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THE LIFE AND DEATH OF LANGUAGES

1. CHANGING PERSPECTIVES

Although language is at least as old as mankind, its mysteries have as yet hardly been scratched and whatever we may hold as its ultimate nature, origin and destiny would remain at present highly speculative. Indeed, a bylaw of the Linguistic Society of Paris is mentioned to rule out of order any formal paper on the origin of language.[1] What is more, socially accepted perspectives on language have altered in the course of ages and while it is true that a "scientific" study of linguistic phenomena has been confined to ancient India and recent times, it may very well be that the fundamental and really controlling level of these phenomena, as distinguished from the level of their habitual use and description, lies in that spontaneous power latent in the psychic reality whereby it is able to attain self-expression in lower media through inducing in them rhythm and pattern. Behind the pattern of the audible sound waves of speech lie the patterns of articulation and neural activity. Despite the operation of chance in the choice of convention in language and in its

[1] E. H. Sturtevant, *Introduction to Linguistic Science*, p. 40.

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actual use, there are discernible in it patterns of a statistical and logical nature. We have here a hierarchy of isomorphic patterns and patterning forces subsisting at various levels—acoustic, articulatory, neural—and soaring upwards to their ultimate psychic source which should be accessible only to mystical apprehension. It is the unity of psychic reality which makes communication ultimately possible since it then becomes a process of self-expression and self-recognition. The fact that language is rooted in a mysterious power of the soul makes linguistic perspective a matter of more than science.[2]

In remote antiquity language was not unoften held to be a divine gift with magical power. Names were considered to be essentially and naturally connected with things and everything had a real name which was as inseparable or detachable from it as its natural form. Names thus gave power over things and this formed the basis of much of primitive magic and religion. This belief naturally encouraged an attitude of reverence, conservatism, and esotericism toward the tradition of language. The sacred and hieratic use of an older language or the older form of a current language in scriptures and ritual tended to support this attitude further. Change in language was merely deplored as a corruption due to declining times. It was even believed that there was originally or ideally only one language which human imperfection had managed to corrupt and diversify. The Biblical story of the "Tower of Babel" is an example of such belief. A priestly class in charge of the tradition of knowledge and education and surviving on the belief in the truth and ultimacy of sacred and mystical formulae provided the social force which helped the maintenance of such views and combatted the tendency to rapid social and linguistic change.

However, while migrations and conquests arising principally from economic causes led to the decreasing isolation of human communities and thus tended to speed up the process of social and language change, the spread of writing and the gradual accumulation and exchange of knowledge led finally to the great "enlightenment" of the human race in the sixth century B. C.

[2] Cf. Whorf, "Language, Mind and Reality," in *Theosophist* (Madras), 1942.

Whether language is natural or conventional was now philosophically debated in Greece as well as in India. Plato argued for the former alternative with great vigor in the well-known dialogue *Cratylus*, while Aristotle was inclined toward the latter. The subsequent controversy between "analogists" and "anomalists" led at any rate to some progress in grammatical analysis for Greek. In ancient India the Mīmāmsakas, Vaiyākaraṇas and Śaiva-Śākta Āgamas argued for an ultimately supernatural source or status of language while the Naiyāyikas and Buddhists stressed the ephemeral nature of speech and its dependence on convention for its linguistic status. At the same time phoneticians and grammarians succeeded in giving a remarkably accurate description of Sanskrit and evolved for the purpose subtle and refined techniques.

The encounter of the West with Sanskrit and the linguistic tradition of ancient India in the days of Sir William Jones led to the emergence of the new science of "comparative philology." The historical and comparative study of Indo-European languages led to the concept of languages as undergoing silent but regular changes and gradually issuing into "new" languages through a systematic transformation. It was now believed that a single prehistoric Indo-European language had produced a numerous progeny in course of time through this process of historical metamorphosis which has led to the obsolescence and emergence of linguistic systems. All human languages may thus be believed to form families with genetic affiliations, and their common progenitors projected in lost prehistoric times may on the availability of sufficient comparative material be held capable of being hypothetically reconstructed. Philology thus might essay to recover the lost prehistory of languages. Its assurance has been based above all on the discovery that regular sound shifts or phonetic laws operate in the course of linguistic history and with the Neogrammarians these laws have been declared to be just like the laws of nature.

