

ions, the opinions form themselves. Take, for instance, in the case of Tolstoy, the mere list of miscellaneous objects which I wrote down at random above, a silk hat, a Home Rule Bill, an Indian poem, and a pound of tobacco. Tolstoy would say: "I believe in the utmost possible simplification of life; therefore, this silk hat is a black abortion." He would say: "I believe in the utmost possible simplification of life; therefore this Home Rule Bill is a mere peddling compromise; it is no good to break up a centralised empire into nations, you must break the nation up into individuals." He would say: "I believe in the utmost possible simplification of life; therefore, I am interested in this Indian poem, for Eastern ethics, under all their apparent gorgeousness, are far simpler and more Tolstoyan than Western." He would say: "I believe in the utmost possible simplification of life; therefore, this pound of tobacco is a thing of evil; take it away." Everything in the world, from the Bible to a bootjack, can be, and is, reduced by Tolstoy to this great fundamental Tolstoyan principle, the simplification of life.¹

One must, of course, dismiss as literary exaggeration Chesterton's claim that there are only "two or three men in Europe" so well integrated that one could supply their inevitable view in anything. Among our own acquaintances we can name several more. In principle, however, if not in statistics, Chesterton is right, for the *majority* of personal lives are not nearly so unified as Tolstoy's; in few cases is the *Leitmotif* so entirely consistent. The difference is one of degree. For in nearly all mature personalities master-sentiments exist, and, however difficult the task may be, psychologists are bound to try to account for them.

FUNCTIONAL AUTONOMY

To understand the dynamics of the normal mature personality a new and somewhat radical principle of growth must be introduced to supplement the more traditional genetic concepts thus far considered. For convenience of discussion this new principle may be christened the *functional autonomy of motives*.²

¹ From G. K. Chesterton and others, *Leo Tolstoy*, 1903, pp. 3 f.

² The authenticity of this principle has been admitted by many psychological writers, but they have neglected thus far to give it a name. Its most familiar statement to date is the oft-quoted phrase of R. S. Woodworth, "mechanisms may become drives." Another clear recognition lies in the following quotation from E. C. Tolman. But neither Woodworth nor Tolman has adopted a substantive designation for the psychological process in question.

"The whole body of both what the anthropologists find in the way of specific culture-patterns and what psychologists find in the way of individual idiosyncrasies

Now, any type of psychology that treats *motives*, thereby endeavoring to answer the question as to *why* men behave as they do, is called a *dynamic psychology*. By its very nature it cannot be merely a descriptive psychology, content to depict the *what* and the *how* of human behavior. The boldness of dynamic psychology in striking for causes stands in marked contrast to the timid, "more scientific" view that seeks nothing else than the establishment of a mathematical function for the relation between some artificially simple stimulus and some equally artificial and simple response. If the psychology of personality is to be more than a matter of coefficients of correlation it *must* be a dynamic psychology, and seek first and foremost a sound and adequate theory of the nature of human dispositions.

Unfortunately the type of dynamic psychology almost universally held, however sufficient it may seem from the point of view of the *abstract* motives of *abstract* personalities, fails to provide a foundation sound enough or flexible enough to bear the weight of any *single* full-bodied personality. The reason is that all prevailing dynamic doctrines refer every mature motive of personality to underlying original instincts, wishes, or needs, shared *by all men*. Thus, the concert artist's devotion to his music might be "explained" as an extension of his "self-assertive instinct," of the "need for sentience," or as a symptom of some repressed striving of "the libido." In McDougall's *hormic* psychology, for example, it is explicitly stated that only the instincts or propensities can be prime movers. Though capable of extension (on both the receptive and executive sides), they are always few in number, common in all men, and established at birth. The enthusiastic collector of bric-a-brac derives his enthusiasm from the parental instinct; so too does the kindly old philanthropist, as well as the mother of a brood. It does not matter how different these three interests may seem to be, they derive their energy from the same source. The principle is that a very few basic motives suffice for explaining the endless varieties of human interests. And the psychoanalyst holds the same over-simplified theory. The number of human interests that he regards as so many canalizations of the one basic sexual instinct is past computation.

seems to consist for the most part, psychologically speaking, in acquired specifications of ultimate goals or in acquired adherences to specific types of means-objects, which latter then often set up in their own right. And such specifications and settings-up, once established, acquire a strangle hold." *Phil. Science*, 1935, 2, p. 370.

