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Evolution and communication: the domestication of the savage mind

For some time now evolution has tended to be a dirty word in the social sciences.[1] The adjectival form, applied to a writer, tends to indicate old-fashioned, even 'biological' concerns. It is time to lay aside this negative attitude. Just as there is no sociology without comparison (implicit or explicit), so comparison almost inevitably raises the question of the change from one form to another. And the process of evolution, stripped of the implications of unilineality and irreversibility, is simply long-term change.[2]

Much of the best known sociology, that associated with the names of Comte, Marx, Spencer, Weber and Durkheim (not to mention the more obvious candidates, Maine, Morgan, Tylor, Robertson-Smith and Frazer) has displayed both comparative and evolutionary interests. The work of Spencer and Durkheim shows an extensive knowledge of the writings about non-European societies; that of Weber has a similar command of Asia. Much of this interest derived from a somewhat egocentric but none the less important concern having to do with the rise of modern industrial society; it centred upon a question which Parsons has recently reiterated. 'Why, then, did the breakthrough to modernization not occur in *any* of the "Oriental" advanced intermediate civilizations?' (1966: 4). This question immediately implies an opposition between 'our' type of society and 'theirs'; and its answer requires that we search the world for positive and negative cases to confirm our ideas about the relevant factors. There is nothing wrong with the search as such, but we need to recognize the ethnocentric nature of its starting point and the fact that the dichotomizing of 'we' and 'they' in this manner narrows the field of both the topic and of its explanation.

If we are interested in even longer-term development (as certain of the hypotheses of Spencer, Durkheim, Marx and Weber force us to be), then a further set of considerations come into play. If I put these in an over-obvious way, it is because much contemporary social theory leads us to neglect certain obvious lines of enquiry.

When we think of long-term evolutionary change, it is inevitable

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that we think primarily in terms of technological developments. For the archaeological record, which provides the only evidence of early societies, is based upon the resurrection of man's material products and these display certain well-established sequences which show general changes in the human economy from hunting to food production to more complex agriculture, and finally, in the age of writing, through to industrial manufacture. Archaeology, as has often been pointed out, makes Marxists of us all, since it has to treat material objects (the tools of production) as the basis for further deductions not only about the mode of production but about the social system as a whole.

While no one can fail to recognize long-term ('evolutionary') changes in the economy, such sequences are less easy to establish in the other social domains, in kinship, in religion, in law, in politics, and in the general field of 'thought', of 'culture'. Nineteenth-century writers had no doubt that such sequences could be worked out, and often, like E. B. Tylor, they proposed geological models for the better understanding of human institutions. But the archaeological strata contained nothing but material objects and, except in a few cases, these could not provide an adequate basis for the reconstruction of total social systems. Consequently the suggested course of development of kinship, for example, was inevitably subject to much speculation, controversy and dispute. This speculation affected synchronic studies of particular societies, because people tried to read back their proposed time-sequences into the contemporary situation and hence to ask what in many cases seemed to be the wrong sort of question. One well-known example in the nineteenth century is the widespread interpretation of any custom indicating reluctance on the woman's part to join her husband at marriage (for instance, the groom lifting his bride over the threshold of their new home) as a 'survival' of marriage by capture; for this was an institution regarded by many as critical for the change from matriliny to patriliny, from 'mother right' to 'father right', since it provided a mechanism for wresting women from their natal homes. Such explanations were decisively rejected by functionalist writers such as Malinowski (1913, 1930) and Radcliffe-Brown (1929) and the latter offered an alternative interpretation of this particular set of customs as expressions of structural rearrangements between persons and groups involved in a marriage alliance.

There can be no doubt that this change in emphasis brought many benefits to comparative sociology. But it also brought with it a certain neglect of questions of long-term change, indeed of social change altogether. One result was a tendency not only to reject pseudo-history (i.e. the speculative reconstruction of sequences of social development) but also history itself. For instance, while political systems were differentiated one from another, such differentiation was treated as purely morphological, with no developmental implications. In their

influential analysis of 'African political systems' (1940), Fortes and Evans-Pritchard analysed the differences between the centralized and acephalous types; the latter term referred to non-centralized societies, often known as segmentary because of the processes of association that characterized them. They treated these two types as of equal standing, without considering the question of the changes from one to the other, nor yet the general direction of those changes. This self-imposed limitation of the discussion to differences of morphology and process of the societies themselves naturally left on one side the more speculative problem of long-term change, even though the analyses of individual societies made by these writers certainly drew attention to dynamic factors.