Philologists have remained on the whole busy with detailed linguistic research and such discoveries as of Tokharian of Hittite have kept them on their toes. On the whole, however, their work and tone once tended to support the application of the concept of evolution to the phenomena of linguistic change and

Schleicher did so explicitly.[3] The attempt of Darwin, however, to derive human language from animal cries did not meet with academic favor since the philologists clearly realized the conventional and special nature of linguistic behavior with its own laws and a relatively autonomous realm.[4]

The development of phonetic and acoustic studies especially with the help of mechanical instruments, the close study of living and dead prehistoric language systems especially from America, the growing interest in the structural description of languages, especially with the help of techniques and symbols drawn from modern logic and mathematics, and the application of information theory have cumulatively inaugurated a new phase in the growth of linguistic science. The general tendency is to achieve the maximum of coherence, brevity and comprehensiveness in the description of languages as structures or systems of phonemes and morphemes. If the principal achievement of the older philology was the discovery of phonetic laws and the genetic affiliations of Indo-European languages, structural linguistics, while considerably advancing the understanding and role of phonetic phenomena, tends to replace the older historical interest by a more abstract interest of a logical and mathematical kind which would make language tractable to cybernetic and communication engineers. At the same time the psychological and cultural aspects of language tend to become the subjects of newer and specialized disciplines like Psycholinguistics and Ethnolinguistics.

While it is generally admitted that language is an integral part of cultural behavior, its special features are now understood with greater clarity and the older notions of linguistic evolution and silent drift stand drastically revised.[5] If language is a means of communication, all the languages of the world, the most "primitive" as well as the most "advanced," seem to be formally equally well qualified for the task. The evolution of language

[3] Cf. J. H. Greenberg, *Essays in Linguistics*, pp. 58ff; O. Jesperson, *Language*, pp. 71 ff.

[4] Cf. Jesperson, *op. cit.*, pp. 414ff; A. S. Diamond, *The History and Origin of Language*, pp. 263-264.

[5] Greenberg, *op. cit.*, p. 60; J. Whatmough, *Language*, p. 162.

thus assumes an aspect very different from what it had in the nineteenth century. It is also realized that language is a very orderly process which is "metastable" in its diachronic aspect[6] and we must add the seeking after balance or equilibrium to that after economy to understand linguistic change, a task which has been essayed statistically and, on one suggestion about the general rate of linguistic change, a language may be expected to be completely transformed or replaced in about five thousand years.[7]

2. "MICRO-PROCESSES" AND TYPOLOGICAL PLAUSIBILITY

It is in the elucidation of the micro-processes of linguistic, especially phonetic changes rather than in the formulation of any general historical patterns that the chief success of the modern science of language must be deemed. Zipf formulated the Principle of Least Effort with statistical data and mathematical precision, although the role of the seeking for articulatory ease in changing linguistic usage was known before. This principle would explain why the actual number of phonemes in different languages vary within a relatively limited range and why they show substantial agreement in the selection of phonetic types.[8] These facts, however, appear to be susceptible of alternative explanations such as for example a monogenist view of human evolution. The idea of a constant and critical, even universal rate of occurrence for minimal linguistic units is dazzling but as yet suggestive rather than fully established. For the simple formulation $f \cdot r = k$ it has been justly pointed out that frequency and rank present difficulties in being independently estimated.[9] Mandelbrot's refinement introduces the notion of the "cost of transmission of information" which is not easier to estimate than "rank."[10] Even if it were known when an over-frequent use of

[6] Whatmough, *op. cit.*, p. 181.

[7] Hoenigswald, *Language Change and Linguistic Reconstruction*, p. 159; cf. R. H. Robins, *General Linguistics*, p. 318.

[8] Cf. L. F. Brosnahan, *The Sounds of Language*, pp. 22ff.

[9] G. Herdan, *Type-Token Mathematics*, pp. 33-36.