Taking the case of Tolstoy, Adler would find the style of life adopted by Tolstoy to be a consequence of his compensatory striving for power, for health, or for personal integrity in the face of an unfavorable environment. Freud might decide that the "simplification of life" was a mere ritual evolved to escape feelings of guilt derived from an unhallowed infantile love; or perhaps he would attribute it to a Death Wish. Rank would see it as a desire to return to the peaceful pre-natal life. Kempf might say that it represented a sublimational craving, sustained by a tension produced by unfulfilled love or by some danger not successfully averted. McDougall might attribute it to the combined effects of the propensities for submission and comfort. H. A. Murray might say that there was a need for submission and inviolacy. And in the language of W. I. Thomas, the wish for security or recognition, perhaps both, would be made responsible. Any of these writers, to be sure, would admit that the original motive had become greatly extended both in the range of stimuli which provoke it and in its varieties of expression. But *the common factor in all these explanations is the reduction of every motive, however elaborate and individual, to a limited number of basic interests, shared by all men, and presumably innate.*

The authors of this type of dynamic psychology are concerning themselves only with mind-in-general. They seek a classification of the common and basic motives of men by which to explain the normal or neurotic behavior of any individual case. (This is true even though they may regard their own list as heuristic or even as fictional.) The plan really doesn't work. The very fact that the lists are so different in their composition suggests—what to a naive observer is plain enough—that motives are almost infinitely varied among men, not only in form but in substance. Not four wishes, nor eighteen propensities, nor any and all combinations of these, even with their extensions and variations, seem adequate to account for the endless variety of goals sought by an endless variety of mortals. And paradoxically enough, in certain cases the few simplified needs or instincts alleged to be the common ground for all motivation, turn out to be completely lacking (cf. p. 112).

Before describing the principle of functional autonomy, its theoretical significance should stand out clearly. The stress in this volume is constantly on the ultimate and irreducible uniqueness of personality. "But how," cry all the traditional scientists, including the older dynamic psychologists, "how are we ever to have a *science*

of unique events? Science must generalize." Perhaps it must, but what the objectors forget is that *a general law may be a law that tells how uniqueness comes about*. It is manifest error to assume that a general principle of motivation must involve the postulation of abstract or general motives. The principle of functional autonomy, here described, is general enough to meet the needs of science, but particularized enough in its operation to account for the uniqueness of personal conduct.

✓ The dynamic psychology proposed here regards adult motives as infinitely varied, and as self-sustaining, *contemporary* systems, growing out of antecedent systems, but functionally independent of them. Just as a child gradually repudiates his dependence on his parents, develops a will of his own, becomes self-active and self-determining, and outlives his parents, so it is with motives. Each motive has a definite point of origin which may lie in the hypothetical instincts, or, more likely, in the organic tensions and diffuse irritability described in Chapter IV. Theoretically all adult purposes can be traced back to these seed-forms in infancy. But as the individual matures the bond is broken. The tie is historical, not functional.

Such a theory is obviously opposed to psychoanalysis and to all other genetic accounts that assume inflexibility in the root purposes and drives of life. (Freud says that the structure of the Id *never* changes.) The theory declines to believe that the energies of adult personality are infantile or archaic in nature. Motivation is *always* contemporary. The life of modern Athens is *continuous* with the life of the ancient city, but it in no sense *depends* upon it for its present "go." The life of a tree is continuous with that of its seed, but the seed no longer sustains and nourishes the full grown tree. Earlier purposes lead into later purposes, but are abandoned in their favor.

William James taught a curious doctrine that has been a matter for incredulous amusement ever since, the doctrine of the *transitoriness of instincts*. According to this theory—not so quaint as sometimes thought—an instinct appears but once in a lifetime, whereupon it promptly disappears through its transformation into habits. If there *are* instincts this is no doubt their fate, for no instinct can retain its motivational force unimpaired after it has been absorbed and recast under the transforming influence of learning. Such is the reasoning of James, and such is the logic of functional autonomy. The psychology of personality must be a psychology of post-instinctive

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behavior. If, as in this volume, instincts are dispensed with from the beginning, the effect is much the same, for whatever the original drives or "irritabilities" of the infant are, they become completely transformed in the course of growth into contemporaneous systems of motives.

