex Mixed-relational languages.* Here belong the "inflective" languages that we are most familiar with as well as a great many "agglutinative" languages, some "polysynthetic," others merely synthetic.

This conceptual classification of languages, I must repeat, does not attempt to take account of the technical externals of language. It answers, in effect, two fundamental questions concerning the translation of concepts into linguistic symbols. Does the language, in the first place, keep its radical concepts pure or does it build up its concrete ideas by an aggregation of inseparable elements (types A and C *versus* types B and D)? And, in the second place, does it keep the basic relational concepts, such as are absolutely unavoidable in the ordering of a proposition, free of an admixture of the concrete or not (types A and B *versus* types C and D)? The second question, it seems to me, is the more fundamental of the two. We can therefore simplify our classification and present it in the following form:

I. Pure-relational Languages	A.	Simple
	B.	Complex
II. Mixed-relational Languages	C.	Simple
	D.	Complex

The classification is too sweeping and too broad for an easy, descriptive survey of the many varieties of human speech. It needs to be amplified. Each of the types A, B, C, D may be subdivided into an agglutinative, a fusional, and a symbolic sub-type, according to

the prevailing method of modification of the radical element. In type A we distinguish in addition an isolating sub-type, characterized by the absence of all affixes and modifications of the radical element. In the isolating languages the syntactic relations are expressed by the position of the words in the sentenc This is also true of many languages of type B, tl terms "agglutinative," "fusional," and "symbolic" applying in their case merely to the treatment of the derivational, not the relational, concepts. Such languages could be termed "agglutinative-isolating," "fusional-isolating," and "symbolic-isolating."

This brings up the important general consideration that the method of handling one group of concepts need not in the least be identical with that used for another. Compound terms could be used to indicate this difference, if desired, the first element of the compound referring to the treatment of the concepts of group II, the second to that of the concepts of groups III and IV. An "agglutinative" language would normally be taken to mean one that agglutinates all of its affixed elements or that does so to a preponderating extent. In an "agglutinative-fusional" language the derivational elements are agglutinated, perhaps in the form of prefixes, while the relational elements (pure or mixed) are fused with the radical element, possibly as another set of prefixes following the first set or in the form of suffixes or as part prefixes and part suffixes. By a "fusional-agglutinative" language we would understand one that fuses its derivational elements but allows a greater independence to those that indicate relations. All these and similar distinctions are not merely theoretical possibilities, they can be abundantly illustrated from the descriptive facts of linguistic morphology. Further, should it prove desirable to insist on the degree of elaboration of the word, the terms "analytic," "synthetic," and "polysynthetic" can be added as descriptive terms. It goes without saying

that languages of type A are necessarily analytic and that languages of type C also are prevailingly analytic and are not likely to develop beyond the synthetic stage.

But we must not make too much of terminology. Much depends on the relative emphasis laid on this or that feature or point of view. The method of classifying languages here developed has this great advantage, that it can be refined or simplified according to the needs of a particular discussion. The degree of synthesis may be entirely ignored; "fusion" and "symbolism" may often be combined with advantage under the head of "fusion"; even the difference between agglutination and fusion may, if desired, be set aside as either too difficult to draw or as irrelevant to the issue. Languages, after all, are exceedingly complex historical structures. It is of less importance to put each language in a neat pigeon-hole than to have evolved a flexible method which enables us to place it, from two or three independent standpoints, relatively to another language. All this is not to deny that certain linguistic types are more stable and frequently represented than others that are just as possible from a theoretical standpoint. But we are too ill-informed as yet of the structural spirit of great numbers of languages to have the right to frame a classification that is other than flexible and experimental.

The reader will gain a somewhat livelier idea of the possibilities of linguistic morphology by glancing down the subjoined analytical table of selected types. The columns II, III, IV refer to the groups of concepts so numbered in the preceding chapter. The letters *a, b, c, d* refer respectively to the processes of isolation (position in the sentence), agglutination, fusion, and symbolism. Where more than one technique is employed, they are put in the order of their importance.[22]

[22] In defining the type to which a language belongs one must be careful not to be misled by structural features which are mere survivals of an older stage, which have no productive life and do not enter into the unconscious patterning of the language. All languages are littered with such petrified bodies. The English *-ster* of *spinster* and *Webster* is an old agentive suffix, but, as far as the feeling of the present English-speaking generation is concerned, it cannot be said to really exist at all; *spinster* and *Webster* have been completely disconnected from the etymological group of *spin* and of *weave* (*web*). Similarly, there are hosts of related words in Chinese which differ in the initial consonant, the vowel, the tone, or in the presence or absence of a final consonant. Even where the Chinaman feels the etymological relationship, as in certain cases he can hardly help doing, he can assign no particular function to the phonetic variation as such. Hence it forms no live feature of the language-mechanism and must be ignored in defining the general form of the language. The caution is all the more necessary, as it is precisely the foreigner, who approaches a new language with a certain prying inquisitiveness, that is most apt to see life in vestigial features which the native is either completely unaware of or feels merely as dead form.