[10] *Ibid.*, p. 37; cf. Whatmough, *op. cit.*, pp. 192-94, 229.

a certain sound in a language should lead to its over-burdening and replacement, the nature of the replacement would remain unpredictable.[11]

A suggestion about what to expect as replacement in some cases is contained in the hypothesis that a language should tend to complete any gap or hole in its pattern of phonemes since the regular employment of a smaller number of distinctive features is more "economical" than the irregular use of a larger number.[12] Thus if a language using *k*, *g*, *t*, *d*, and *b* tended to develop *p* by splitting *b*, it would be completing a gap. This might also be attributed to the tendency to balance or symmetry or in the older terminology, analogy. The operation of the principle, thus, may have helped the emergence of *ṭ* in Sanskrit since with *t*, *d*, and *dh* already present as also *ḍ* and *ḍh* in such cases *īḍe*, *nīḍa*, *soḍha* and *līḍha*, there was an obvious gap. The tendency to fill the gap would thus join forces with the cerebralizing influence of a preceding *ṣ* and of the retroflexives in Dravidian loan-words.[13]

It is generally admitted that major sound shifts have occurred in the direction of the ease of articulation. Assimilation to another sound in the environment is an example of a conditioned phonetic change of this kind while assimilation of features within a segment may also occur unconditionally.[14] We have examples of this in Grimm's law, rules of *sandhi* and rules of "Prākṛtization." The history of Indo-European languages is full of such changes which seem to act as the most prominent milestones of linguistic evolution. Assimilation may also occur if the opposition between two phonemes has a low functional yield. For example, this is how *v* and *b* have tended to become assimilated in the Prākṛtas and their descendants. Again, if the opposition between two phonemes tends to be neutralized in certain positions, a merger of the two may occur.

[11] Cf. L. Bloomfield, *Language*, pp. 389ff.

[12] Martinet, *L'Economie des changements phonétiques*; cf. J. P. Hughes, *The Science of Language*, p. 250.

[13] Cf. Hoenigswald, *op. cit.*, p. 98.

[14] E. H. Sturtevant, *Linguistic Change* (Phoenix ed.), pp. 44ff; Hoenigswald, *op. cit.*, pp. 73-74.

If the forces of ease and economy tend to produce replacements and assimilations, their working has to reckon with the counter forces set up by the need to maintain phonemic oppositions and keep words and forms distinct. The ease and economy of articulation normally prevail only when their working would not too adversely affect the success of communication. Since "no language makes common use of a sound which seems difficult to the speakers of that language,"[15] it would be hazardous to declare any simple sound easier than another on what may really be a glossocentric bias. Again, too great an economy makes a message insecure and a certain amount of redundancy has a value as insurance against "noise." Thus the tendency toward assimilation tends to set up beyond a point a counter-tendency to dissimulation.

At the morphemic level too similar simplifying tendencies may be noticed at work. The gradual obsolescence of inflexional complexities in Indo-European languages is a remarkable case of this tendency. The verbal system of classical Sanskrit is thus simpler than that of Vedic. The subjunctive is dropped and so are a great many irregularities which indeed appeared so annoying that even Pāṇini wrote the despairing "*Bahulaṁ Chandasi.*" The Prākṛtas extended the process further and the spread of constructions based on the past participle effected a critical transformation. Similar changes have occurred in other Indo-European languages, but at the same time to compensate for the disorder introduced by the reduction or elimination of the inflexional system everywhere a more complicated syntactical order has been created. Suprasegmental phonemes and analogical creations are other prominent factors in morphemic changes.

Cultural change leads to variation in the frequency of different types of discourses and this affects the repeat rate of words in the lexicon or "language." Consequently words become obsolete, new words emerge, and a total redistribution takes place. This may be considered as a basic process of semantic change. Thus the word "*ṛta*" is replaced at the end of the Vedic period by "*dharma*," "*yajña*" and "*satya.*" The change occurs in the context of a partial replacement of ritualistic and cosmological thinking

[15] Sturtevant, *op. cit.*, p. 62; Hoenigswald, *op. cit.*, p. 75.

by a more socio-ethical mode of thought, and in the process the meanings of words are modified. A parallel change may be noticed in the replacement of Vedic "*puruṣa*" by the later "*jīva*" as part of the growing obsolescence of Vedic humanism. Deliberate innovation such as in coining a new word, or giving a new definition or using an original metaphor, is another important source of semantic change.