This trend was reinforced by the general swing to 'cultural relativism', since if one could set types side by side instead of one above another, the element of value judgment implied in the temporal ordering of data was automatically removed. Even so there was clearly a certain degree of ambivalence towards the study of long-term and short-term social change. While synchronic studies of single societies largely avoided both problems, any broader comparison, as Parsons has pointed out, brings the 'evolutionary' question back into focus.

Of no topic is this truer than studies of the general development of the human mind or thought. Here we face the two characteristic dilemmas of those considering long-term change. Firstly there is the dilemma of the participant observer. We look at the question not as an investigator examines geological layers, but from the inside outwards. We start with the conviction that there are important differences between ourselves (variously defined) and the rest. Otherwise how come that they are under-developed (or developing) and we are developed (or over-developed)? Or to revert to the earlier classification, why are they primitive and we advanced? We try to state the nature of these differences in very general terms—the move from myth to history, from magic to science, from status to contract, cold to hot, concrete to abstract, collective to individual, ritual to rationality. Such movement inevitably tends to be phrased not only in terms of process but of progress too; in other words it acquires a value element. While there is nothing necessarily wrong, this procedure tends to distort the way we perceive the kind of development that has occurred, especially when this is seen in such very general terms as, for example, Levy-Bruhl's division into pre-logical and logical mentalities.

A consideration of Levy-Bruhl leads us to the second dilemma, that of the functionalist or the cultural relativist. One basic functionalist objection to thinking in terms of change is that a wrong judgment may distort an analysis of the structure. The objection has much force. But all analysis of social change, whatever the nature of the evidential basis, tends to get tarred with the same brush. We can perhaps overcome the

objection to sketching out the development of man's thinking, if we bear in mind the limits of the evidence and the possibility of any distortion to synchronic studies. For we are always faced with the problem that if as cultural relativists we throw aside not only Levy-Bruhl but the whole developmental problem, there is still the tendency for another schema to creep back in its place.

One recent attempt is Lévi-Strauss' study of *La Pensée Sauvage*, translated into English as *The Savage Mind*. I cannot discuss the contents of this influential book in the course of a brief paper, but it does illustrate both of the dilemmas mentioned above. One needs to say straight away that there are two themes in Lévi-Strauss' analysis of the human mind. There is differentiation; there is similarity; and apparently with regard to the same features. The second line of thinking is present in *La Pensée Sauvage* as well as in the three volumes entitled *Mythologiques*. It is epitomized in his piece on 'The Concept of Primitiveness' where he writes: 'I see no reason why mankind should have waited until recent times to produce minds of the calibre of a Plato or an Einstein. Already over two or three hundred thousand years ago, there were probably men of a similar capacity, who were of course not applying their intelligence to the solution of the same problem as these more recent thinkers; instead they were probably more interested in kinship!' (1968: 351).

The sentiment is unexceptional (I cannot believe that on one level anyone could think otherwise, anyhow if we lessen the 2–300,000 to 50,000, the emergence of *Homo sapiens*): at least we avoid the radical dichotomy. But we do so apparently by rejecting all consideration of the specific factors, including intellectual tradition, institutional setting and manner of communication, that lay behind the emergence of a Plato or an Einstein. We move from the crude dichotomy to an ahistorical unity.

The starting point of *The Savage Mind* is a dichotomy of 'mind' or 'thought' into savage (or 'prior') and domesticated. This opposition has many of the characteristics of the earlier 'we–they' division into primitive and advanced, even though the author tries to set aside some of its implications. He attempts to give the new dichotomy a more specific historical base, seeing 'savage' knowledge as characteristic of the neolithic age and the domesticated variety as dominating the modern period. In making this division, he specifically denies the continuity of scientific endeavour, seeing 'two distinct modes of scientific thought'. But then he goes on to deny the 'evolutionary' implication of his position. 'These [modes] are certainly not a function of different stages of development of the human mind but rather of two strategic levels at which nature is accessible to scientific enquiry: one roughly adapted to that of perception and the imagination: the other at a remove from it' (1966: 15).

