

CHART I

I. Types of Animal Under Discussion	II. Internal Structural Changes	III. Phases of Neuro-Psychic Technique Dominant	IV. Language Forms Used	V. Processes of Thinking Involved	VI. Phases of Invention Utilized	VII. Type of Environment Operative	VIII. Types of Adjustment Response Functioning	IX. Objective Sought in Adjustment	X. Types of Social Organization
(1) Civilized types	Inner structural changes are no longer the product of biological mutation and variation, but are in the nature of acquired neural and muscular adaptations and skills. Also sensory and organic extensions produced by inventions serve to differentiate the responses of the organism to its environment.	Projective stage dominant. The mechanisms of internal habit adjustment have been symbolized and projected or externalized in permanent forms as psycho-social controls. Vocal projections also of very great importance.	Written language is dominant. Vocal language still very important. Gesture, pantomime, holophrastics vocal expressions are now but supplementary or serve only specialized functions such as entertainment and recreation.	Scientific conceptual thinking probably dominates society, although in volume it is secondary to relatively unsystematic and emotional thinking. Scientific thinking regarding future adjustments tends to become common.	Projective invention is the dominant type and is the basis of modern industry, communication, and social organization. It fosters and utilizes method inventions	Psycho-social environment is deposited in externalized symbols and dominates and directs the physico-social and bio-social environments. The natural environments operate almost wholly indirectly through the bio-social and physico-social environment.	Rational responses, making use of the data of science and the symbolic patterns of tradition are dominant, but emotional responses are by no means negligible.	To the future as well as to the present, and with reference to the race as well as the individual. Narrow hedonic motives in adjustment probably predominate. Religion tends to be transformed from a fear motivation to constructive humanitarian ethical philosophy.	Social organization becomes very complex and purposive. Groups expand from the category of primary and face-to-face groups to the most abstract derivative types of "publics" and closely organized administrative groups. All aspects of life become highly organized, but flexibility of organization is greater than in the preceding stage. The economic life is most highly organized, but the political is close second to it. Educational, recreational, religious, and aesthetic organizations follow in complexity. Vastly increased means of communication extend the range of groups and their abstractness as well as increase the complexity of their organization.
(2) Barbarian types (3) Savage types	The structural changes in brain, hands, vocal apparatus, and upright position begun in the transition stage are now perfected and man reaches his maximum biological development	Inner symbolic habit response with minimum of overt behavior organization now dominates the adjustment process, especially in complicated situations in the higher stages of culture. Overt habit adjustment still important. Projection of internal symbolic adjustment mechanisms in the form of traditions, beliefs, etc., begun.	Vocal language becomes verbal, i.e., speech is evolved and becomes the dominant language mechanism. Gesture language persists as a means of communication, especially in intergroup contacts. Holophrastic expression is specialized.	Conceptual thinking is developed on the basis of verbal language among higher types of groups. Perceptions are also well defined through the use of definitely conditioned word symbols. Thinking about the future, where it occurs, is primarily of the nature of wish projections rather than of intellectual analysis.	Empirical inventions become complex and are guided by the internal habit or thinking processes. But as yet man is not able to make projective inventions on any basis other than speculative magic and generalizations from random experiences.	The psycho-social environment takes on definite form. Its content is vocal, and it is organized as traditions, conventions, beliefs, mores, etc. It begins to assume direction over the bio-social and physico-social environments, which reach a considerable degree of development as means of mitigating the severity of the impact of the natural environments upon man.	Trial-and-error adjustment responses are largely transferred to internal mechanisms, leaving the total overt response for the end process of adjustment as the result of thinking out behavior. However, scientific thinking has not yet superseded sympathetic magic as a system of making adjustments.	The ends or objectives of adjustment still remain almost wholly in the present, but the human animal has reached the stage of internal habit control, or thinking, at which he is able to see his adjustment to the present more or less as a whole. Religion, as a philosophy of adjustment is based on considerations of fear and personal intrigue.	Social organization becomes more complex and consciousness and purposive. Organization is still primarily on the basis of the primary group because of the limitations upon means of communication. Derivative group organizations arise, especially in the political sphere, but come together in face-to-face association, at least through their representatives, upon occasion. Religious and political organizations are, perhaps, most dominant, although economic organization is also very important. Organization, although based mainly upon habit, is almost as fixed as if instinctive, because of the dominance of custom and tradition