Changes at different linguistic levels tend to interact dynamically on account of the systematic structure of language and also because the higher linguistic units are constituted out of the lower and a change in the available forms of the latter necessarily produces change in the former. Thus changes at the levels of phones, phonemes, morphs, morphemes, syntax and semantics form interlocking processes and chains. Thus in Indic *alābu* > *lauki* phonetic and morphic changes are continuous. A concurrent phonetic and semantic change in *loka* > *loga* leads on to the new form *lugāi.*

It is unnecessary to continue with the description of such changes in languages whereby particular sounds, grammatical forms, words and meanings undergo alteration, for the record of their detailed observations forms an extensive corpus and there have been several attempts at their systematization and formulation into rules of a more or less general character. As already mentioned the most spectacular success was achieved in noticing the regularity of sound shifts in the course of the history of Indo-European languages. The achievement, however, declines as higher linguistic units are taken up for analysis. In a way these studies have tended to follow the typical earlier course of the advancement of a science. First uniformities were observed in a general manner and then scrutinized more vigorously while at the same time the techniques of observation and description were made more precise. Finally the isolation of minimal linguistic units, the formulation of structures and the application of statistical techniques adumbrate an era of prediction which recapitulates on a higher level the earlier retrospective predictions or historical reconstructions. Nevertheless the relatively small area of analyzed or even accessible languages in relation to their actual totality in history seems to raise a doubt about the possibility of reaching universal laws and genuine prediction

inductively.[16] Some contemporary optimism rests on a belief in the sufficiency of communication theory in accordance with which language is not only a stochastic but also an ergodic process.[17] It is one thing, however, to discover the probabilities of recurrences at the level of "parole," lexicon or archive for a given linguistic status and community; another, to discover or even posit a pattern in linguistic history in general. We have a parallel in econometry which can lead to reliable short-run predictions over a limited area but cannot render economic history transparent.

3. MACRO-PROCESSES AND HISTORICAL PATTERNS

From the analysis of what have been described above as the micro-processes of linguistic phenomena, articulatory and structural, attempts have indeed been made to derive a larger pattern governing the life and death of languages. It has been observed that the inflexions of Indo-European appear to have arisen from the "agglutination" of pronominal expressions which later turned into the familiar suffixes.[18] In the wake of nineteenth century evolutionism it was thus suggested that languages may have evolved from a simpler to a more synthetic and complex stage and the evolutionary series indicated as isolating, agglutinative and inflexional.[19] If, however, inflexional features arose through such a process of "synthesis," the loss of inflexions as cumbrous and redundant may be termed by contrast as "analysis." It has thus been suggested in opposition to the older view that the trend of linguistic evolution may have lain toward increasing analysis and the polysynthetic, agglutinative, inflexional and

[16] Hoenigswald (*l. c.*) refers to the "unavoidable typological restriction imposed by the fragmentary nature of known historical and reconstructed materials." He also quotes E. P. Hamp's pointed remark "The difficulty lies in judging what is typologically plausible in a given language."

[17] Herdan, *op. cit.*

[18] Probably first pointed out by Bopp-Hughes, *op. cit.*, p. 80.

[19] Schleicher's standard formulation. Cf. Jesperson, *Language*, pp. 76ff; Greenberg, *op. cit.*, p. 60.

isolating systems of languages may have successively arisen as different stages. In positing either of these types of evolution excessive attention was devoted to the Indo-European languages and their morphological characteristics. One was also motivated by contrary notions of what constitutes linguistic progress and efficiency. Some argued that the classical languages were more logical than their modern descendants; others espoused an opposite cause.[20] When it was discovered that American-Indian languages are more synthetic than Greek and Latin, and Chinese more analytical than English and French, both sides tended to withdraw and the very notion of linguistic evolution and progress tended to be abandoned in favor of the essential (formal) equality of different languages.

If the Indo-European languages show the emergence and loss of inflexions and thus attest the alternation of synthetic and analytical tendencies, a glance at the course of Chinese suggests a parallel alternation, for Chinese seems to have been polysyllabic and even inflexional before becoming monosyllabic and is clearly showing signs of developing a new polysyllabism to avoid the confusion caused by too many homonyms. Turning to the Semitic languages from the Akkadian and ancient Hebrew to modern Arabic and the revived Hebrew, we seem to reach an area where passing millennia have not produced any such marked structural changes as witnessed by the Indo-European.[21] With the preliterate languages of Africa, Oceania and America we do not have enough information to reconstruct much of their earlier history of patterns.