Since all these terms are capable of a number of interpretations, one may certainly misunderstand the author's meaning. But the position does appear to be a classic example of 'having it both ways', a frequent solution to the dilemmas we have outlined above. The major difficulty arises from the simplistic dichotomy into 'we' and 'they' which dogs so much sociological enquiry into long-term development. In those areas of social life where we can trace with some certitude the course of long-term changes, we find a whole sequence of developments, not one cataclysmic transformation. For example, there is a continuity as well as a discontinuity of 'scientific' or 'technological' tradition, one step leading by more or less circuitous paths to another. Why should such a pattern be any less likely in matters of the 'mind'?

In looking at the changes that have taken place in human thought, we must abandon the egocentric dichotomies that have characterized social thought in the period of European expansion. Instead we should look for more specific criteria for man's development. Nor should we neglect the material concomitants of the process of mental 'domestication', for they are not only the manifestations of thought, invention, creativity, they also shape its future forms. They are not only the products of communication but also part of its determining features.

So even if the message cannot reasonably be reduced to the medium, any changes in the system of human communication must have great implications for the content. Indeed, our starting point must be that the acquisition of language, which is an attribute of mankind alone, is basic to all social institutions, all normative behaviour.[3]

Many writers have seen the development of language as a prerequisite of thought itself. Into this argument, which is partly a definitional problem, we do not need to delve. But it is worth noting that the archaeological evidence of extensive human culture, as depicted in the wall paintings of the Upper Palaeolithic and in the burial practices of the Neanderthals, coincides with the appearance of a man with the larger brain that would seem to be necessary for the type of communicative and storage systems associated with speech.

Of course, the existence of language does tend to dichotomize. You either have it or you don't. Human languages appear to display few differences in their potentiality for adaption to development. Whatever differences there may be in the language of 'primitive', 'intermediate' and 'advanced' peoples, apart from vocabulary, these factors seem to have little effect in inhibiting or encouraging social change. In making this point, I am deliberately setting aside certain implications of Benjamin Lee Whorf's seminal comparison of SAE (Standard Average European) and Hopi, as well as the multitude of anthropological analyses that tend to treat man as imprisoned by the concepts he has produced and hence fail to account for the generative aspects of his culture.

The dichotomy between those with language and those without has

little to do with the kind of differences which concern us here. However, it does suggest that an examination of the systems of communication, a study of the technology of the intellect, can throw further light on developments in the sphere of human thinking. For those studying social interaction, developments in the technology of the intellect must always be crucial. After language the next most important advance in this field lay in the reduction of speech to graphic forms, in the development of writing. Here we can see not one major change but a series of changes, many of them spread through a process of diffusion that can be largely reconstructed. These culminated in the relatively simple form of alphabetic writing in widespread use today, and whose proposed adoption Lenin once described as the revolution of the East.

If we think of changes in communication as being critical, and if we see them as multiple rather than simple in character, then the old dichotomy between primitive (or 'prior') and advanced disappears, not only for 'thought' but for social organization as well. For the introduction of writing has had a great influence on politics, religion and economics; kinship institutions seem influenced only in a secondary way, for reasons that will shortly be discussed. In saying this I am not attempting to put forward a simple, technologically determined, sequence of cause and effect; there are too many eddies and currents in the affairs of men to justify a monocausal explanation of a unilineal kind. On the other hand, there is a halfway house between the choice of a single cause and the complete rejection of causal implications. A major line of thinking in sociology and anthropology, especially in the Durkheimian tradition, has tended to neglect the technological changes that other disciplines, such as prehistory, have found so significant. There were two reasons for this tendency. One was the attempt to establish sociology as a distinct subject dealing with a special category of facts deemed 'social'; in social anthropology there was a parallel attempt (deriving from the same Durkheimian source) to steer clear of the study of 'material culture' and concentrate upon the 'social'. The second reason lay in Weber rather than in Durkheim; his qualifications to Marx's thesis involved a partial shift in emphasis from production to ideology, from 'infrastructure' to 'superstructure', a trend that has become increasingly dominant in some later social theory.

The significance of technological factors has to be judged independently of ideological considerations. In the realm of thought they are important for two special reasons. We are dealing with developments in the technology of communicative acts, a study of which enables us to make a bridge between social theory and communications theory. Secondly a stress upon the implications of changes in the technology of communications can be seen as an attempt to discuss in more manageable terms a topic that has become increasingly obscure and scholastic.

