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The
Growth of the Mind

An Introduction to Child-Psychology

By
K. KOFFKA

Translated by
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CHAPTER II
GENERAL CONSIDERATIONS

§ I—*Maturation and Learning*

WE speak of development whenever an organism or any special organ becomes larger, heavier, more finely structured, or more capable of functioning. One must, however, differentiate two types of development: development as growth or maturation, and development as learning.²⁹ Growth and maturation are processes of development which depend upon the inherited characteristics of the individual, just as any morphological character like the form of the skull is determined at birth. To be sure, growth and maturation are not altogether independent of the individual's environment. Under-nourishment will check growth, and it may, in exceptional cases, prove permanently harmful. In the forcing-house, one can accelerate growth and blooming, but under "normal" conditions the course of these developmental phases is primarily dependent upon the laws of heredity.³⁰ Likewise under "normal" conditions the environment may influence growth and maturation by determining the selection of individual types of behaviour. Children who grow up out-of-doors are stimulated by their surroundings to run, to jump, and to swim, while children who are kept indoors are more likely to use their fingers than their arms and legs. The mere fact that an organ, such as a muscle, is frequently used will influence its growth quite apart from the specific character of the response; think of the many "systems" in vogue for strengthening the bodily muscles. A similar statement is applicable to

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the maturation of the sense-organs. By learning, however, we understand a change in ability resulting from quite definite individual activities. In learning to play cards it is not enough that one should grow up amid favourable circumstances, or that one's fingers should have attained a certain degree of technical facility; but, first of all, it is necessary to understand the significance of a pack of cards, and of each card for itself. When some one says that So-and-so is a born card-player, he does not mean that by merely glancing at a pack of fifty-two cards spread out on a table the "born player" could sit down with three other persons and without instruction be able to play a perfect game of bridge-whist. Nor does he even mean that such a person would at once be able to play the game somehow, and would quickly master its intricacies by himself as, for instance, birds are able to fly as soon as they try to do so, and quickly attain the highest degree of perfection in this art. An ability to play cards is not thus laid down in the individual's inherited disposition. It need not develop at all in the whole course of a lifetime, and when it does develop it is a new acquisition.

In any discussion of development we are confronted with this opposition of inherited and acquired traits. Whether this opposition can be bridged over, whether that which is inherited must first have been acquired by our ancestors in the course of racial development,³¹ are questions we shall here leave out of consideration. Yet this opposition is found in the development of every individual; a fact which we can only note in passing without further explanation; since to explain it would require a detailed analysis of what learning actually is, and that is one main problem of our entire book.

Nevertheless, we should have this problem clearly in mind at the beginning of our inquiry, because in their development capacities are controlled by laws inherent in the organism, and are very loosely dependent upon

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the individual's achievements, whereas the abilities of an individual are chiefly determined by his experiences and achievements.

This double aspect of development makes difficult the solution of a problem to which reference was made at the beginning of the first chapter—the problem, namely, as to what part of any performance is inherited, and what part of it is acquired. In general, it has been thought possible to proceed as though whatever took place at birth, or upon the first appearance of a certain type of behaviour, could be differentiated from later forms of the same act—the former as being inherited, and the latter as being acquired. But even if it were so, this differentiation is extraordinarily difficult. Furthermore, one must not regard every improvement in a performance as an acquisition of learning; neither are all complicated performances necessarily acquired or learned; for we must not neglect the part played by mere maturation in the refinement of behaviour, both in its motor and also in its sensory aspects.

§ 2—*The Function of Infancy*

A comparative study of behaviour leads us to conclude that the higher an organism stands in the animal-series, the more helpless it is at birth, and the longer will its period of "infancy" last. The human being constitutes the extreme in both respects; his almost complete dependency at birth being associated with an extraordinarily long infancy and youth, a period which, indeed, exceeds the whole lifetime of many mammals. At no time during the entire course of his maturation does the human being attain complete efficiency, whereas efficiency is attained very early by other animals, especially by organisms much farther down the scale—which in this respect are superior to man. Infancy must therefore have a peculiar and a specific function, closely related to the superiority of the

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higher forms of life. For this reason Claparède raises the question, "What is the function of childhood?" The superficial facts of comparative biology show us in what region the answer to this question must lie, since infancy is the period of greatest potentiality for development. During this period man changes from a very helpless creature into the best-equipped of all the species. In comparison, a chick can perform many acts correctly as soon as it breaks from the shell, and a full-grown hen can not do much more than a chick.

The development that takes place during infancy is also subject to conditions specifically different from those of embryonic development. The embryo's surroundings are constant, and its development is guided chiefly by a kind of immanent law, external conditions playing only the part usual in processes of growth and maturation. But all this is changed in the post-embryonic period, for the older a child becomes, the more specific is the influence which the world exercises upon his life. From this fact alone one may conclude that development becomes more and more a matter of "acquisitions"—in the sense of learning—and also, that certain stages of development are attained only after learning has been added to growth and maturation. Childhood is the period of learning *par excellence* which Claparède speaks of as the constructive period of life. Indeed, the efficiency that distinguishes the most highly-developed from all lower forms of life can not be attained simply through the intrinsic laws of development in growth and maturation. Learning is also essential to them; for efficiency depends upon functions that are not fixed in advance. When we reflect that learning, objectively considered, is an actual performance, we are better able to understand infancy, since both the extent and the intensity of the learning that goes on at this time far exceed the amount of learning in all the later epochs of an individual's life-history.