Woodworth has spoken of the transformation of "mechanisms" into "drives."³ A *mechanism* Woodworth defines as any course of behavior that brings about an adjustment. A *drive* is any neural process that releases mechanisms especially concerned with consummatory reactions. In the course of learning, many preparatory mechanisms must be developed in order to lead to the consummation of an original purpose. These mechanisms are the effective cause of activity in each succeeding mechanism, furnishing the drive for each stage following in the series. Originally all these mechanisms were merely instrumental, only links in the long chain of processes involved in the achievement of an *instinctive* purpose; with time and development, with integration and elaboration, many of these mechanisms become activated directly, setting up a state of desire and tension for activities and objects no longer connected with the original impulse. Activities and objects that earlier in the game were *means* to an end, now become *ends* in themselves.⁴

Although Woodworth's choice of quasi-neurological terminology is not the best, his doctrine, or one like it, is indispensable in accounting for the infinite number of effective motives possible in human life, and for their severance from the rudimentary desires of infancy. Further discussion of the operation of the principle and a critique of Woodworth's position will be more to the point after a review of the evidence in favor of the principle.

³ R. S. Woodworth, *Dynamic Psychology*, 1918. Equivalent assertions are those of W. Stern concerning the transformation of "phenomotives" into "genomotives" (*Allgemeine Psychologie*, 1935, p. 569); and of E. C. Tolman regarding the "strangle hold" that "means-objects" acquire by "setting up in their own right" (fn. p. 191).

⁴ "The fundamental drive towards a certain end may be hunger, sex, pugnacity or what not, but once the activity is started, the means to the end becomes an object of interest on its own account" (Woodworth, *op. cit.*, p. 201). "The primal forces of hunger, fear, sex, and the rest, continue in force, but do not by any means, even with their combinations, account for the sum total of drives activating the experienced individual" (*Ibid.*, p. 104).

EVIDENCE FOR FUNCTIONAL AUTONOMY

Let us begin in a common sense way. An ex-sailor has a craving for the sea, a musician longs to return to his instrument after an enforced absence, a city-dweller yearns for his native hills, and a miser continues to amass his useless horde. Now, the sailor may have first acquired his love for the sea as an incident in his struggle to earn a living. The sea was merely a conditioned stimulus associated with satisfaction of his "nutritional craving." But now the ex-sailor is perhaps a wealthy banker; the original motive is destroyed; and yet the hunger for the sea persists unabated, even increases in intensity as it becomes more remote from the "nutritional segment." The musician may first have been stung by a rebuke or by a slur on his inferior performances into mastering his instrument, but now he is safely beyond power of these taunts; there is no need to continue, yet he loves his instrument more than anything else in the world. Once indeed the city dweller may have associated the hills around his mountain home with nutritional and erotogenic satisfactions, but these satisfactions he finds in his city home, *not* in the mountains; whence then comes all his hill-hunger? The miser perhaps learned his habits of thrift in dire necessity, or perhaps his thrift was a symptom of sexual perversion (as Freud would claim), and yet the miserliness persists, and even becomes stronger with the years, even after the necessity or the roots of the neurosis have been relieved.

Workmanship is a good example of functional autonomy. A good workman feels compelled to do clean-cut jobs even though his security, or the praise of others, no longer depend upon high standards. In fact, in a day of jerry-building his workman-like standards may be to his economic disadvantage. Even so he cannot do a slipshod job. Workmanship is not an instinct, but so firm is the hold it may acquire on a man that it is little wonder Veblen mistook it for one. A business man, long since secure economically, works himself into ill-health, and sometimes even back into poverty, for the sake of carrying on his plans. What was once an instrumental technique becomes a master-motive.

Neither necessity nor reason can make one contented permanently on a lonely island or on an isolated country farm after one is adapted to active, energetic city life. The acquired habits seem suffi-

cient to urge one to a frenzied existence, even though reason and health demand the simpler life.