In an earlier paper (1963) Watt and I tried to lay out some of the features we saw as being closely linked to the advent of writing and in particular to the invention of the alphabetic system that made widespread literacy possible. We suggested that logic in our modern sense (and we did not give the same value to this discovery as Levy-Bruhl and other philosophers) seemed to be a function of writing, since it was the setting down of speech that enabled man clearly to separate words, to manipulate their order and to develop syllogistic forms of reasoning; these latter were seen as specifically literate rather than oral, even making use of another purely graphic isolate, the letter, in its original formulation. A similar argument applies to the law of contradiction, which Levy-Bruhl deemed absent in primitive societies. From one standpoint his claim was nonsense. Yet it is certainly easier to perceive contradictions in writing than it is in speech, partly because one can formalize the statements in a syllogistic manner and partly because writing arrests the flow of oral converse so that one can compare side by side utterances which have been made at different times and at different places. Hence there is some reason behind Levy-Bruhl's distinction between logical and pre-logical mentality, as well as behind his discussion of the law of contradiction. But the emphasis is quite wrong. Because he fails to consider the mechanics of communication, he is led to make wrong deductions concerning mental differences.

The same kinds of consideration apply to numbers as apply to other words. The development of Babylonian mathematics also depended upon the prior development of a graphic system, though not necessarily an alphabetic one. The relationship between writing and mathematics holds true even at an elementary level. In 1970 I spent a short time revisiting the LoDagaa of Northern Ghana, whose main contact with literacy began with the opening of a primary school in Birifu in 1949. In investigating their mathematical operations I found that while non-school boys were expert in counting a large number of cowries (shell money), a task they often performed more quickly and more accurately than I, they had little skill at multiplication. The concept of multiplication was not entirely lacking; they did think of four piles of five cowries as equalling twenty. But they had no ready-made table in their minds (the 'table' being essentially a written aid to 'oral' arithmetic) by which they could calculate more complex sums. The contrast was even more true of subtraction and division; the former can be worked by oral means (though literates would certainly take to pencil and paper for the more complex sums), the latter is basically a literate technique. The difference is not so much one of thought or mind as of the mechanics of communicative acts.

There are two other general points I want to make about the mental processes involved. I remarked that most LoDagaa were quicker in counting large sums of cowries. Indeed my method caused some

amusement since I was seen as moving the shells in an uneconomic manner, one by one; I later observed that only schoolboys, accustomed to the more individualizing ways of abstract counting, used the same technique. When a normal bridewealth payment adds up to 20,000 cowries, counting can be a time-taking procedure. The LoDagaa themselves recognized a special mode of 'cowrie counting' (*libie pla soro*), where they moved first a group of three, then two, to form a pile of five. Apart from being a fraction of twenty, which was the base for higher calculations, five represented a number which one could check by a glance as one moved one's hand forward again to collect the next group of cowries. The possibility of such a double check clearly increased the accuracy of their computation. Four piles of five were then aggregated into a pile of twenty; five twenties into a hundred, and so on till the bridewealth was counted. But the point I want to make has nothing to do with the speed or accuracy of counting, but with the relative concreteness of the procedure. When I first asked someone to count for me, the answer was 'count what?' For different procedures are used for counting different objects. Counting cows is different from counting cowries. We have here an instance of the greater concreteness of procedures in non-literate societies. It is not the absence of abstract thought, as Levy-Bruhl believed; nor is it yet the opposition between the 'science of the concrete' and the 'science of the abstract', of which Lévi-Strauss speaks. The LoDagaa have an 'abstract' numerical system that applies as well to cowries as to cows. But the ways in which they use these abstract concepts are embedded in daily living. Literacy and the accompanying process of class-room education brings a shift towards greater abstractness, but to crystallize such a developmental process into absolute dichotomy does not do justice to the facts either of traditional society, or of the changing world in which the LoDagaa now find themselves.

The other general point is this. There are some specialist groups of traders, such as the overseas Yoruba, whose ability to calculate relatively complex sums is linked to their role as distributors of European goods, breaking down bulk items into small packages. Such transactions require a careful consideration of the profit and the loss, and this attention the Yoruba certainly give. How far their ability in this direction is a feed-back of literate achievement is difficult to know; the 'table' (as its name suggests) is essentially a graphic device, yet it is used as an instrument of oral calculation. Among the Yoruba this ability to calculate is normally transmitted in 'family' lines; it is subject to the limitations of oral transmission, which tends rapidly to formalize a body of knowledge. I have already mentioned that the absence of writing means that it is difficult to isolate a segment of human discourse (e.g. mathematical discourse) and subject it to the same highly individual, highly intense, highly abstract, highly critical analysis that we can give

to a written formula. But there is also a further point. Since the same complaint of formalization is often levelled at the corpus of written knowledge, let me provide a simple illustration to show the difference. If an individual Yoruba were to develop a new mode of calculation, the chance that this creative achievement would survive him depends primarily upon its 'utility'. I do not give this term the narrow meaning assigned by Lévi-Strauss in his dismissal of Malinowski (1966: 3) but simply intend to infer that it is a now or never matter; there is no chance that his discovery will be acclaimed at a later date; there is no store for subsequent recall.