However important structurally conditioned drifts may be, they are certainly not the only significant aspect of linguistic change nor indeed are they self-explanatory or self-effectuating. It may be obvious that while the structure of Indo-European favored much change, the situation is manifestly different on the Semitic side. Yet, the mere presence of structural inclination or resistance to change does not either initiate change or decide its pace and extent, for counteracting tendencies are always present.

[20] Cf. Sturtevant (against Mill), *op. cit.*, pp. 165ff.; Jesperson, *Progress in Language with Special Reference to English.*

[21] Cf. Diamond, *op. cit.*, pp. 196ff.

If languages are handed down as a social tradition and imitation is the source of their preservation, the inevitable imperfections of transmission and imitation are the source of their corruption or change. In learning a language children and adults all make mistakes which normally tend to be corrected by their environment, but not always. While the direction of these lapses tends to be often decided by inbuilt factors, their survival and spread from speaker to speaker or from word to word depends a great deal on the social and regional environment. The role of dialectical variation is of great significance in this context. So is the influence of foreign languages particularly through loan words. Migrations, conquests and population intermixtures lead to close interaction between different dialects and languages and consequent changes. Cultural changes and innovations lead specially to changes in vocabulary and styles which exercise a certain influence particularly relevant for semantic changes. In other words, the history of the community where a language is used is a major extrinsic factor without which the degree and manner of the fulfilment of its intrinsic possibilities of change would not be intelligible. If Indo-European languages have changed far more than semitic languages, the difference is not unconnected with the much greater historical changes which the Indo-European peoples have undergone.

Intrinsic and structural factors indicate the relative probabilities of different types or directions of change in language, which is not the same as the actual history of such changes. To understand the dates, pace and extent of changes in languages one has to turn to social and cultural occurrences which appear to lend their own pattern to linguistic history. Thus it appears that during the long ages of prehistory languages like human communities were much divided and conservative so that they varied more in space than in time. With the growth of communication and the emergence of the great civilizations, standard languages tended to replace or be superimposed over the many languages or dialects of large culture areas. The attachment to tradition—cultural, literary and linguistic—in the community especially among the educators, scholars and priests tended, however, toward a conservatism which, on the one hand, kept culture and language areas apart and, on the other, slowed the

pace of linguistic change through the deliberate efforts at retaining the classical purity of the standard *kôine* with the aid of such means of preservations as graphic, descriptive and lexical records. While migrations and conquests and the mixtures and vicissitudes of classes, regional and social, have tended to create linguistic instability, the advancement and greater contact of cultures have only tended toward the enrichment of vocabulary and greater standardization in language where printing, libraries and public education have carried forward the process which writing began. At the same time, special systems and means of communication have, however, tended to evolve and to overcome the separation of cultures and nations by their cherished languages. Scientific symbolism, tele-communication and machine-translation are examples of such devices which though ultimately dependent on natural languages still tend in a way to transcend their isolation and unify them at a higher level.

This process of incomplete unification in the history of languages arises from a basic duality in the functions which language performs. As a tool of intellectual communication, abstract or practical, it is easy to see that a message in one language may be more or less adequately transformed into another and this indicates their isomorphism. On the other hand, language is also used for the purpose of expressing feelings and ideologies and these are at once vague and effective only within definite cultural contexts. This tends to set a limit to the area of communication and to the transformability or replaceability of natural languages.

As examples of this close intertwining of linguistic and cultural historical patterns, one may take Sanskrit and Latin. Both have an archaic phase followed by a classical one where a standardization based on one of the dialects is achieved and spreads widely on account of political and cultural reasons.[22] This expansion naturally means an increasing difference between the standard literary language and the numerous dialects spoken in different regions. The restricted character of education meant a difference in the pace of change in the literary and spoken tongues and made the task of a continuous or complete refine-

[22] Cf. L. R. Palmer, *The Latin Language*, pp. 61, 68, 72, 178ff.

ment or correction of popular and "vulgar" variations impossible. With the additional disturbing force of invasions and migrations, the result was that a variety of provincial speeches gradually emerged as independent languages and the use of the classical language was confined to learned and liturgical purposes. This process was parallel to the emergence of marked cultural variations which in Europe led to the formation of modern nations which remain basically divided along the lines of linguistic cleavage. In India the "patriotic" attachment to provincial tongues appears to be emerging now and gravely threatening national unity, which in the past has always rested as practically everywhere else on one standard *kôine*, Sanskrit, Sanskrit/Persian, English.