The pursuit of literature, the development of good taste in clothes, the use of cosmetics, the acquiring of an automobile, strolls in the public park, or a winter in Miami, may first serve, let us say, the interests of sex. But every one of these instrumental activities may become an interest in itself, held for a lifetime, long after the erotic motive has been laid away in lavender. People often find that they have lost allegiance to their original aims because of their deliberate preference for the many ways of achieving them.

The maternal sentiment offers an excellent final illustration. Many young mothers bear their children unwillingly, dismayed at the thought of the drudgery of the future. At first they may be indifferent to, or even hate, their offspring; the "parental instinct" seems wholly lacking. The only motives that hold such a mother to child-tending may be fear of what her critical neighbors will say, fear of the law, a habit of doing any job well, or perhaps a dim hope that the child will provide security for her in her old age. However gross these motives, they are sufficient to hold her to her work, until through the practice of devotion her burden becomes a joy. As her love for the child develops, her earlier practical motives are forgotten. In later years not one of these original motives may operate. The child may be incompetent, criminal, a disgrace to her, and far from serving as a staff for her declining years, he may continue to drain her resources and vitality. The neighbors may criticize her for indulging the child, the law may exonerate her from allegiance; she certainly feels no pride in such a child; yet she sticks to him. The tenacity of the maternal sentiment under such adversity is proverbial.⁵

Such examples from everyday experience could be multiplied *ad infinitum*. The evidence, however, appears in sharper outline when it is taken from experimental and clinical studies. In each of the following instances some new function emerges as an independently structured unit from preceding functions. The activity of these new units does not depend upon the continued activity of the units from which they developed.

⁵ Most mothers, to be sure, give their babies a somewhat warmer welcome from the start, but even so, there is little evidence that the maternal instinct is a ready-made, full-fledged and invariable possession of all women. Even those who have early learned to be fond of babies find that with practice and experience the interest becomes constantly stronger, demanding no other satisfaction for itself than its own autonomous functioning. Some women become so absorbed in being good mothers that they neglect being the good wives they were earlier.

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1. *The Circular Reflex.* Everyone has observed the almost endless repetition of acts by a child. The good-natured parent who picks up a spoon repeatedly thrown down by a baby wearies of this occupation long before the infant does. Such repetitive behavior, found likewise in early vocalization (babbling), and in other early forms of play, is commonly ascribed to the mechanism of the circular reflex.⁶ It is an elementary instance of functional autonomy; for any situation where the consummation of an act provides adequate stimulation for the repetition of the *same* act does not require any backward tracing of motives. The act is self-perpetuating until it is inhibited by new activities or fatigue.

2. *Conative Perseveration.* Many experiments show that incomplete tasks set up tensions that tend to keep the individual at work until they are resolved. No hypothesis of self-assertion, rivalry, or any other basic need, is required. The completion of the task itself has become a quasi-need with dynamic force of its own. It has been shown, for example, that interrupted tasks are better remembered than completed tasks;⁷ that an individual interrupted in a task will, even in the face of considerable opposition, return to that task;⁸ that even trivial tasks undertaken in a casual way become almost haunting in character until they are completed.⁹

Conative perseveration of this order is stronger if an empty interval of time follows the period of work, showing that *left to itself*, without the inhibiting effect of other duties or activities, the motive grows stronger and stronger. The experiment of Kendig proves this point, as well as that of C. E. Smith.¹⁰ The latter investigator demonstrated that there is more success in removing a conditioned fear if the deconditioning process is commenced immediately. After a twenty-four hour delay the fear has become set, and is more difficult to eradicate. We are reminded here of the sound advice to drivers of automobiles or airplanes who have been involved in an accident, that they drive again immediately to conquer the shock of the accident, lest the fear become set into a permanent phobia. The rule seems to be that unless specifically inhibited all emotional shocks, given time to set, tend to take on a compulsive autonomous character.

3. *"Conditioned Reflexes" Not Requiring Reinforcement.* The pure

⁶ As a means of fixating early habits and of providing a foundation for future learning, this mechanism has received detailed attention by E. B. Holt, *Animal Drive and the Learning Process*, 1931, esp. chaps. vii and viii.