This is no trivial consideration; what happens here is part and parcel of the tendency of oral cultures towards cultural homeostasis; those innumerable mutations of culture that emerge in the ordinary course of verbal interaction are either adopted by the group or get eliminated in the process of transmission from one generation to the next. If one is adopted, the individual signature (it is difficult to avoid the literate image) tends to get forgotten, whereas in written cultures the very knowledge that a work will endure in time, in spite of commercial or political pressures, stimulates the creative process and encourages the recognition of individuality.

The growth of individuality is another of the vague generalities applied to the mental development of mankind. Once again, there is something to be explained. Durkheim tried to do so by means of another dichotomy, the shift from mechanical to organic solidarity; the growth of the division of labour meant the increasing differentiation of roles; advanced society was characterized by heterogeneity as against homogeneity and this state of affairs was reflected in the 'conscience collective' of uncomplicated societies (for as Parsons has pointed out the conscience collective was at first assigned only to these latter) and to the kinds of solidary bond that existed between persons and groups.

Again there is something to the Durkheimian argument. But the process he describes is more likely to produce a series of partially differentiated sub-groups rather than the kind of activity usually associated with the growth of individualism in the West. There was certainly more than one factor involved in this vaguely defined process; but the changes in human communication that followed the extension of alphabetic literacy in Greece and the introduction of the printed word in Renaissance Europe were surely important factors. Yet they are given no consideration in his argument.

Another common element in differentiating between primitive and advanced societies, one that is discussed by Lévi-Strauss as well as Cassirer before him, has to do with the contrast between myth and history (Goody and Watt, 1963: 321–6). There is, of course, a simple-minded sense in which history is tied to the use of documentary material and hence inseparable from literate cultures; before that, all is pre-

history, the prehistory of societies dominated by myth. Without going into the many ambiguities involved in the definition of myth, there is a sense in which this concept involves a backward look at that which is either untrue or unverifiable. And the concept literally comes into being at the time when writing enabled mankind to set one account of the universe or the pantheon beside another and hence perceive the contradictions that lie between them. There are thus two senses in which the characterization of the 'savage mind' as 'pre-historical' relates to the distinction between literate and pre-literate societies.

I have mentioned two sociological discussions that would gain from a consideration of the consequences of changes that have occurred in systems of communicative acts. The written word does not replace speech, any more than speech replaces gesture. But it adds an important dimension to much social action. This is especially true of the politico-legal domain, for the growth of bureaucracy clearly depends to a considerable degree upon the ability to control 'secondary group' relationships by means of written communications. Indeed it is interesting to note that the terms in which Cooley originally defined the primary group are very close to those used for pre-literate societies. 'By primary group, I mean those characterized by intimate face-to-face association and co-operation. The result of intimate association, psychologically, is a certain fusion of individualities in a common whole, so that one's very self, for many purposes at least, is the common life and purpose of the group' (1909: 23). A face-to-face group has no great need of writing. Take the example of the domestic group, the prototypical primary group, which brings us back to the reasons why writing and other changes in the communication system have had little direct influence on kinship, since intercourse between kin is largely oral and often non-verbal.

