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EXPERIMENTAL ABNORMAL PSYCHOLOGY

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Зейгарник Блюма Вульфовна

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Foreword

In recent years psychology has considerably expanded and enriched its relations with medical practice, first and foremost with psychiatry. This orientation toward experimental abnormal psychology has been closely tied to the practical tasks of psychiatry: differential diagnosis, establishment of the structure and extent of impairment, and the dynamics of mental disorders as affected by treatment, etc.

Experimental abnormal psychology has been no less important for the theoretical problems of psychology and psychiatry. The study of pathological changes in mental processes helps in dealing with questions about the structure and formation of mental activity. The research findings of abnormal psychology also have important implications for overcoming biologizing tendencies in the interpretation of human psychology.

The present book does not try to provide an exhaustive exposition of all divisions of abnormal psychology. It introduces the reader only to those problems which at the present time seem to be best worked out experimentally: the breakdown of intellectual capacity, thought disorders, the methodology of setting up an experiment in the psychiatric clinic, and certain questions relating to motivational disturbances and psychological growth and decay.

Some rewritten sections from the author's earlier book, "The Pathology of Thinking," have been included.

The present volume is intended for psychology students, for psychologists, and for physicians working in psychiatry.

Research in experimental psychology by the author and her colleagues constitutes the factual basis for the book's theses. This research was carried out in the Laboratory of Experimental Abnormal Psychology of the Moscow Institute of Psychiatry, which for many years has been the core program of the School of Psychology at Moscow State University.

I am sincerely grateful to the staff of the Institute and especially to my colleagues at the Laboratory. I would also like to express my gratitude to the physicians and psychologists at the Gannushkin Psychoneurological Hospital Number 4 for their unceasing assistance.

B. V. Z.

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Chapter 6

Personality Disturbances in the Mentally Ill and Relevant Research Techniques

Analysis of any manifestation of mental disorder requires taking into account the personality peculiarities of the patient. This approach is dictated by the fundamental principles of contemporary materialist psychology. In "Being and Consciousness," S. L. Rubinshtein stated on page 308 that "in the explanation of any mental phenomena personality is involved as an aggregate of internal conditions which are bound together and through which all external influences are reflected."

In studying mental change it is necessary to take personality into account for still another reason, namely, that mental illness frequently affects the entire personality by affecting need systems and emotional-voluntary components. In the meantime, research in abnormal psychology has been basically concerned with disorders of cognitive activity. The experimental techniques for studying personality changes have been insufficiently developed. This is partially attributable to the insufficient development of the problem of personality structure in general psychology.

One must acknowledge that foreign psychologists have devoted much effort to the problem of personality and its pathology. However this research has been carried out mainly by psychologists with a psychoanalytic inclination and psychologists adhering in some way or another to "verstehen psychology" or to the philosophy of existentialism.

Soviet psychologists (A. N. Leont'ev, S. L. Rubinshtein) believe that personality is a product of historical development, of the de-

velopment of relationships between the individual and society, of relationships "between the subject and the world of man" (Leont'ev). Leont'ev emphasizes that in personality formation, it is not the processes of adaptation to the environment which are important, but the processes of mastering human experience.

While studying personality formation in children, L. I. Bozhovich dwelt on its tendency to have a specific direction which forms the basis for the lifelong development of a reliable and stable motivational system. In the personality formation process, the dominant role is played by the child's awareness of the place which he occupies in a system of social relationships, his "internal" position.

It is already evident from these basic tenets of theoretical psychology how complex the psychological structure of personality is. It is bound up with the individual's needs and goals, with his emotional and volitional peculiarities. Regardless of the fact that the latter properties are thought by psychologists to be processes, in essence, they are components of personality. The individual's personality is formed and manifested in his activity, deeds, and behavior. His needs, both material and spiritual, reflect his relationship with the surrounding environment and people. We evaluate an individual personality mainly by characterizing the interests which compose it and the content of its desires and needs. We judge an individual according to the motives behind his acts and by those phenomena of life to which he is indifferent. What makes him glad and what are his thinking and desires aimed at?

The following indicate impending changes in personality: the interests of a patient decline under the influence of disease; his needs diminish; he becomes indifferent to previous sources of excitement; his behavior is deprived of purposiveness; his actions become senseless; he stops controlling his behavior, and he is no longer able to appropriately evaluate his opportunities.

From everything we have said so far, it follows that research on personality, and its formation and change, is exceedingly complex and manysided; it may be carried out in various modes and directions. Hence, first and foremost, it is important to look at those areas of personality research which at present are most developed in a general theoretical sense. Among the most theoretically well-developed problems are the questions of motives, attitudes, and personality goals.

Without going into detail on the problem of the structure of needs and motives, one must note that in the writings of Soviet psychologists (A. N. Leont'ev, S. L. Rubinshtein) the social nature of personality needs has been emphasized. It is thought that these needs find their satisfaction in activity, that the development of needs occurs via the development of production, and that any activity in itself generates needs. In our study of personality disturbances we try to proceed from these basic positions as developed by Soviet psychology.

On the other hand, we propose that the study of the pathology of personality can turn out to be helpful in analyzing the structure of normal personality. The personality changes observable in psychiatric practice are multifarious and all of this has been admirably described in the textbooks of psychiatry. For the sake of illustration we will briefly discuss several such descriptions.

In these volumes we find very colorful descriptions of epileptics and the changes in the emotional-volitional areas which are characterized by pronounced inertness and rigidity. The patients constantly turned to one and the same emotion, one and the same notion; they concentrate on insignificant phenomena. This emotional rigidity is expressed in the pedantic behavior of these patients; the patients are unable to accept any changes in the lifestyle that they have established. Pedantic in their work, they are inclined to carry out only one type of activity which they do with special thoroughness. This emotional inertness in epileptics is associated with the quick onset of irascibleness as well as an inclination to affective discharges and mood changes. As a result, the patients behave inappropriately and sometimes inflict harm on other people. Egocentrism and narrowness of interests characterize epileptics. At the same time they can have an exaggerated politeness, an obsequiousness bordering on hypocrisy. (This type of patient was depicted by Dostoevski in his character Smerdyakov.)

These characterological features are determined to a large extent by the patient's response to his inferiority. This has been shown by A. P. Osipov in his "Handbook of Psychiatry."