I need hardly point out that these examples are far from exhausting the possibilities of linguistic structure. Nor that the fact that two languages are similarly classified does not necessarily mean that they present a great similarity on the surface. We are here concerned with the most fundamental and generalized features of the spirit, the technique, and the degree of elaboration of a given language. Nevertheless, in numerous instances we may observe this highly suggestive and remarkable fact, that languages that fall into the same class have a way of paralleling each other in many details or in structural features not envisaged by the scheme of classification. Thus, a most interesting parallel could be drawn on structural lines between Takelma and Greek,[23] languages that are as geographically remote from each other and as unconnected in a historical sense as two languages selected at random can well be. Their similarity goes beyond the generalized facts registered in the table. It would almost seem that linguistic features that are easily thinkable apart from each other, that seem to have no necessary connection in theory, have nevertheless a

[23] Not Greek specifically, of course, but as a typical representative of Indo-European.

Fundamental Type	*II*	*III*	*IV*	*Technique*	*Synthesis*	*Examples*
A (Simple Pure-relational)	—	—	a	Isolating	Analytic	Chinese; Annamite
	(d)	—	a, b	Isolating (weakly agglutinative)	Analytic	Ewe (Guinea Coast)
	(b)	—	a, b, c	Agglutinative (mildly agglutinative-fusional)	Analytic	Modern Tibetan
B (Complex Pure-relational)	b, (d)	—	a	Agglutinative-isolating	Analytic	Polynesian
	b	—	a, (b)	Agglutinative-isolating	Polysynthetic	Haida
	c	—	a	Fusional-isolating	Analytic	Cambodgian
	b	—	b	Agglutinative	Synthetic	Turkish
	b, d	(b)	b	Agglutinative (symbolic tinge)	Polysynthetic	Yana (N. California)
	c, d, (b)	—	a, b	Fusional-agglutinative (symbolic tinge)	Synthetic (mildly)	Classical Tibetan
	b	—	c	Agglutinative-fusional	Synthetic (mildly polysynthetic)	Sioux
	c	—	c	Fusional	Synthetic	Salinan (S. W. California)
	d, c	(d)	d, c, a	Symbolic	Analytic	Shilluk (Upper Nile)

NOTE.—Parentheses indicate a weak development of the process in question.

Fundamental Type	*II*	*III*	*IV*	*Technique*	*Synthesis*	*Examples*
C (Simple Mixed-relational)	(b)	b	—	Agglutinative	Synthetic	Bantu
	(c)	c, (d)	a	Fusional	Analytic (mildly synthetic)	French*
D (Complex Mixed-relational)	b, c, d	b	b	Agglutinative (symbolic tinge)	Polysynthetic	Nootka (Vancouver Island) †
	c, (d)	b	—	Fusional-agglutinative	Polysynthetic (mildly)	Chinook (lower Columbia R.)
	c, (d)	c, (d), (b)	—	Fusional	Polysynthetic	Algonkin
	c	c, d	a	Fusional	Analytic	English
	c, d	c, d	—	Fusional (symbolic tinge)	Synthetic	Latin, Greek, Sanskrit
	c, b, d	c, d	(a)	Fusional (strongly symbolic	Synthetic	Takelma (S. W. Oregon)
	d, c	c, d	(a)	Symbolic-fusional	Synthetic	Semitic (Arabic, Hebrew)

* Might nearly as well have come under D.
† Very nearly complex pure-relational.

tendency to cluster or to follow together in the wake of some deep, controlling impulse to form that dominates their drift. If, therefore, we can only be sure of the intuitive similarity of two given languages, of their possession of the same submerged form-feeling, we need not be too much surprised to find that they seek and avoid certain linguistic developments in common. We are at present very far from able to define just what these fundamental form intuitions are. We can only feel them rather vaguely at best and must content ourselves for the most part with noting their symptoms. These symptoms are being garnered in our descriptive and historical grammars of diverse languages. Some day, it may be, we shall be able to read from them the great underlying ground-plans.

