MENTALITY, MENTAL CAPACITY AND CULTURE: A NOTE TOWARD THE CLARIFICATION OF THE CONCEPT OF INTELLIGENCE*

ZİHNİYET, ZİHNÎ KAPASİTE VE KÜLTÜR: ZEKÂ MEFHUMU HAKKINDA BİR NOT

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Batı tipînde ilmî zekâ ile, ilîm dışı tradisyonel cemiyetler ve iptidaî cemiyetlerde gelişen zekâ arasındaki fark IQ skorlarındaki farklarla ifade edilemez, zira bu iki tip zekâ için müşterek bir ölçek yoktur. Zihnî inkişafta yalnız değişebilir kantiteler değil, kalitatif olarak farklı seviyelerde görülür. Bu yazıda; genetik potansiyelin inkişaf merhaleleri boyunca muhafaza edilemeyeceğine işaret edilmekte ve bu açıdan kognitif inkişaf ve kültür münasebeti incelenmektedir.

The difference between the Western type of Scientific intelligence and the intelligence nurtured in non-scientific traditional societies and primitive societies cannot be expressed by differences in IQ scores, since there is no comparable metric for the two kinds of intelligence. It is argued that in mental development not only variable quantities but also qualitatively different

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levels are involved. It is pointed out that innate potential cannot be preserved throughout the developmental stages.

I have no right to reveal other people's ignorance besides my own, but I can find no better starting point for a discussion on intelligence. Psychologists are fond of measuring intelligence and they have an urge to define it, often as a postscript to measurement. Definitions, however, cannot be the source of knowledge, and measurements without a theoretical orientation may be irrelevant or perplexing. Intelligence test scores give an estimate of achievement. They portray the mental end-products; about the psychological processes behind the end-products little is known. In psychology, «intelligence» has been an island of research cut off from the mainland of experimental investigations of thought emotion, perception, memory, attention, and other psychological processes. Consequently, the theoretical foundations of the concept of intelligence have remained rather flimsy. IQ scores need to be interpreted, but there is no firm theoretical basis for their interpretation. Moreover, many human actions described as intelligent involve psychological qualities which are beyond the reach of conventional intelligence tests. In fact, as ordinary people, our observations of human behavior are qualitatively more discriminatory than IQ scores. Gilbert Ryle mentions the following adjectives as more definitive designations related to the concept of intelligence : 'clever', 'sensible', 'careful', 'methodical', 'inventive', 'prudent', 'acute', 'logical', 'witty', 'observant', 'critical', 'experimental', 'quick-witted', 'cunning', 'wise', 'judicious', and 'scrupulous',[1]. How can a unitary process called intelligence account for such diversity in apparent behavior? Qualitatively variable organization of various psychological processes during the years of development may well be decisive for the type and level of one's intelligence.

The human mind develops and becomes structured through experience, within the possibilities of a given genetic potential. Experience is acquired in a cultural context. Every culture presents to its members a store of knowledge, a variety of tasks and goals, a set of values and assumptions. These cultural presentations play an important role in the determination of the capacities of an individual, as his thoughts, emotions, perceptions, memory, interests and attention develop. Here, I would like to introduce the concept of mentality as distinguished from ,though developmentally interwoven with, the concept of mental capacities. Mentality is not taught and learned as a circumscribed task. It is not a conscious content in the mind. It grows out

of the selective presentations of a culture and consists of habitual modes of thinking, feeling and reacting. For development and adaptation, a growing child needs some degree of consistency and stability in his perceptions of and reactions to the environment. Culture helps him to achieve this by providing him with bases of interpretation and rules of conduct. Without awareness, the child's sense of reality becomes infused with this cultural framework. So, what an individual comes to regard as the reality is, to a great extent, socially constructed. As Berger and Luckmann have remarked, «what is 'real' for a Tibetan monk need not be 'real' for an American businessman»[2]. Knowledge is not a collection of additive items of information but a structure with a built-in filter and transformer. Since structure is the result of cultural assumptions, values and goals, one cannot, as a member of a certain culture, add to one's store of knowledge without filtering and/or transforming the experiential material met in the environment.