In the psychiatric clinic we find another kind of personality disturbance manifested as increased lability of emotional reactions, lack of self-criticism with respect to one's actions, and a weakening in cognitive regulation akin to that found in chronic al-

coholism. The patients become self-confident, boastful, inclined to stupid jokes, and their behavior is bereft of purposiveness while their actions are unmotivated and unjustified.

The absence of self-criticism has been described by many psychiatrists in analyzing the personality of patients with progressive paralysis. The patients display a sort of excited complacency, they declare that they are in wonderful health and that they have unusual abilities. Their excited mood easily changes into one that is capricious and irritated; these patients can cry at a trifle but all at once they become calm.

The suggestibility of these patients has been described in great detail: they easily succumb to persuasion and they do frivolous things. E. A. Gilyarovskii used to bring such a patient into his lectures. This man broke a window in front of everybody and took a vase that he didn't need merely because it was pleasing to him; another patient bought a set of dishes for his wife, using up all the money he had and leaving his whole family without any money for food.

Sometimes patients' ethical sensitivity is blunted; they are indifferent to their neighbors; the grief of their friends does not touch them nor are they affected by their own unhappinesses; they are careless and indifferent both to themselves and to others. Their behavior is bereft of purposiveness and self-direction.

Psychiatrists have devoted much attention to the kinds of personality disturbance which are observed in different forms of schizophrenia. The feelings of schizophrenics lose the quality of belonging to a particular "ego." These patients have a special relationship to the world around them that includes an autistic alienation from people. The patients live in the world of their own illusionary experiences without taking an interest in real relationships around them. They incorrectly interpret the environment. Their emotional reactions are distorted, their development dull. People who used to be delicate and modest become crude, shameless, and unrestrained. The frigidity and coldness of their feelings is noticeable; the patients can laugh even while telling about the death of persons who were close to them and when they receive a visit from relatives they don't ask about anything. They are indifferent to life and to people. Emotional dullness forms the background for the patient's negativism. This consists in negative reaction to stimulation; when he is greeted he hides his hands behind his back and does not reply to questions. The poses and gestures of the patient frequently suffer from paradoxicalness and whimsicality. Sometimes the behavior of the patient becomes impulsive; without justification he begins to whistle or to make grimaces during a conversation. The patients interpret the environment in a peculiar way; any event can acquire a special meaning for them: "if someone on the ward picked up a newspaper, this means that that person must be killed."

It is evident from this rather sketchy description, that the personality changes which are observed in the clinic are extremely diverse. It is very difficult to qualify these changes in terms of scientific psychology because the psychology of personality is insufficiently developed on the theoretical level. There are two few concepts and techniques for personality research. Therefore it seems advisable in our further discussion to dwell on experimental approaches to personality and on those findings which have been brought to light with these techniques.

One way of studying pathology of personality is to observe the behavior of the patient during an experiment. Even when the patient has "accepted" the task, or its instructions, it is possible to observe the adequacy or inadequacy of his personality. Any experiment in psychology can serve as an indicator of the emotional-volitional properties of personality.

Every investigation must take attitudes and motives into account. This point of view was enunciated in the 1930's by V. N. Myasishchev. He pointed out that attitudes exist at two levels; attitudes generated by the experimenter and attitudes elicited by the task itself.

Many patients have an attitude toward the experimental situation. Some perceive the experimental situation as some kind of test of their intellectual capacity. Frequently patients consider that the results of the research will affect how long they have to stay in the hospital or what treatment will be selected for them or to which group of patients they will be assigned. Therefore the experimental situation itself promotes the actualization of a certain attitude. So, for example, some patients, fearing that their bad memories will be discovered, declare that "they always remembered things poorly." In other instances, the requirement to

do calculations elicits the comment that they "could never do arithmetic." Any task, even an easy one, can provoke a personality reaction in the experimental situation.

In some of our patients (for example, during diagnosis) an orientation toward illness develops in which the patient tries to express his intellectual incapacity, i.e., he does not do the task. This motive, of course, is in conflict with the appropriate motive as stimulated by the task itself. As a result the intellectual behavior of the patient turns out to be complex, to have two forces working, but, all the same, it is structurally intact. The patients customarily solve the problem correctly to themselves, but then they deliberately distort the answer given to the experimenter (findings of S. Ya. Rubinshtein).

In other instances the attitude generated by the task itself predominates. The task contains an intrinsic instigation to self-criticism and self-control; that is, the task makes sense for the patient. Here the task addresses itself, as it were, to the individual's self-esteem and his level of personality aspiration; it seems as if the drive to solve the problem is justified and objectified for the individual. This motivational push, which mobilizes the intellectual resources of the individual, makes the experimental method fundamentally dependable.

Hence, it can happen that, for some patients, who are intact, but who are suffering from asthenia and exhaustion, the conditions of the experiment can stimulate activity and afford partial relief from the exhaustion. As a result these patients appeared to be more normal in the experiment than in real life. Such effects were observed in patients with vascular diseases of the brain who displayed better intellectual production during the experiment than in nonexperimental situations.

Experience in our laboratory has shown that observation of patients who are doing the most simplified tasks can be used for evaluating their attitudes. For example, in building "Links cubes" (the technique focused on the study of combinatorial operations), it turned out that schizophrenics and psychopaths reacted in different ways. Patients with simple schizophrenia evinced no emotional reactions while they worked on the cube; they worked on the task itself, rather passively, and their mistakes did not cue any emotional

reactions. They did not react to the comments of the experimenter when he pointed out their mistakes.

The psychopaths' behavior was completely different. At the beginning of this experiment, the ways they acted and worked were analogous to the behavior of normal individuals. However, this behavior changed sharply when mistakes occurred: the patients became irritable, frequently interrupted their work, and did not carry it to completion.

We had the opportunity to observe similar behavior in patients with symptoms of irritable weakness and asthenia. However, in these patients, the affective reaction was not so strongly expressed. However, in children with serious asthenia, difficulties in carrying out a task frequently caused depression and tears.

Observing the behavior of the subject during an experiment makes it possible to evaluate his critical ability and his capacity for self-control. Patients frequently point out that it is interesting to check on how well they can remember. It even frequently happens that a patient, while working on a task, is the first to recognize that he has an intellectual insufficiency and he reacts to it in an appropriate manner. It follows that the behavior and utterances of the patient and his reaction to the experimental situation, can serve as material for analyzing his personality dispositions and the extent to which a healthy personality has been preserved.