Other social institutions are affected more directly. I mentioned above the problem of communication in large states. This is not the occasion to enter upon an extended discussion of the relationship between the means of communication and political organization. Max Weber pointed out that one of the characteristics of bureaucratic organization was the conduct of official business on the basis of written documents.[4] But it needs stressing that some of the other characteristics of bureaucracy he mentions are also closely related to this fact. The depersonalization of the method of recruitment to office often involves the use of 'objective' tests, that is, written examinations, which are ways of assessing the applicants' skill in handling the basic material of administrative communication, letters, memos, files and reports. As Bendix notes in his valuable commentary on Weber, in earlier systems of administration 'official business is transacted in personal encounter and by oral communication, not on the basis of impersonal documents' (1960: 420). In other words, writing affects not only the method of recruitment and the occupational skills but also the nature

of the bureaucratic role itself. The relation with both ruler and ruled becomes more impersonal, involving greater appeal to abstract 'rules' listed in a written code and leading to a clearcut separation between official duties and personal concerns. I do not wish to suggest that such separation is totally absent from non-literate societies; nor would I endorse the observation that unwritten tradition 'endorses the unprincipled arbitrariness of the ruler' (Bendix 1960: 419). But it is clear that the adoption of written modes of communication was intrinsic to the development of more wide-ranging, more depersonalized and more abstract systems of government; at the same time, the shift from oral intercourse meant assigning less importance to face-to-face situations, whether in the form of the interview or audience, of personal service or national festivals, in which the renewal of ties of obedience was often as significant as the religious rites.

In this essay I have tried to take certain of the characteristics that Lévi-Strauss and others have regarded as marking the distinction between primitive and advanced, between wild and domesticated thinking, and to show that many of the valid aspects of these somewhat vague dichotomies can be related to changes in the mode of communication, especially the introduction of writing. The advantage of this approach lies in the fact that it does not simply describe the differences but relates them to a third set of facts, and thus provides some kind of explanation, some kind of mechanism, for the changes that are assumed to occur.

A recognition of this factor also modifies our view of the nature of those differences. The traditional characterization is essentially a static one in that it gives no reason for change, no idea of how or why domestication occurred, it assumes the primitive mind has this particular character, the advanced has that, and it is due to the genius of the Greeks or the Western Europeans that modern man emerged. But modern man is emerging every day in contemporary Africa, without, I suggest, the total transformation of processes of 'thought' or attributes of 'mind' that existing theories imply. The content of communication is clearly of prime significance. But it is also essential, for social theory and historical analysis, for present policy and future planning, to recall the limitations and opportunities offered by different technologies of the intellect.

References

Cassirer, E. (1944) *An Essay on Man*. New Haven, Yale University Press.

Cooley, C. H. (1909) *Social Organization*, New York, Charles Scribner's.

Durkheim, E. (1933) *The Division of Labour in Society*, New York, Macmillan (1st French ed., 1893).

Fortes, M. and Evans-Pritchard, E. E. (1940) *African Political Systems*, London, Oxford University Press.

Goody, J. and Watt, I. (1963) 'The Consequences of Literacy', *Comparative Studies in Society and History*, vol. 5, pp. 304–45.
Hockett, C. (1960) 'The Origin of Speech', *Scientific American*.
Lévi-Strauss, C. (1966) *The Savage Mind* (1st French edn., 1962), London, Weidenfeld.
Lévi-Strauss, C. (1968) 'The Concept of Primitiveness', in R. B. Lee and I. DeVore (eds.), *Man the Hunter*, Chicago, Aldine.
Levy-Bruhl, L. (1926) *How Natives Think* (1st French edn, 1910), London, George Allen & Unwin.
Malinowski, B. (1913) *Family Among the Australian Aborigines*, University of London Press.
Malinowski, B. (1930) 'Kinship', *Man*, vol. 30, no. 17.
Parsons, T. (1937) *The Structure of Social Action*, New York, McGraw-Hill.
Parsons, T. (1966) *Societies: Evolutionary and Comparative Perspectives*, Englewood Cliffs, N. J., Prentice-Hall.
Radcliffe-Brown, A. R. (1929) 'A Further Note on Ambrym', *Man*, vol. 29, no. 35.
Whorf, B. L. (1956) *Language, Thought and Reality; Selected Writings of Benjamin Lee Whorf*, New York, The Technology Press of Massachusetts Institute of Technology and John Wiley & Son, Inc.

Notes

1. This paper was first presented at the International Sociological Association, Varna, September, 1970.

2. When Talcott Parsons undertook a comparison of social systems, he was directly confronted with the problem of dealing with 'societal evolution' (1966: v).

3. By language here I mean a specific constellation of attributes of aural systems of communication; see Charles Hockett, 'The Origin of Speech', *Scientific American* (1960).

4. See Reinhard Bendix, *Max Weber; an Intellectual Portrait*, New York, 1960, p. 419; Max Weber, *The Theory of Social and Economic Organization* (English transl.) New York, 1947, pp. 330–2.