⁷ B. Zeigarnik, *Psychol. Forsch.*, 1927, 9, 1-85.

⁸ M. Ovsiankina, *Psychol. Forsch.*, 1928, 6, 302-379.

⁹ I. Kendig, "Studies in Perseveration" (in five parts), *J. Psychol.*, 1936, 3, 223-264.

¹⁰ C. E. Smith, *Change in the Apparent Resistance of the Skin as a Function of Certain Physiological and Psychological Factors* (Harvard College Library), 1934.

conditioned reflex readily dies out unless the secondary stimulus is occasionally reinforced by the primary stimulus (cf. p. 153). The dog does not continue to salivate whenever it hears a bell unless sometimes at least an edible offering accompanies the bell. But there are innumerable instances in human life where a single association, *never* reinforced, results in the establishment of a life-long dynamic system. An experience associated only once with a bereavement, an accident, or a battle, may become the center of a permanent phobia or complex, not in the least dependent on a recurrence of the original shock.

4. *Counterparts in Animal Behavior.* Though the validity of a principle in human psychology never depends upon its having a counterpart in animal psychology, still it is of interest to find functional autonomy in the lower organisms. For example, rats, who will first learn a certain habit only under the incentive of some specific tension, as hunger, will, after learning, often perform the habit even when fed to repletion.¹¹

Another experiment shows that rats trained to follow a long and difficult path, will for a time persist in using this path, even though a short easy path to the goal is offered and even after the easier path has been learned.¹² Among rats as among human beings, old and useless habits have considerable power in their own right.

Olson studied the persistence of artificially induced scratching habits in rats. Collodion applied to the ears of the animal set up removing and cleaning movements. Four days later the application was repeated. From that time on the animals showed significantly greater number of cleaning movements than control animals. A month after the beginning of the experiment when the ears of the rats as studied by the microscope showed no further trace of irritation, the number of movements was still very great. Whether the induced habit spasm was permanently retained the experimenter does not say.¹³

5. *Rhythm.* A rat whose activity bears a definite relation to his habits of feeding (being greatest just preceding a period of feeding and midway between two such periods) will, even when starved, display the same periodicity and activity. The acquired rhythm persists without dependence on the original periodic stimulation of feeding.¹⁴

Even a mollusc whose habits of burrowing in the sand and reappearing depend upon the movements of the tide, will, when removed from

¹¹ J. D. Dodgson, *Psychobiology*, 1917, 1, 231-276. This work has already been interpreted by K. S. Lashley as favoring Woodworth's dynamic theory as opposed to Freud's (*Psychol. Rev.*, 1924, 31, 192-202).

¹² H. C. Gilhousen, *J. Comp. Psychol.*, 1933, 16, 1-23.

¹³ W. C. Olson, *The Measurement of Nervous Habits in Normal Children*, 1929, pp. 62-65.

¹⁴ C. P. Richter, *Comp. Psychol. Monog.*, 1922, 1, No. 2.

the beach to the laboratory, continue for several days in the same rhythm without the tide. Likewise certain animals, with nocturnal rhythms advantageous in avoiding enemies, obtaining food, or preventing excessive evaporation from the body, may exhibit such rhythms even when kept in a laboratory with constant conditions of illumination, humidity, and temperature.¹⁵

There are likewise instances where acquired rhythms in human life have taken on a dynamic character. Compulsive neurotics enter upon fugues or debauches, apparently not because of specific stimulation, but because "the time has come." A dipsomaniac in confinement and deprived for months of his alcohol describes the fierceness of the recurrent appetite (obviously acquired).

Those craving paroxysms occur at regular intervals, three weeks apart, lasting for several days. They are not weak, namby-pamby things for scoffers to laugh at. If not assuaged with liquor they become spells of physical and mental illness. My mouth drools saliva, my stomach and intestines seem cramped, and I become bilious, nauseated, and in a shaky nervous funk.¹⁶

In such states of drug addiction, as likewise in states of hunger, lust, fatigue, there is to be sure a physical craving, but the rhythms of the craving are partially acquired, and are always accentuated by the mental habits associated with it. For instance, eating in our civilized way of life takes place not because physical hunger naturally occurs three times a day, but because of habitual rhythms of expectancy. The habit of smoking is much more than a matter of craving for the specific narcotic effects of tobacco; it is a craving for the motor ritual and periodic distraction as well.