Another methodological approach to the study of personality change is the mediated manifestation of change with the help of techniques directed at studying cognitive processes. This tactic seems fully correct and justified, for cognitive processes do not exist divorced from personality orientations and from the patient's needs and emotions. In treating motives and the instigation of thinking, S. L. Rubinshtein, in his book "Concerning Thought and Ways of Studying It," noted that "the basic question concerns the sources from which a given cognitive process stems" (page 87).

As we already said in Chapter 5, research on abnormal thinking has shown that some kinds of disturbances are essentially expressions of the cognitive confusion which is characteristic for such patients. We showed that the actualization of inappropriate cognitions is in no way a self-contained process independent from the structure and properties of personality, but, rather, a mani-

festation of altered orientations, attitudes, and needs, that is, a reflection of changed "internal conditions."

We tried to exposit this view in Chapter 5 when we were analyzing that form of cognitive disturbance which has been labeled "ratiocination." As proof we cited the findings of T. I. Tepenitsyna in which it was shown that it is not disorder of intellectual operations but change in a personality component which plays the dominant role in the structure of "ratiocination." Here we only wish to discuss two kinds of facts coming from the research of Tepenitsyna. The author has shown the following: 1) The structure of ratiocination is diverse and depends on the nature of the personality disorders. In patients with organic diseases of the brain ratiocination appears as an unsuccessful compensation for intellectual inadequacy. In epileptics, ratiocinative reasoning is marked by the actualization of inert connections with past experience. In other words the structure of personality change affects the structure of the cognitive disorder. 2) Ratiocination is manifested most readily in those experimental situations which form and "provoke" a heightened level of aspiration; when experimental tactics are applied which stimulate the activity of the patient, and which provide an occasion for him to demonstrate his attitude. It follows, and these examples show it, that the strategy itself of thinking is determined to a considerable degree by the attitude of the individual. The attitude of the individual is included in the structure of cognitive activity. This notion is supported, moreover, by research on uncritical thinking in which the thoughtless judgments and incorrect behavior of the patients are caused, not by a lowered level of generalization, but by an indifferent and inactive attitude toward the consequences of their activity.

A similar type of patient, for example a patient with frontal-lobe injury, cannot manage certain simple tasks in spite of the fact that his intellectual functions are relatively intact. For example, while these patients understand the metaphorical meaning of proverbs and the conditions of the instructions, they are unable to put a series of pictures depicting a simple theme into a consistent order.

Any simple task which requires choosing and planning cannot be carried out by this type of patient and, on the other hand, more complex tasks, which do not require adherence to such conditions,

can be carried out by them rather easily. In such fashion, erroneous solutions of problems appear not due to a disorder of logical structure of thinking, but are the result of a thoughtless orientation. Changes and alterations which crop up in the area of cognitive activity appear to be due to personality modifications.

This is demonstrated by the studies of Soviet psychologists working in the area of pedagogical psychology. Thus the studies of L. I. Bozhovich and L. S. Slavina showed that the failure of many students to advance in school was caused not by cognitive disturbance but rather by attitudinal changes in the children and their changed position in the collective.

To recapitulate, it can be said that analysis of cognitive strategies will be incomplete if we do not take into account the personality goals of the cognizing subject. For, in the words of L. S. Vygotskii: "If we divorce thinking from life and needs we prevent ourselves from finding any ways of showing and explaining the properties and the chief significance of thinking, namely, to define the manner of life and behavior and to change our behavior."[1] Therefore it is right to expect that the execution of any experimental task which was apparently directed at the study of cognitive activity, could, in principle, provide information about the personality orientations of the patient. More importantly, the modeling of the individual's cognitive activity must include modeling of his personality.

Methods for indirect evaluation of personality are unlimited. In principle, any experimental technique can be a convenient way to do this since the construction of any model of human activity (and the techniques of experimental psychology are such models) presupposes the attitudes of the individual.

We will limit ourselves to a few examples.

Performance on even the most rudimentary tasks includes an emotional component. The studies of É. A. Evlakhova have shown that even such simple tasks, as the description of an uncomplicated subject of a picture, depend on the emotional status of the subject. It was found that children, with frontal lobe damage, had an inade-

[1] L. S. Vygotskii, "Selected Psychological Investigations," Moscow, Izd. APN, RSFSR, 1957, page 476.

quate reaction to the emotional content of pictures. It seemed appropriate that disturbances of emotional orientations should be especially marked when pictures had to be described whose comprehension depended chiefly on the physical appearance of the figures. The pictures used for this purpose belonged to the so-called projective techniques. As we have already pointed out in Chapter 3, the essence of this method is that the task does not presuppose any definite way of doing it; it is intended to reveal the emotions, peculiarities of personality and the character of the subject. The subject's performance is not assessable since, in projective techniques, the problem of right and wrong answers does not arise.

Projective techniques are used in other countries with a dual purpose: to establish individual differences and to reveal "covert feelings."

One of the projective techniques, proposed by Morgan and Murray, has been called the Thematic Apperception Test (T.A.T.). It consists of separate pictures depicting situations without any definite content. According to Murray's instructions, the subject is told that his imagination is being studied and he must compose stories based on the pictures.

According to the way in which Murray interprets the utterances of the subjects, their stories have to be regarded as symbolic reflections of their feelings and opinions and their notions concerning their past and future. According to Murray, an identification occurs between the subject and the hero in the picture.

In a master's thesis by N. K. Kiyashchenko done in our laboratory, the instructions to the subject were changed. The subjects were told that the problem concerned the study of perception (and not imagination). The subject was not given questions but was simply presented with the following "blind" instructions: "I will show you pictures, look at them and tell me what is depicted on them." Only after the task had been completed was the question asked: "What suggested this or that description?"

The findings of Kiyashchenko's research showed that healthy subjects approached the task in order to explain the content of the pictures. Their attempts to define the subject of the pictures were carried out by posing and by imitating the depicted personages. As

a rule, in carrying out this task, the healthy subjects expressed their attitudes toward the events and personages in the pictures.