4. POLARITIES AND RATE OF CHANGE

This pattern of archaic, classical and obsolescent, of unification and standardization followed by expansion and diversification, is at once cultural as well as linguistic. In this process of metamorphosis the opposite forces of refinement and vulgarization may be noticed as constantly at work. They proceed from the twin aspects of ideality and actuality which every language possesses. The standard or correct form, whether of pronunciation, or grammar or idiom, is an ideal which education inculcates and seeks to maintain in its purity. This is the great conserving force in language and when suitably aided by the emotional attachment of a community to its untranslatable literary tradition as also by the availability of suitable media of conserving such as a system of writing, the possibilities of this conserving force are extensive. On the other hand, actual speech and usage vary directly with time, space, persons and groups. The more these variations are recorded and valued, for example by being given a place in educational tradition, the more influential they tend to become. The Chinese, for example, have valued the written tradition far more than that of local and ephemeral speech. As a result they have had a continuity and accumulation of literary heritage which far surpasses that of any other nation, ancient or modern. On the other hand, during the recent past, Indians have veered away from their classical tradition and tended to worship such

false gods as the numberless spoken tongues of their country. The result is rapid change, differentiation and struggle in their linguistic culture. The purification of modern Greek and its approximation to its classical form, the cultivation, spread and development of Gaelic, the revival of Hebrew as the actual and current medium of Israelite national life, are all instances which prove the power of education and cultural attachment and their capacity of bringing about a renascence to offset an older obsolescence. The fate of Sanskrit in modern India presents a sharp contrast. Till 1830, for example, Sanskrit was still remarkably alive for purposes of learning, scholarship and religion; the spread of English and "vernacular" education, however, has rapidly affected its status and popularity so that it is now at last virtually "dead," which is not to say that it cannot be partially revived under suitable conditions. We must remember that languages neither live nor die. They are used or cease to be used. Unlike "death," disuse is a reversible process.

From the ideal-actual duality of language arise two contradictory forces tending to hinder and help linguistic change. The rate of change depends on the relative strength of the two forces. The notion that this relative strength is in some sense a constant and thus leads to a universal rate of change, say of twenty per cent of the vocabulary per millennium, appears to be neither theoretically sound nor sufficiently evidenced at the statistical level. On the other hand, the varying strength of the two elements may be clearly seen in history. The Vedic millennium from 1500 B. C. to 500 B. C. thus appears to be far more conservative in the linguistic sphere than the succeeding millennium when the various Prākṛtas rose and flourished. Similarly if one were to put Chaucer in the middle of a millennium, it would be obvious that the first half would show far more change than the second half.

Although the distinction between the ideal and the actual operates at each of the principal levels of linguistic phenomena—pronunciation, grammar and lexicon—we may still essay to place them in a scale of the more or less ideal or actual; it would then appear that we have here an ascending series of ideality and consequently a descending series for the rate of change. The relative weightage of the three ranges to discover a

mean, however, would depend on the state of education and cultural attitudes. It should, however, be marked that an actual variation of sound may be masked in the written language or continuous generations or areas by an apparent continuity of which the impression is produced by the gradualness of the change and the fact that the written language only records phonemic stereotypes. Thus even educated Indians today are often unaware that the classical *ṛ* has really disappeared. Similarly while a change or loss of accent would make the spoken word or sentence unintelligible, the change would go unnoticed in writing. At the grammatical level, on the other hand, the appearance of change may be magnified by a variety of factors. For example, we are struck far more by even a small unintelligibility when we are reading an old document than by a much bigger one when we are casually conversing. In the case of Indo-European languages the changes in inflexions appear to suggest a far greater revolution than is actual, for the very redundancy of the inflexions is proof of the fact that there have always been underlying syntactical structures which show greater persistence. It is as if in developing the inflexions these languages overdid the job and then gradually retreated.

