

meanings are based upon experiences uncritically interpreted; the psychopathologist seeks to revive and to re-interpret the experiences from which such meanings have been derived.

IV. Conclusions from the Medical Investigation

It is unfortunate that a clumsy and unnecessary terminology should have collected about the researches of the psychopathologist. Terms such as subconscious, unconscious, foreconscious, co-conscious do little but cause confusion and take attention away from the really important aspects of the investigation. If we put all this on one side and look at the facts elicited by clinical research we find:

1. That it calls attention to the existence of four mental states—concentration, dispersed attention or reverie, hypnoid states and sleep.

2. That it shows the importance of dispersed thinking in education and in all determination of personal attitudes.

3. That it demonstrates total situation to be the fundamental fact for psychological study.

1. Until quite recently, it was customarily assumed that during the 24 hours of the day, an individual is either awake and conscious or asleep and unconscious. It is now possible to distinguish the four general mental states specified above. The point of chief interest, however, is not that four states are distinguished in place of two; it is rather that the distinction must be stated in terms of attention and inattention. All four are states of consciousness; even sleep must be described as inattentive consciousness. Concentration is the state of greatest mental tensility, sleep is the condition of greatest relaxation. But a passive awareness of the surrounding persists in sleep. This is illustrated by the fact that it is not the intensity of a stimulus—for example a sound—that wakes a sleeper but rather its meaning for him. In the maternity hospital the loud clang and crash of the trolley car outside does not wake the mother, but at the slightest stir in the cot by her side, she sits up in bed. A "shell-shocked" soldier was afraid of the dark but slept well at night if the lights were left on. Directly the lights were turned out, he wakened. Telegraph operators in the country districts of Pennsylvania are allowed to sleep on night duty. They all hear the call for every station, but all alike develop a capacity for waking

immediately when their station is called and for sleeping through other signals. Illustrative facts could be multiplied indefinitely. The whole study of what is usually termed suggestion is a study of the passive responses of dispersed thinking, hypnoid states and sleep.

2. The importance of dispersed thinking is chiefly that described by Janet. The direct relevance of this French psychopathology to factory investigation is astonishing. Janet, speaks of neurotic agitation as due to crises of reverie; he also points out the difficulty of maintaining mental tensility or concentration, and consequent temporary disintegration, when fatigue has set in.¹⁴ With respect to mental normality as implying a cooperative relation between concentration and reverie, it may be said that the same fact is observable in the factory and in business generally. Those whose reveries are relevant to their work are the successful men; the reveries of the unsuccessful men seem to be irrelevant to what they are doing for the most part. This is not, of course, their fault nor are they in any sense to blame.

3. Total situation is the fundamental fact for psychology. Medical researches into the nature of sleep and dispersed thinking give us a new conception of the mental life of man. We have to distinguish between that conscious awareness of, or orientation to, our surroundings which is a steadily persistent character of our mental life, and the act of attention to some particular thing—an active "thinking about" things which is only fitfully present. The conscious awareness of surrounding which begins with infancy persists practically uninterrupted through sleep and waking until the hour of death. Its general character changes slowly as successive experiences or acts of attention establish new meanings or new individual attitudes. But at every point or moment its general character determines the type and quality of the attention or thought that can be given to any aspect of the surrounding. There need be no difficulty with this conception; the same truth holds, for example, of our muscular apparatus. One who has been athletic in youth has established a working relation between his "contractile" muscular fibres which adapt a limb to a new position and his "plastic" muscular fibres which hold that posi-

¹⁴"Les Névroses," p. 358.

tion. Long after he has given up games this relation between muscular contractility and plasticity persists and shows itself in every least or trivial movement. So with our mental attitude; the general significance of the world, determined by earlier thought and education, informs and fixes later capacity for thinking. For every individual the world is primarily meaning derived from former thought and experience. This meaning forms the background against which the particular events of the day, week and year are displayed; it varies with the individual and is perpetually present in his mental attitudes. This is the significance of total situation; we cannot understand why an individual suffers an obsession or leaves his job or, it may be, thinks logically, until we know the background against which for him the events of life are played.

And in considering this it is important to realize that this total attitude is not by any means the product only of concentration or logical thinking. In the average instance, reverie—and most frequently reverie of an irrational type—has done even more to determine attitude than concentrated thinking. In the total situation of the average individual consequently, both rationality and irrationality play a part. A steady period of work may be succeeded or interrupted by an unexplained flare of emotion, astonishing even to the individual himself. No psychological method can hope to contribute anything to the understanding of incidents of this kind, or to the general understanding of individual attitudes, unless it takes account of total situation. Methods which look only at concentrated thinking or at adaptation to work or at obsessive thinking as if these were facts in themselves, are in the position of an engineer who looks at the apex of a pyramid and neglects to examine its base. The apex is supported by its base; every act of concentration is the product or expression of a total mental situation.

Pierre Janet's point is well taken; capacity for concentration, or the explicit perception of realities, or work, is to be understood as capacity for mental tension. Whenever the total attitude is ill-organized or unduly compounded of the irrational products of irrelevant reverie, then concentration is difficult or impossible to achieve. And since it is by concentration that we achieve an explicit hold upon the reality about us, it follows that in all

such cases the hold upon reality is tenuous in the extreme. Any condition of living which makes for too much reverie thinking of an irrelevant type tends to diminish the individual's hold upon reality. Concentration is possible only when supported by a well-ordered total situation. It is the business of total situation psychology in industry to investigate and to eliminate conditions which lead to disharmony in the individual's mental background, and to promote that orientation which alone makes reasoned adjustment to the job possible. Disturbances may originate either in the personal history of the individual or in the present conditions of his work or both at once.

V. The Approach to the Factory

I am well aware that at this point many members of my audience will be asking, perhaps with some alarm, what I propose to do—whether industry is to be asked to submit its entire personnel to the ministrations of the psycho-pathologist. I can at once reassure those who have such questions in mind. There are at present, in every economic organization of any size, personnel managers and psychologists whose business it is to handle the human problems of industry. My whole claim is that such experts should be trained in the type of psychology I have briefly described. The responses of every individual to the associations and opportunities of the factory or office are, for the most part, determined by causes in his personal history and total situation which lie beyond the immediate control of the management. If the personnel manager or industrial psychologist be trained to take account of his total situation in dealing with an individual, it will involve no more work than at present and the work will be infinitely more effective. There are in particular two reasons why training of this type is becoming increasingly necessary to successful management. The first is that modern methods of industrial organization tend to impose on the average individual long periods of reverie thinking. Machine operation, once the worker is habituated to it, does not demand a high degree of concentrated thought. On the other hand, it is impossible for him to concentrate his mind upon anything else. One finds in actual practice, therefore, that the mental mood which accompanies work is very frequently a low-grade reverie of a pessimistic order. In one in-