The results with simple schizophrenics were completely different. In contrast to healthy people, the patients in this group had no desire to find the correct interpretation. The answers of the patients contained only formal declarations about the elements in the pictures: "two people," "a man is sitting in an arm chair," "a conversation between two people." There were formal generalizations: "rest," "a minute of silence." As a rule, the patients did not express their own attitudes toward picture themes. To illustrate, a few examples of picture descriptions by healthy individuals and by patients with simple schizophrenia are given in Table 8. These descriptions have been taken from Kiyashchenko's studies.

Table 8. Examples of Descriptions of Pictures by Schizophrenics (In Comparison with Healthy Subjects)

Healthy subjects		Schizophrenics	
Subject G	This picture is laughable because the physiognomy of the patient is so smug. It seems to him that he is doing something that is generally very helpful and without a doubt, pleasant. Otherwise he would not be in such an emotional state.	N	A man is sitting.
		K	A man reads a book, holding it in his left hand; and in his right hand, a pipe.
Subject M	A man who is reading a book recalls a similar event from his own life (the event was pleasant and significant) and he falls into a reverie.	M	Someone is relaxing.
		O	A minute of silence.
		F	A man is sitting near a round window.
Subject A	A man is in an airplane. He reads a book but then he had a pleasant recollection and his eyes wander from the pictures, which change into a window. Undoubtedly he recalled something pleasant which occurred before his departure.	M	A man sits in an armchair. There is a cushion on it.

Peculiarities in the perception of the TAT pictures by schizophrenics were not associated with lowering of the level of generalization; their descriptions were not based on concrete representation; on the contrary, they amounted to formal contentless characterization.

To recapitulate, the modeling of the cognitive processes (the application of experimental tests requiring generalization, isolation of essential attributes, comparison of actualized relationships, and so forth) always includes the arousal and actualization of personality components (motives and attitudes).

Finally, one of the ways of studying personality change is the application of techniques aimed directly at revealing emotional and volitional peculiarities of the sick individual and revealing his changed attitude toward the experimental situation. This group of techniques stems from research in the affective-volitional area. S. L. Rubinshtein's book "Concerning Thought and Ways of Studying It" states that a research finding which reveals any essential relationships whatsoever, can be turned into a technique, into an instrument of subsequent investigation. This happened in fact with some of the techniques developed for research in the affective-volitional area by Kurt Lewin's school. Despite the fact that Lewin's general methodological position is unacceptable to us, his experimental techniques have turned out to be quite useful.

Here we will discuss some of these in more detail. A few words first concerning the principles behind the construction of such techniques. Major care must be taken that the artificially created experimental situation factilitates attitude formation as much as possible. As we said above, any experimental situation evokes an attitude on the part of the subject (hence the very possibility of indirectly studying his personality reactions). However, if we want our technique to be proper models of cognitive processes in the human being, then those methodological tactics, which are aimed at direct study of personality properties, must be models of everyday situations, which compel the subject to be responsive.

To achieve this goal we used Hoppe's technique, known in the psychological literature as "study of the level of aspiration." It was proposed and standardized in the Lewin school.

Kurt Lewin (1890-1947) was a representative of the German school of Gestalt psychology, who, after the onset of the fascist regime, emigrated from Germany to the United States. He was the first to systematically develop a theory about the will and affects and he was one of the first to devote experimental attention to studying the properties of human behavior in concrete circumstances.

In Lewin's conceptual system, it was necessary to distinguish two periods: the first took place before 1933 and it was in this period that he created his dynamic theory of personality. The second or American period took place after 1933, when his scientific views began to change under the influence of American sociological psychology. The methods that we are going to describe belong to the first period.

In contrast to the atomistic thinking of his time, or, as they called it then, associationism in psychology, Lewin believed that needs rather than associations lie at the basis of human behavior and thought. Under the heading "needs" Lewin understood not biological implications but rather psychological formations which arise in conjunction with the everyday goals of the individual. More than anything else, Lewin emphasized that goals and intentions belong, in their dynamic properties, in the same category with needs. In Lewin's teaching concerning needs the question arose concerning the relationship between need and object. He showed that the individual always exists in a definite concrete situation (according to his terminology, "in a psychological field"), where each object occurs not in itself but in relationship to the needs and strivings of the individual. Lewin pointed out the dynamic quality of these relationships and that any behavior of the individual changes the "relationship of forces in the situation" and this in turn affects the behavior of the individual.

Hence, any experimental research requires analyzing the mutual relationships between the individual and the environment. Lewin emphasized that the individual is always included in the environment of his situation and that the environment itself must be considered in its relationship to the behaving individual. The nature of these relationships is dynamic, and depends on the structure of the individual's needs.

Yet Lewin resolved the question of needs as a motive force in human activity from the idealist position of Gestalt psychology. For him, a need means some internal psychological dynamic "charge" or "tension system," striving for discharge of relaxation. Discharge of this "tension system" constitutes need satisfaction, according to Lewin. He failed to see the social-historical determination of needs and he ignored their substantive character. Indeed even the concept itself, "psychological field," did not mean a real objective environment, but rather the phenomenal world that was essentially a reflection of those same tension systems. According to Lewin, volitional behavior can be explained by discovering the structure of the dynamic tension systems and their relationships with the "psychological field."

The idealist biases of Lewin are especially evident in his view of the nature of volitional behavior, a cornerstone of his doctrine. Just as he did not see that needs are socially conditioned, he did not perceive that volitional behavior, although it is linked in its origins with needs, does not flow directly from them but is mediated by the awareness of the individual.

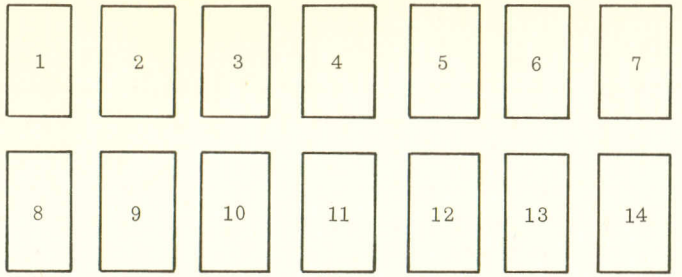
Regardless of methodological errors, the theory of Lewin played a positive role in the history of psychology. Lewin introduced into psychological research new parameters for studying the individual: he showed that it is possible to do experiments on needs, motives, intentions, and goals. But what was especially significant was the role of Kurt Lewin and his school in the development of experimental techniques applicable to the psychology of personality. The writings of Lewin and his pupils (Dembo, Mahler, Karsten, Hoppe) permitted the experimental discovery of relationships between the personality and the environment and within the personality itself. To these internal relationships belong the problems associated with "level of aspiration." Lewin believed that level of aspiration is formed in the process of concrete activity. Success and failure play an important role in level of aspiration and it is an important personality development because it is linked with self-evaluation, the activeness of the subject, and the complexities of his affective life.