Such a purely technical classification of languages as the current one into "isolating," "agglutinative," and "inflective" (read "fusional") cannot claim to have great value as an entering wedge into the discovery of the intuitional forms of language. I do not know whether the suggested classification into four conceptual groups is likely to drive deeper or not. My own feeling is that it does, but classifications, neat constructions of the speculative mind, are slippery things. They have to be tested at every possible opportunity before they have the right to cry for acceptance. Meanwhile we may take some encouragement from the application of a rather curious, yet simple, historical test. Languages are in constant process of change, but it is only reasonable to suppose that they tend to preserve longest what is most fundamental in their structure. Now if we take great groups of genetically related languages,[24] we find that as we pass from one to another or trace the course of their development we frequently encounter a gradual change of morphological type. This is not surprising, for there is no reason

[24] Such, in other words, as can be shown by documentary or comparative evidence to have been derived from a common source. See Chapter VII.

why a language should remain permanently true to its original form. It is interesting, however, to note that of the three intercrossing classifications represented in our table (conceptual type, technique, and degree of synthesis), it is the degree of synthesis that seems to change most readily, that the technique is modifiable but far less readily so, and that the conceptual type tends to persist the longest of all.

The illustrative material gathered in the table is far too scanty to serve as a real basis of proof, but it is highly suggestive as far as it goes. The only changes of conceptual type within groups of related languages that are to be gleaned from the table are of B to A (Shilluk as contrasted with Ewe;[25] Classical Tibetan as contrasted with Modern Tibetan and Chinese) and of D to C (French as contrasted with Latin[26]). But types A:B and C:D are respectively related to each other as a simple and a complex form of a still more fundamental type (pure-relational, mixed-relational). Of a passage from a pure-relational to a mixed-relational type or *vice versa* I can give no convincing examples.

The table shows clearly enough how little relative permanence there is in the technical features of language. That highly synthetic languages (Latin; Sanskrit) have frequently broken down into analytic forms (French; Bengali) or that agglutinative languages (Finnish) have in many instances gradually taken on "inflective" features are well-known facts, but the natural inference does not seem to have been often drawn that possibly the contrast between synthetic

[25] These are far-eastern and far-western representatives of the "Soudan" group recently proposed by D. Westermann. The genetic relationship between Ewe and Shilluk is exceedingly remote at best.

[26] This case is doubtful at that. I have put French in C rather than in D with considerable misgivings. Everything depends on how one evaluates elements like *-al* in *national*, *-té* in *bonté*, or *re-* in *retourner*. They are common enough, but are they as alive, as little petrified or bookish, as our English *-ness* and *-ful* and *un-*?

and analytic or agglutinative and "inflective" (fusional) is not so fundamental after all. Turning to the Indo-Chinese languages, we find that Chinese is as near to being a perfectly isolating language as any example we are likely to find, while Classical Tibetan has not only fusional but strong symbolic features (e.g., *g-tong-ba* "to give," past *b-tang*, future *g-tang*, imperative *thong*); but both are pure-relational languages. Ewe is either isolating or only barely agglutinative, while Shilluk, though soberly analytic, is one of the most definitely symbolic languages I know; both of these Soudanese languages are pure-relational. The relationship between Polynesian and Cambodgian is remote, though practically certain; while the latter has more markedly fusional features than the former,[27] both conform to the complex pure-relational type. Yana and Salinan are superficially very dissimilar languages. Yana is highly polysynthetic and quite typically agglutinative, Salinan is no more synthetic than and as irregularly and compactly fusional ("inflective") as Latin; both are pure-relational. Chinook and Takelma, remotely related languages of Oregon, have diverged very far from each other, not only as regards technique and synthesis in general but in almost all the details of their structure; both are complex mixed-relational languages, though in very different ways. Facts such as these seem to lend color to the suspicion that in the contrast of pure-relational and mixed-relational (or concrete-relational) we are confronted by something deeper, more far-reaching, than the contrast of isolating, agglutinative, and fusional.[28]

[27] In spite of its more isolating cast.

[28] In a book of this sort it is naturally impossible to give an adequate idea of linguistic structure in its varying forms. Only a few schematic indications are possible. A separate volume would be needed to breathe life into the scheme. Such a volume would point out the salient structural characteristics of a number of languages, so selected as to give the reader an insight into the formal economy of strikingly divergent types.

CHAPTER VII

Language as a Historical Product: Drift

Everyone knows that language is variable. Two individuals of the same generation and locality, speaking precisely the same dialect and moving in the same social circles, are never absolutely at one in their speech habits. A minute investigation of the speech of each individual would reveal countless differences of detail—in choice of words, in sentence structure, in the relative frequency with which particular forms or combinations of words are used, in the pronunciation of particular vowels and consonants and of combinations of vowels and consonants, in all those features, such as speed, stress, and tone, that give life to spoken language. In a sense they speak slightly divergent dialects of the same language rather than identically the same language.

There is an important difference, however, between individual and dialectic variations. If we take two closely related dialects, say English as spoken by the "middle classes" of London and English as spoken by the average New Yorker, we observe that, however much the individual speakers in each city differ from each other, the body of Londoners forms a compact, relatively unified group in contrast to the body of New Yorkers. The individual variations are swamped in or absorbed by certain major agreements—say of