From this perspective if we compare the development of Indo-European Semitic and Chinese languages, a significant correlation may be noticed. The Chinese have emphasized the semantic aspect most by developing ideograms and relatively neglecting spoken sounds and their grammatical forms. This is what has given Chinese its immense continuity in space and time. If the Chinese had insisted on writing what they speak instead of writing what they mean, they would have been fragmented long ago. In the Semitic languages many forms tend to penetrate the roots which bear significance and this integral character of forms has helped linguistic conservation. What is more the roots are consonantal and we have to remember that consonants are easier to distinguish and have a firmer opposition than vowels.[23] The phonetic emphasis of the Indo-European scripts with their insistence on and distinction of

[23] Diamond, *op. cit.*, pp. 196ff.; Cf. Martinet, *L'Economie des changements phonétiques*, pp. 134ff.

numerous vowels, the additive character of inflexions and their functional overlap with actual syntactical forms, all tend to produce a relatively fluid situation.

We must, however, distinguish the ease and rate of change from the extent of change since the two tend to have an almost inverse relation. Thus the sound complement of a language being subject to the greatest stress and being nearest to spontaneous processes tends to vary most immediately in idiolect and dialect, and yet its total range of variation is relatively limited. Perhaps there is some articulatory reason which places an upper limit so soon over the total number of phonemes which human languages utilize. The persistence of phonemes—which have an ideal character—and even more so of phonemic structure counteract the constant tendency for phonic variation and one may get "the impression that the phonic material of the language moves in and out of a rather permanent framework."[24] In the case of grammatical forms the total possibilities of change become much larger, although certain types of features such as triliteralism in Semitic roots or monosyllabism in Sino-Tibetan or the characteristics belonging to a language area show great persistence and tend to act as limiting factors. It is in the area of semantic change that we enter a realm of almost unlimited possibilities since it runs parallel to general cultural change. Limits arise here from the fact that certain basic institutions and attitudes show relatively minor variation in the course of culture and also from the fact that new meanings are often built out of old ones.

It may thus be said that while language is constantly subject to the process of change springing from internal as well as external forces, it is equally subject to similar stabilizing forces. This introduces a great diversity in the pace, pattern and extent of change which different languages undergo in different places and epochs. They are not in any case subject to a unidirectional and endless process of change akin to human destiny and they should not be conceived as organic processes with an inbuilt evolution, decay and death. Nor indeed do they run down like mechanical processes losing energy and becoming more dis-

[24] Hoenigswald, *op. cit.*, p. 66.

orderly. Languages change under the impact of historical and cultural factors in accordance with their phonetic and structural plausibilities. A sound and widespread system of education tends to minimize the process of change and a language continues to live and flourish so long as its speakers continue and take pride in it. Languages die only when communities and cultures die.[25] Plato had expressed the opinion that a change in the style of music reflects a basic change in culture.[26] It may be said with greater truth that languages mark the spatiotemporal boundaries of cultures and communities—indeed, of individuals whose speech habits and linguistic usage are as characteristic as their personalities.[27] Even if one does not accept in toto the opinion that each language expresses a unique world-view,[28] one would still have to accept that natural languages are neither culturally indifferent value-neutral communication systems nor reducible to or replaceable by such. Language is at once the ultimate form of cultural expression as well as scientific communication. Insofar as there is an organized or systematic character in the collective psyche of any cultural pattern, language mirrors it in the most general and exhaustive manner and changes in sensitive response to it. On the other hand, a fundamental unity of human nature and environment makes possible the emergence of an ever-widening common world of communication. Out of parochial communities and dialects emerged the great world cultures and languages of antiquity but the persistent barbarism of northern Europe and Central Asia led to the breakdown of classical fabrics and the retrograde emergence of diverse nationalities and tongues into the historically significant world. Imperial power and influence have undoubtedly given a quasi-international status to English, French and Spanish while

[25] Cf. Weinreich, *Languages in Contact*, p. 84.

[26] *Republic*, 4.424.

[27] E Sapir, "Speech as Personality Trait," *American Journal of Sociology*, 1927.

[28] Cf. Whorf, "Segmentation of nature is an aspect of grammar," *Language, Thought and Reality* (ed. Carroll), p. 240; Cf. *Language in Culture* (ed. Hoijer), pp. 235ff.

Chinese, Arabic and Russian retain a world status in their own right. The future would seem to lie not with the triumph of any one of these but with the development of tools and institutions of rapid, easy and continuous translations from one language into another, increased multilinguism and the ever-widening use of nonlinguistic symbolism and universal nomenclature in technical areas.