The method of studying level of aspiration consisted in the following. The subject was presented with a number of problems (from 14 to 18), which differed in their degree of difficulty. All the tasks were put on cards which were laid out in front of the subject in numerical order. The degree of difficulty of the task corresponded to the number on the card.

Research done with this technique (F. Hoppe, M. S. Neimark, B. I. Bezhanishvili, E. A. Serebryakova) showed that, as a rule, subjects choose more difficult tasks after they have been successful, and when they have not been successful they turn to easier tasks. The quality of task performance affects the choice of the next task.

The tasks which were given to the subjects could be quite different in content depending upon the level of education and the occupation of the subjects. For example, subjects who were school children or students at technical institutes could be given mathematical tasks; students of the humanities, tasks requiring knowledge in the area of literature and art. The tasks could be like puzzles. In other words the content of the tasks had to correspond to the social and educational level of the subjects. Only under these conditions was it possible to get the subjects to relate seriously to the experimental situation; only under these conditions was there a real choice.

In order to carry out the experiment 12 × 17 centimeter cards were prepared, and on these cards the numbers from 1 to 14 were clearly written. In addition, a stopwatch was required. The cards were laid out in two rows:



The subject is instructed: "In front of you are cards with problems on the back. The number on the card indicates degree of difficulty of the problem. The problems are arrayed in front of you in terms of increasing difficulty. For the solution of each problem a definite amount of time is allotted which is unknown to you. I will monitor time with the help of a stopwatch. If you do not get the problem right in the allotted time I will consider that you have not done it at all. You must choose which problems you do yourself." In this fashion the subject had the right to choose the difficulty of the problem. After the instructions, the subjects had to choose a task. Upon completing each succeeding task, the subject was told: "And now choose a problem of whatever difficulty you want." The experimenter set the time for completing the task and after each problem said: "You completed this problem in time, I'm going to give you a plus" or: "You did not get it in time, I am giving you a minus." The experimenter could increase or reduce the time allotted for carrying out the task and thus arbitrarily induce a feeling of failure or success. The experimenter could show that the task was completed correctly or, by limiting the time, cause bad results to be obtained. The subject chose the next task, whether harder or easier, only after the evaluation of the experimenter. The analysis of the experimental findings showed that the choice of the problem (its degree of difficulty) depended upon whether the previous problem had been done successfully or not. However the feeling of success or failure itself depended on the attitude of the subject toward the goal of the task. Subjects always begin work with definite aspirations and expectations, which are then changed in the course of the experiment. The sum of these aspirations, which shifts with each trial, was called "level of aspiration" by Hoppe. The feeling of attainment, of success or failure, depended, consequently, not only on objective performance but also on the level of aspiration. Without a level of

aspiration, a given trial performance was not felt either as success or failure.

Hoppe's research showed that after successful problem solution, the level of aspiration rises and the subject turns to more complex material; after failure the level of aspiration slowly decreases. The work of Hoppe was the first experimental attempt to study stages in the formation of aspiration under the influence of successful or unsuccessful problem solution. His work was followed by others.

The law for the shift of level of aspiration, as established by Hoppe, was checked out by Juknat, in his "Achievement, Level of Demand, and Self-awareness." By modifying the technique somewhat, a series of labyrinth problems were developed instead of the individual tasks as in Hoppe's research. The first series (ten labyrinth problems) guaranteed success, i.e., the subject could solve the problem, he could find a path from the beginning to the end of the labyrinth. This was the "success series." In the second series, the "failure series," all the problems (also ten labyrinth problems) except the first were unsolvable, that is, all paths of the labyrinth led to a dead end.

Juknat studied two groups of subjects. The first group began the task with the series which guaranteed success; the second group began with the failure series. It turned out that subjects who began with the success series began the second series with a supposedly more difficult problem and, conversely, subjects who started with the failure series began the next series with easier problems. Juknat tried to show that the development of the level of aspiration was linked with prior experience.

Yet for Juknat, just as for Hoppe, "level of aspiration" turned out to be completely isolated from the objective influence of its component attitudes.

The studies of Soviet authors, e.g., E. A. Serebrykova and M. S. Neimark, attempted to show the dependence of level of aspiration on the content of the activity. Basing her research on Hoppe, Serebryakova tried to establish the roles of successful task completion and social evaluation in the development of self-evaluation and self-confidence. If Hoppe in his technique abstracted from real life conditions to the greatest possible extent, Serebryakova tried to maximize naturalism. As a result of her research Serebryakova showed that the development of self-confidence depends upon the type of self-evaluation. Using children, she established correlations between the following:

1. Reliable and appropriate self-evaluation and well-established self-evaluation.
2. Inappropriate reduction of self-evaluation and lack of self-confidence.
3. Inappropriate elevation of self-evaluation and self-confidence.
4. Unstable self-evaluation and poorly established self-evaluation.

Besides this, Serebryakova discovered that different groups of pupils had different types of affective reaction to success and failure. But questions connected with the emotional relationship of the pupils to task difficulty were ignored by Serebryakova. Her research was limited to establishing the nature of self-evaluation but the question concerning the relationship between self-evaluation and level of aspiration was not considered.

However, both these problems were studied in the article by Neimark, "Psychological analysis of the emotional reactions of school children to the difficulty of their work." Neimark indicated that, to the extent that self-evaluation is developed, it begins to affect the behavior of the child and determines his reaction to the influence of adults. If this evaluation is high and gives the child an honorable place in his collective, then it finally becomes a need. From here Neimark was led to a conclusion about the relationship between self-evaluation and level of aspiration. "Level of aspiration is a need for a definitely satisfying self-evaluation." Her research assessed the emotional reactions of children to their success and failure. In her design the subjects were divided into four groups.

1. Pupils with an appropriate reaction to success and failure (disappointment at failure and a feeling of satisfaction at success).
2. Pupils with an inappropriate reaction to failure (after an unsuccessful attempt to solve a problem the children set out on even more difficult problems, displayed resentment toward the experimenter, and were rude).