Human begins Prehuman ends Primates (domesticated animals?)	The highly differentiated brain, hands and vocal apparatus, and the upright position, which distinguish man from the lower animals and enable him to develop language and thought and thus transform his natural environments largely into physico-social and bio-social environments and to create a psycho-social environment, begin and reach a large portion of their development in this period.	Transition stage from the total overt habit response with minimum of internal behavior organization to the internal and symbolic habit response with minimum of overt organization. Overt habit adjustment still dominant. Inner or symbolic trial-and-error learning begins.	Gesture language develops but remains simple and carries little imaginal content other than kinaesthetic. Simple vocal cries, approaching the modifiable holophrastic content, also serve to convey emotional attitudes and suggest or stimulate like coadaptive or antagonistic responses.	Perceptions through the higher exteroceptive senses like the definition which verbal symbols as yet not invented, would give to them. The nearest approach to abstract thinking is probably in some approaches to generalized pattern responses.	Simplest accidental or empirical inventions seem clearly established but apparently the occur without foresight of their use.	Psycho-social environment can scarcely be said definitely to exist because the means for symbolizing and objectifying experience are so crude and rudimentary that the fund of culture is extremely small or non-existent. The physico-social and bio-social environments are still extremely crude and offer but little protection against the direct impacts of the natural environments.	Trial-and-error the predominant form of adjustment response, but there is a slight beginning of the transfer of these to the internal mechanisms. Instinctive responses are still the chief forms in the lower and prehuman phase of this stage of development.	Hedonistic satisfactions of present desires are the only conscious objectives in adjustment.	Instinctive collective responses are not somewhat supplemented by group responses based on habit adjustment, but there is little or no purposive element in group behavior. Group response centers almost wholly around food, fear, and sex impulses.
Median animal types (1) Vertebrates (2) Higher Invertebrates	Lengthening of the life period, improved means of locomotion, and improvements in the sensory equipment bring the animal into wider and more complex and more rapidly changing environments, making it necessary for it to develop habit patterns to supplement the old instinctive patterns which no longer meet the requirements of more complex adjustments. Increased and more flexible cortical adjustments. Increased and more flexible cortical development makes possible the organization of new habit-adjustment patterns.	Habit modifications in adjustment initiated from without and executed as total overt response. New adjustments made predominantly on overt trial-and-error basis. Minimum of internal control over the adjustment process, although neural mechanisms are developed as a means of adjustment.	Total overt responses and cries and other sounds and emotional expressions serve as stimuli to initiate responses in other animals, but there is apparently little or no prevision of the results of such expression. Response to gesture is still rudimentary.	Vague perceptions only, without any recognition of meaning or any purposive thinking to aid in adjustment.	Some simple accidental modifications of the physical environment occur in the process of adjustment, but such modifications are not foreseen and probably are not preserved. Unforeseen social adjustments due to changes in habits apparently are sometimes perpetuated	Only rudimentary beginnings of physico-social and bio-social environments. The natural environments are dominant.	Trial-and-error as a method of adjustment begins to take place of instinct.	Apparently little or no foresight of even the most elementary hedonistic satisfactions.	Groups of individuals responding to similar stimuli or to one another, to some extent on the basis of purely overt habit mechanisms, but mainly on an instinctive basis, in search of food, protection and sex satisfaction.
Lowest animal types	Close correlation between structure of the organism and the environment to which it adjusts itself instinctively. No need for habit adjustment.	Instinct is the only neuro-psychic technique. Response is stereo-typed.	There is no language proper, although responses of one organism serve as stimuli to like or unlike stereotyped responses in other organisms.	No conscious processes.	None.	Natural environments only.	Responses stereotyped.	None.	Instinctive group responses only to food, sex, and protective objects. Such responses are very rudimentary.

Adapted from L.L. Bernard. "The Interdependence of Factors Basic to the Evolution of Culture." *American Journal of Sociology* 32, (1926): 177-205