At the time of the birth there is virtually no knowledge and no mentality. During infancy and early childhood the contents and the contexts of learning begin to produce a certain mentality, which operates with increasingly more efficiency to select, relate, edit and interpret the contents of later perceptions and learnings. It is most probable that by early adulthood this acquired mentality has become firmly established. It changes only in exceptional cases and under the influence of extraordinary experiences. Generally, it does not alter at all, but by its perceptual filtering and transforming operations, determines the direction and the contents of new learnings, as well as their significance.

Unfortunately, most theories of learning are based on the data of adult learning, and the developmental characteristics of the processes of learning are typically neglected in theory-building. However, the importance of early learning has not remained completely unrecognized. One of the central problems in psychology of learning, «transfer of training», has emphasized it, although this emphasis has found no reflection in formal theories. McGeoch has said : «After small amounts of learning early in the life of the individual, every instance of learning is a function of the already learned organization of the subject; that is all learning is influenced by transfer... The learning of complex, abstract, meaningful materials and the solution of problems by means of ideas (reasoning) are to a great extent functions of transfer. Where the subject 'sees into' the fundamental relations of a problem or has insight, transfer seems to be a major contributing condition. It is,

likewise, a basic factor in originality, the original and creative person having, among other things, unusual sensitivity to the applications of the already known to new problem situations. Perceiving, at whatever level, is probably never free of its influence; and there is no complex psychological event which is not a function of it»[3]. Here, I should like to emphasize «the already learned organization of the subject» and to point out that by this means early learning exerts an influence not only on the ease of learning particular tasks met later but also on the modes of perceiving and thinking employed in learning situations. From birth onward, perceptual development is continuously influenced by previous learning and finally perception marges into thought. «There is more in vision than meets the eye», as the proverb says.

Indeed, Gregory has argued on the basis of many experiments and systematic observations that the perception of the external world is not given directly by sensory processes : «It seems clear that perception involves going beyond the immediately given evidence of the senses : this evidence is assessed on many grounds and generally we make the best bet, and see things more or less correctly. But the senses do not give us a picture of the world directly; rather they provide evidence for checking hypotheses about what lies before us. Indeed, we may say that a perceived object is an hypothesis, suggested and tested by sensory data»[4]. It may be added that in complex and ambigous perceptual situations the grounds for assesment of sensory evidence are provided by culture. For the same set of physical cues different hypotheses may have priority in different cultures. Moreover, especially in those situations where perceptual activity is not directly initiated by sensory data but is preceded by an intellectually determined search for certain physical cues, cultural assumptions and traditions play a predominant role in the organization of perceptions. The process of scientific progress is a model example of this last point. In any area of science, the prevailing concepts and the collective judgment of the first-class scientists on the probable direction of further progress guide the observations of individual scientists by making them select the contents of their perceptions in a relatively unstructured and undefined perceptual field. Registering unexpected results is to a great extent also a function of the conceptual scheme entertained by the scientist. Although intellectually more elaborate, the selective perceptions of the scientist in his scientific observations are governed by the same psychological mechanisms which govern the selectivity of perception in the everday observations of ordinary people.

In every society, traditions, culturally established modes of apprehension, commonly held assumptions, beliefs and expectations selectively influence the perceptual contents and qualitatively slant their interpretations. In fact, the identity of a culture depends upon the *integrated* selections made from the possible range of human experience. «Every human society everywhere has made such a selection in its cultural institutions. Each, from the point of view of another, ignores fundamentals and exploits irrelevancies», as Ruth Benedict put it[5]. Our interest is centered on the question of how a particular selection of cultural institutions selectively furthers and hinders the intellectual capacities and perceptual-motor skills of the individual.