3. Pupils with inappropriate reaction to success (lowering of the level of aspiration after achieving success).
4. Pupils fleeing from difficulty (after the first failure the children refused to participate in the experiment).

Neimark showed the relationship of level of aspiration to the material of the experiment, she demonstrated the nature of the emotional reaction in the critical situation, and she came close to the problem of the relationship between level of aspiration and self-evaluation.

In this fashion the studies of Serebryakova and Neimark showed that Hoppe's technique was feasible for studying the development of school children's attitudes. This method also turned out to be suitable for studying changes in the emotional conditions of patients.

The studies of our colleague V. N. Myasishchev had already used this technique to illuminate the personality traits of hysterical children (R. I. Meerovich and V. M. Kondratskaya).

Using different variations of this technique in our laboratory, studies of the development of level of aspiration were carried out (by B. I. Bezhanishvili) in patients with various mental illnesses. As an experimental task the subjects were given problems which might be regarded as indicators of certain cultural levels. Arithmetic tasks, or other tasks requiring special skills, had to be rejected since for most people they do not permit development of a meaningful level of aspiration.

In all there were 24 tasks (there were two cards for each level of difficulty). Here are some examples.

1. Write three words beginning with the letter "Sh."
2. Write three words beginning with the letter "N."
2a. Write the names of four animals beginning with the letter "L."
2b. Write the names of four fruits beginning with the letter "A."
3. Write the names of five cities beginning with the letter "L."
3a. Write six names beginning with the letter "P."
4. Write six names beginning with the letter "A."
4a. Write the names of six nations beginning with the letter "I."

5. Write the names of three flowers beginning with the letter "R."
5a. Write the names of five subway stations beginning with the letter "K."
6. Write the names of six animals beginning with the letter "K."
6a. Write 20 words beginning with the letter "S."
7. Write the names of 5 flowers beginning with the letter "G."
7a. Write those parts of the world which begin with the letter "A."
8. Write four names of trees beginning with the letter "O."
8a. Write the names of 15 cities beginning with the letter "M."
9. Write the names of 10 cities beginning with the letter "A."
9a. Write the names of 5 films beginning with the letter "M."
10. Write the names of 5 authors beginning with the letter "S."
10a. Write the names of 5 well-known Soviet film artists beginning with the letter "L."
11. Write the names of four composers beginning with the letter "S."
11a. Write the names of well-known Russian composers, artists, and authors beginning with the letter "R."
12. Write the names of seven French artists.
12a. Write the names of 5 well-known Russian artists beginning with the letter "K."

The experimental results obtained with healthy subjects supported the findings of Hoppe and Serebryakova. The selection of tasks by healthy subjects depended on whether the prior tasks were done successfully or not. The initial level of aspiration was different for different subjects: for some subjects their entire behavior was careful and "groping," while others developed a more or less high level of aspiration immediately, as if "on the run." However it was quite evident that the choice of tasks was dependent on how well the previous task had been done. This relationship was frequently not straightforward but the element of choice was always present.

With schizophrenics the findings were completely different. (These were simple schizophrenics who were rather dull and listless). According to the findings of Bezhanishvili, 26 out of 30 schizophrenics showed no relationship between the choice of task and prior performance. No level of aspiration developed nor was

there any sign of an adequate self-evaluation of abilities. The statements of the patients did not have any emotional coloring whatsoever. The patients did not display embarrassment even when the experimenter emphasized their failure.

Psychopaths were completely different when their level of aspiration was studied; it developed very quickly and, as a rule, it was rather high. However it was characterized by fragility and instability: at the least failure, it fell and, at the same time, it would quickly increase when a problem was solved successfully. In studying the psychopathic personality with this method one other feature was observed, namely, affective explosiveness. The patients quickly became irritated, their mood turned bad, they became gloomy, malicious, and sometimes tore up pieces of paper that contained the experimental instructions which they deprecated, saying "stupid problems."

However, in further work with these techniques some insufficiences with the level-of-aspiration tasks were found, especially as they had been applied by Bezhanishvili. In her thesis, N. K. Kalita showed that the use of questions which allegedly reflect general educational level, was unreliable since the questions presented by Bezhanishvili afforded no basis for judging the degree of difficulty for individual subjects. It turned out that for some subjects the answer to question No. 8 (write four names of trees beginning with "O") was considerably more difficult than the answer to question No. 10 (write the names of five authors beginning with the letter "S"). In other words, there were no clear gradations of difficulty and complexity in these questions and because of this, it was difficult to conduct a proper experiment. Another experiment was thought up which permitted the experimenter to artificially regulate the time for solving the problem and thereby arbitrarily determine success and failure. However the time control by the experimenter must occur within reasonable limits so that the subject doesn't suspect anything. The subjects had different amounts of knowledge about the topics of the questions: subjects sometimes succeeded very quickly in answering questions No. 10 or No. 11, while they were unable to do ones that were actually easier. As consequence, the experimenter's evaluation lost its significance for the subject and his own self-evaluation prevailed.

Kalita concluded that it was necessary to find more objective gradations of task complexity. He introduced the following variation: subjects are presented with a pair of pictures which are different from one another in terms of the number of elements (this is akin to a test of attention). The subjects have to find the difference between them. Twelve pairs of tasks were set up and laid out in terms of increasing degrees of difficulty. As a criterion for the difficulty of the task the investigator used the number of differences between two pictures and the time which was necessary for normal subjects to find these differences (from 15 seconds to 3 minutes). The subject was told that his attention was being studied.

This modification in technique permitted Kalita to show the following: (1) The development of level of aspiration depends not only on the evaluation of the experimenter but on the self-evaluation of the subject. (2) A level of aspiration is not formed in circumstances in which the subject is still developing a working relationship to the experiment or when he is simply motivated to become acquainted with problems.

All these data lead us to the following conclusion. In order that an experiment may reveal the self-evaluation and level of aspiration of an individual, it must be set up in such a fashion that it evokes not only an orientation toward the content of the task but it also must facilitate the formation of a relationship to the experimental situation and to the experimenter.

The technique of studying the level of aspiration has turned out to be fruitful in investigating patients with vascular diseases of the brain. The reactions of these patients at the beginning of the experiment was adequate. They tried to test their power, they demanded more of themselves after successful problem solving and returned to easier problems after failure (but these fluctuations were not particularly sharp). However, gradually, toward the end of the experiment, the patients became exhausted and began to be somewhat perplexed; at the same time they did not want to acknowledge their failure. As a result their choice of tasks became unjustified; "I just don't know which one I should take, you tell me," "How would you advise me," etc. The patients, as it were, transferred responsibility for choosing tasks to the experimenter. Frequently the patients refused further work: "I'm tired."

In studying the emotional-volitional behavior of children with oligophrenia, especially interesting results were obtained. The studies of L. Balakireva have shown that in these children the entire

development of level of aspiration has a rather different structure. For the majority of oligophrenics the level of aspiration was not appropriate to their self-evaluation. In spite of successful task completion, the children selected less difficult tasks and, conversely, long-term failure did not lead to a reduction in their level of aspiration. The sluggishness of their emotional reactions came to light in his experiment showing the difficulty with which these oligophrenic children changed their level of aspiration.

At the same time research has revealed another characteristic, namely, the exceeding sensitivity to failure. The least reproach by the experimenter led to a catastrophic decay in the level of aspiration and subsequent successful problem solving did not make the level of aspiration go back up again. The children with oligophrenia were especially vulnerable to the experimenter's assessment. This fact underscores the unusual combination of inertness and instability in the emotional-volitional sphere characteristic of oligophrenics and it demonstrates the immaturity and the insufficiently differentiated quality of their personality. The paradoxical combination of inertness and sluggishness, together with instability, is very likely one of the characteristic personality traits of oligophrenics.

Another appropriate technique for studying pathological personality changes has been "the study of mental satiation" which was launched by a student of Lewin's, A. Karsten. Her research focused on the ability to maintain and to restore the impetus to complete some monotonous task. The subject has to carry out a task, for example, drawing dashes or circles (in doing this task a large pile of sheets of paper is placed in front of the subject). The subject is instructed: "please draw dashes in this fashion" (the experimenter draws some identical dashes or circles ○○○○○). If the subject asks how many he has to draw the experimenter answers in an indefinite and impassive manner: "As many as you want, there you have some paper."

Studies carried out by Karsten and I. M. Solov'ev show that at the beginning, the subjects rather accurately carried out the task that was assigned to them; however, after a short period (5 to 10 minutes), they began to introduce variations into the task, that is, unknown to himself the subject changes the task. These variations seemed to be changes in the external structure of the task: the dashes or circles became smaller or bigger, the subjects changed

work tempo or drew the dashes and circles in a definite rhythm (for example, ○○ ○○○ ○○ ○○○). Sometimes the subjects had recourse to concomitant behavior; they began to sing, whistle, and tap their feet. These variations show that the instigation to complete an assigned behavior begins to run down and, as Karsten expressed it, the phenomenon of "mental satiation" begins to supervene.

According to Karsten such phenomena, that is, variations in the task, not only show that the desire to complete the task is beginning to fade; to some extent these variations perform a prophylactic service; change in the structure of a given task enabled the subject to continue it.

The experimenter conscientiously records spontaneous statements of the subject, the nature of his reactions, his mimic behavior, and his expressive movements. In this way he determines the point of time at which the new variations appear.

After a certain amount of time (usually 20 to 30 minutes), when variations are becoming more frequent and are beginning to take on a somewhat coarse character, the subject is given new instructions: "This task is monotonous for you and it was given to you in order to study your stamina. Continue it if you want."

The reactions of the subjects to these new instructions are diverse. Some subjects become angry: "Why didn't you tell me that earlier," and they stop working. For other subjects, however, the new instructions provide a new comprehension of the situation: "Well, that is another matter" is frequently heard in reply.

This new comprehension of the task situation often makes variations become less frequent, less pronounced, and sometimes they even disappear altogether. After the new instructions the experimenter conscientiously records the responses and the statements of the subjects and notes, just as he did before, the time at which variations supervene and their nature. A good time for stopping work before completion has not been established. As a rule the subjects themselves stop work: "I can't do any more." But sometimes some of them are not disposed to stop work because they frequently change their interpretation of the task, or, more correctly, they add something to it. This is shown both by the spontaneous utterances and the self-awareness of these subjects. "I

wanted to see who would get fed up sooner, you (that is the experimenter) or I," or "I wanted to test myself to see how long I could work on this boring task."

When this study was done with healthy adults and children it was shown that, after a certain amount of time, the subjects introduce variations into a monotonous task: the variations consist in changes of the activity itself, for example, the circles are transformed into "mug" cartoons and ears and hair are added. Then pauses occur in the work, and concomitant behavior begins to occur. The child begins to sing and whistle, just as if the children were satiated with the monotonous work and were attempting to change its meaning for themselves. The variations are temporary withdrawal from work and a shift to activity which is fundamentally similar. Solv'ev followed Karsten in labeling this withdrawal, that is, this variation, "an equivalent withdrawal from work." The more subtle such equivalences, the more they demonstrated the flexibility of the child's behavior.

In doing this experiment with mentally retarded children it turned out that they kept at the task as long as healthy children, and it followed that their work capacity can appear to be undisturbed. However, the unfolding of the satiation process revealed peculiarities consisting in the polarity of their reactions.

In intellectually retarded children we find coarse forms of the variations: long pauses, temporary withdrawals from work, even together with stamina and endurance (especially in connection with monotonous tasks). On the other hand, children with oligophrenia quickly throw aside the work that they are tired of; no variations or changes are introduced. Such a polarity, so noticeable in the daily behavior of oligophrenics, demonstrates the immaturity of their intentions.

This methodological technique turned out to be very useful for revealing the personality features of epileptics. It turned out that they not only can maintain monotonous performance for a long time but that they introduce few variations. It was especially interesting to observe the responses of patients to the second instruction. While the second instruction imparted new meaning to the entire situation for healthy subjects, in epileptics and in children suffering from oligophrenia, this kind of meaning transformation did not occur. Hence, the techniques which we used showed that, for a definite group of patients, the process of meaning formation is disturbed.

As we have mentioned above in Chapter 3, interesting results were obtained by using this method on patients with disorders of work capacity. Experimenting with patients with brain trauma, we were able to note that satiation occurred for them much more quickly. While variations occur on the average after 10 minutes for healthy subjects, the traumatized subjects generate variations after only two or three minutes; and these variations are quite crude in nature. The experiment reveals the rapid extinguishability of mental processes in such patients.