The psychological significance of culture for learning derives essentially from its directive influence. A particular direction imposed by culture produces a particular mentality and a characteristic pattern of capacities correlated with it. Particularly in a cross-cultural context, it is more appropriate to speak of mentalities and patterns of capacities rather than intelligence. The concept of intelligence has an undesirable aura which renders it unsuitable to account satisfactorily for the culturally directed differential growth of capacities. For, the current notions of intelligence are tuned to the testing movement, and tests reflect European-American middle-class assumptions about what a child should know at various ages. Moreover, in the term intelligence there somehow lingers the connotation of heredity uninfluenced by learning experiences. Test-makers regard themselves more successful if they believe that they measure innate ability. Certainly, it is not to be doubted that every newborn baby has an innate potential. But it can never be observed or measured, neither then nor later. What can be observed and measured are its behavioral manifestations through particular sets of experiential encounters. Innate potential may be thought to be fixed at the time of the formation of genes, but fixation concerns the limits; the level of actual behavioral manifestations within the limits depends upon experiental conditions. It is only too easily forgotten that living beings are not only born but they develop as well. And, for a fixed innate potential, development varies as a function of the psychological value of the social and physical environment.

The effects of a loss at any one stage of development are permanent; that is later development will be negatively affected, even under optimal conditions, because the individual will have to perceive and learn with an underdeveloped capacity and will not be able to exploit his experiential conditions in full measure.

In summary, innate potential cannot be preserved. Since even potential capacity is transformed by experience a «culture-free» intelligence test displays a contradiction in terms. Without experience there could be no manifest intelligence to measure. And, experience occurs in a cultural context biased in determining the particular direction of mental activities by selectively organizing the contents of learning[6]. Thus the measurement of innate potential is not possible, and intelligence, as observed in actual behavioral manifestations at any point in time during the course of an individual's development, is nothing but the level of psychological complexity of the individual's cultural attainments.

When individuals from different cultures, subcultures or social classes are tested, one is not enabled to make statements about differences in innate capacity. One's statements should be limited to the unequal development of capacities for doing the kind of tasks comprised by the test. The emphasis on the developmental character of intelligence is not to be considered as belittling the importance of genetic factors. This serves only to make it plain that, notwithstanding the richeness or poorness of the genetic make-up, the observed intelligence is not the result of a process of automatic unfolding of genetically determined abilities. For the full realization of even a very high genetic potential, the existence of optimal experiential conditions is necessary. Often one hears the competitive question : «Who is better?». This is a reasonable question to ask in practice, for selection purposes, when the tested persons have already left their early childhood far behind. But one is not justified to draw from the answers given to this question scientific conclusions regarding the innate abilities of the persons in the absence of sufficient data on the experiential conditions of development. For purposes of scientific analysis, a non-competitive question may be asked : «Has there been a probable capacity loss, and in which case is it greater?» Or to put it differently : «Whatever may be the initial value of genetic potential, has there been a probable loss?».

The study of cultural-educational differences in terms of the psychological processes involved is very important for an understanding of the relation of cognitive development to culture. Systematic observations and experimental studies have already begun in this field[7]. These studies make it clear that the separation of social agency from physical causality, the distinction between thought and reality, and the acquisition of abstract and context-independent thinking (out of the context of immediate reference) are

achieved only if certain cultural and educational prerequisites exist in the developmental milieu.

The best model of such a developmental milieu is provided by the scientific culture of the West. Western scientific thought displays not only complexity in terms of the psychological processes involved but also contains error-detecting and error-correcting devices which make it an open system of thought, capable of modifying itself vis-a-vis nature and experience. Western scientific thought is universally valid, although it has grown in a certain set of historical-social conditions. The thought processes of modern experimental science, grudually built up since the 16 th century in the West, represent a new phase of realization of the evolutionary possibilities of the human brain. That this strategy of thought could not be achieved till over 2000 years after the Ancient Greek philosopher-scientists, who were by no means less intelligent than modern scientists, is indicative of those historical-social changes that permitted this new realization of human potentialities.

Scientific civilization of the West differs in its essential aspects from all earlier civilizations and their living remnants. Earlier civilizations represented an elaborate but precarious ecological-politicial balance which was quite vulnerable to change and external influences. When the balance was disturbed, decline was the fate. In contrast, Western scientific civilization lives on the principle of continuous discovery and adaptation; the surprisal value of any possible change has been lessened. The power of this civilization does not lie in a superb but once and for all balance for the preservation of which all energy must be expended, but in the possession of a technique of thought to detect and solve problems in a continuous flux of adaptation, resulting in what some people call progress.