Recently some other approaches to the study of personality traits in mental patients began to appear, such as comparison of patients' complaints about their intellectual deficit with what has been revealed experimentally. This methodological technique was followed by V. V. Kostikova, who made a very interesting attempt to analyze the so-called "internal dynamics of illness" in the mentally ill.

The well-known Soviet therapist R. A. Luriya introduced the concept of "internal dynamics of disease," by which he means "all that which the patient experiences and feels, the entire aggregate of his sensations, not only local sensations due to his illness but also his general feeling about himself, his self-observation, how he represents his illness to himself (with respect to its causes), all that which is linked with approaching a physician – that entire internal world of the patient, which consists of very complex combinations of perceptions and sensations, emotions, affects, conflicts, mental feelings, and trauma." He indicated that the behavior and mental processes of the individual are changed at the very moment when he learns about his illness.

Luriya discussed the significance of studying the "internal dynamics of disease" in somatic illnesses. Undoubtedly these dynamics play a larger role in mental illness. The author was completely right when he pointed out that a comparison of subjective and objective amnesia in the history of the patient facilitates establishing whether the patient is aware of his disease, to what extent he adequately appraises the burden that his condition will be for him, and what feelings are linked with the disease. It can be no less informative to compare the patient's complaints with

the results of experimental research. The experiment is a situation that has personal significance for the patient and therefore the relationship of the patient to it and his emotional response to the fact that his capability is being studied characterize his personality.

Kostikova made an attempt to compare the results of experimental research with patient complaints. Patients with different kinds of illnesses were presented with a number of standard questions aimed at revealing their complaints and their opinions about the causes of their illness (for example, the questions: "How does your illness show itself?" "What do you think is the cause of your illness?"). Then the usual experimental steps were taken and a number of experimental methods were used (classification of objects, pictogram, memorization of ten words, transmission of the metaphorical meaning of proverbs, counting, and others).

Comparison of patients' complaints with the experimental and clinical evidence enabled Kostikova to observe different kinds of relationships between them. In some instances a very crude uncritical attitude is observed: the patients did not notice and they are unable to evaluate the signs of their own mental weaknesses. Some patients who in conversation created the impression of being completely uncritical were enabled to show critical ability by the experiment. These abilities were manifested as an unstable but, all the same, active personality disposition. At the same time, there are instances of the passive awareness of disease without any effect on the disposition of the patient toward everyday life. In many instances in which more or less correct assessment of their disease is available to the patient, he talks about it incorrectly to the doctor. This frequently signifies that there is "dissimulation." But such a dissimulation can have two meanings; in one case, the patient, who is trying to compensate for his defect, does not talk about it, and tries to struggle with the disease and to make a good life adjustment. In the second instance the patient dissembles; he conceals the pathological feelings because he is trying, for delirious reasons, to get discharged from the hospital and he acts in terms of these delirious ideas.

The characterization of this kind of personality disposition is important since the experiment has artificially created a personally significant situation which facilitates discovery of the patient's relationship to the doctor, to the treatment situation, and to his disease in general.

Whatever may be the disposition of the individual during experimental research, if there is even a shred of interest displayed, it always demonstrates that personality has been preserved to some extent.

The problem of personality disposition has recently been raised by psychologists working on the problem of the development of personality in the child (L. N. Bozhovich, S. L. Slavina). They correctly show that the formation of needs in the individual is associated with the availability of awareness of the need. Therefore, study of changes in awareness has fundamental significance for questions of general psychology as well.

Recently still another technique has begun to show up, namely, the analysis of illness-history data. These data, that is, a description of mental status, the findings of anamnesis, diaries, etc. are valuable material, which have been insufficiently used by psychologists. Meanwhile casting of many of the factors which have been described by clinical psychologists in the terms of contemporary psychological science could vastly facilitate the analysis of the structure of needs and motives, which change so much in many mental patients (schizophrenia, epilepsy, chronic alcoholism). This kind of analysis is being carried out now in many studies such as those of B. S. Bratuse, L. V. Bondareva, and M. M. Kochenov.

Combining psychological techniques and pharmacological tests has turned out to be especially valuable in illuminating personality properties. The studies of S. Ya. Rubinshtein are moving in this direction. While affirming the opportunity afforded by applying experimental methods to the study of psychopathological phenomena, this author states that the following means of constructing experimental techniques are most objective and appropriate to the problems of psychiatry: 1) variation of the situation in which the patient finds himself, 2) variation of the activity which the patient must perform, and 3) variation of the condition of the patient by means of experimental and pharmacological stimulation. It is possible to combine these techniques in a very productive fashion.

Rubinshtein showed that the patient's susceptibility to change and his susceptibility to pharmacological influence can serve as major criteria for the effectiveness of therapy. The author has

developed a number of methodological techniques which enable him to carry out such research; this branch of research is extremely promising for the study of abnormality in personality.

The enumerated research techniques for studying personality alterations are not the only ones. The analysis of so complex a problem must be carried out from different points of view and from different directions. However, the fundamental basis for these studies must be the tenets of contemporary materialist psychology.

Chapter 7

Mental Decay and Mental Growth

Knowledge about the relationship between mental growth and decay is poorly developed even though this issue is very important for psychiatric and psychological theory and for understanding the structure of mental activity and the principles of mental development. The correct resolution of this question may help to defeat biologizing tendencies in psychiatry and psychology. In a practical sense, this question generates data for classifying and analyzing psychopathological syndromes.

G. E. Sukhareva repeatedly cited the necessity for an evolutionary-biological approach to the resolution of theoretical questions in psychiatry. L. S. Vygotskii, who devoted much attention to mental development and maturation in the child, emphasized the importance of information about mental decay. In this connection, he indicated that, as far as human development and maturation are concerned, the genetic approach, as applied to animals, cannot be simplistically extrapolated, since, in phylogenesis, the laws of biological evolution yielded to the principles of social-historical development. Continuing with Vygotskii's conceptualization, A. N. Leont'ev stated that human development consists not in adaptation to the environment but in mastering all the accumulated knowledge of mankind.

The question arises as to whether the relationship between decay and growth can be resolved in psychology as it is in biology. It is well known that research on anatomical and cell pathology has established that brain disease first of all affects the "young" formations in the cortex, that is, those portions whose phyloge-