The scientific culture of Western societies has created favorable conditions for the development of human intellectual capacities. In these societies, intelligence has been institutionalized. Thinking has individuality but the individual makes use of a pool of intelligences. Individual thinking does not replicate the thoughts of the group or of another individual, nor does it start from a completely unrelated point and carry forward all alone. It is assumed that there exists an objective reality, independent of thought, which can be discovered by scientific methods, a special combination of rational thinking and experimentation. Scientific understanding produces a

conceptual model of the objective reality, which works in the sense of predicting its behavior. This means that although thought has individuality, it is depersonalized vis-a-vis objective reality. Individuality is encouraged because everyone may contribute a different piece toward the completion of the model. Thought, however, must not reflect the personality of the thinker but must reveal the processes of nature. Consequently, in the scientific culture of Western societies, knowledge is cumulative and thought has objectivity and continuity.

Here it should be stressed that the intelligence of the intelligent Western children and adults is influenced by a distinctive mentality, penetrating at every level the social organization of the whole society. A growing child is trained, formally in school and informally at home and in society at large, to acquire this mentality, or to use a phrase by Bruner, to acquire the distinctive «ways of responding ways of looking and imaging, and most important, ways of translating what one has encountered into language»[8]. Individuals assimilate the sifted knowledge and start to think at the last problematic stage of thought; (cumulativeness implies not isolated additions to the body of knowledge but organic growth of knowledge, with continuous elimination in the process). The difference between the Western type of intelligence and the intelligence nurtured in non-scientific traditional societies and primitive societies cannot be expressed by differences in IQ scores, since there is no comparable metric for the two kinds of intelligence. Rather, they must be described in terms of different patterns and qualitatively different levels of mental capacities coupled with different mentalities. Years ago Heinz Werner pointed out this distinction as he discussed differences in logical thinking between primitive peoples and Europeans: «Es ist eine wichtige Aufgabe der Entwicklungspsychologie, zu zeigen, daB der Naturmensch nicht weniger logisch, sondern anders logisch denke als der Europäer»[9]. In Werner's judgment, primitive man is not illogical or pre-logical, nor is he even less logical than European man. Although his approach to the events around him derives from a completely different mental conception than that of the scientific European, his conclusions are drawn quite consistently from that mental conception.

Once the cultural relativity of intelligence is accepted, the relation between socially recognized purposes and tasks on the one hand, and mentalities and mental capacities on the other, becomes more meaningful than the quantitative comparison of intelligence between different cultures. Since the

measurements obtained from the application of intelligence tests are culturally biased, such a direct comparison loses its point. But it is quite legitimate to argue that one type of intelligence (a certain mentality coupled with a certain pattern of capacities) is inferior to another type *for a certain set of purposes and tasks.* Indeed, it may be argued that the intelligence of non-scientific traditional societies is unsuitable for the purposes and tasks of the Western scientific societies. If the traditional societies undertake, as some of them do, the purposes and the tasks of the scientific societies, they must create the cultural and educational conditions for the development of a Western-scientific type of intelligence. Otherwise, disappointments are inevitable.

NOTES AND REFERENCES

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4 R.L. Gregory : Eye and Brain. London : World University Library, 1966, pp. 11-12.
5 R. Benedict : Patterns of Culture. 1934, New York : The New American Library, 1956, p. 22.
6 It is false to think that non-verbal tasks involving geometrical shapes or other materials can ever be culture-free. Perceptual-motor skills and non-verbal modes of apprehension, just like verbal skills, are shaped by culture.
7 See, for example, P.M. Greenfield and J.S. Bruner : Culture and Cognitive Growth. In D.A. Goslin (ed.,): Handbook of Socialization. Chicago: Rand McNally, 1969; M. Cole et al : The Cultural Context of Learning and Thinking. London : Methuen, 1971.
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