6. *Neuroses*. Why are acquired tics, stammering, sexual perversions, phobias, and anxiety so stubborn and so often incurable? Even psychoanalysis, with its deepest of depth-probing seldom succeeds in effecting *complete* cures in such cases, even though the patient may feel relieved or at least reconciled to his difficulties after treatment. The reason seems to be that what are usually called "symptoms" are in reality something more. They have set themselves up in their own right as independent systems of motivation. Merely disclosing their roots does not change their independent activity.¹⁷

¹⁵ S. C. Crawford, *Quar. Rev. Biol.*, 1934, 9, 201-214.

¹⁶ Inmate Ward Eight, *Beyond the Door of Delusion*, Macmillan, 1932, p. 281.

¹⁷ The case of W. E. Leonard, *The Locomotive God*, 1927, is instructive in this regard. An intense phobia was not relieved by tracing its history backward to the start of life. Even though he could explain why he was once frightened for a very good reason (by a locomotive), the author is quite unable to explain why now he is frightened for no particular reason. Such neuroses, and psychotic delusional systems as well, often acquire a "strangle hold," and the task of dislodging them is usually more than therapeutic skill is equal to.

7. *The Relation Between Ability and Interest.* Psychometric studies have shown that the relation between ability and interest is always positive, often markedly so. A person likes to do what he can do well. Over and over again it has been demonstrated that the skill learned for some external reason, turns into an interest, and is self-propelling, even though the original reason for pursuing it has been lost. A student who at first undertakes a field of study in college because it is prescribed, because it pleases his parents, or because it comes at a convenient hour, often ends by finding himself absorbed, perhaps for life, in the subject itself. He is not happy without it. The original motives are entirely lost. What was a means to an end has become an end in itself.

And there is the case of genius. A skill takes possession of the man. No primitive motivation is needed to account for his persistent, absorbed activity. It just is the alpha and omega of life to him. It is impossible to think of Pasteur's concern for health, food, sleep or family, as the root of his devotion to his work. For long periods of time he was oblivious of them all, losing himself in the white heat of research for which he had been trained and in which he had *acquired* a compelling and absorbing interest.

A much more modest instance is the finding of industrial research that when special incentives are offered and work speeded up as a consequence, and then these special incentives removed, *the work continues at the speeded rate*. The habit of working at a faster tempo persists without external support.

8. *Sentiments vs. Instincts.* Every time an alleged instinct can by rigid analysis be demonstrated not to be innate but acquired, there is in this demonstration evidence for functional autonomy. It is true enough that maternal conduct, gregariousness, curiosity, workmanship, and the like, have the tenacity and compelling power that instincts are supposed to have. If they are not instincts, then they must be autonomous sentiments with as much dynamic character as has been attributed to instincts. It is not necessary here to review all the arguments in favor of regarding such alleged instincts as acquired sentiments; the problem was discussed in Chapter IV.

9. *The Dynamic Character of Personal Values.* When an interest-system has once been formed it not only creates a tensional condition that may be readily aroused, leading to overt conduct in some way satisfying to the interest, but it also acts as a silent agent for selecting and directing any behavior related to it. Take the case of people with strongly marked esthetic interests. Experiments with the word-association test have shown that such people respond more quickly to stimulus words connected with this interest than to words relating to

interests they lack.¹⁸ Likewise, in scanning a newspaper they will observe and remember more items pertaining to art; they also take a greater interest in clothes than do non-esthetic people; and when they are asked to rate the virtues of others, they place esthetic qualities high. In short the existence of a well-established acquired interest exerts a directive and determining effect on conduct just as is to be expected of any dynamic system. The evidence can be duplicated for many interests other than the esthetic.¹⁹

CRITIQUE OF FUNCTIONAL AUTONOMY

Objections to the principle of autonomy may be expected from two sides. Behavioristically inclined psychologists will continue to prefer their conception of organic drive with its capacity for manifold conditioning by ever receding stimuli. Whereas instinct psychology of the traditional order will be unable to accept a pluralistic principle that seems to leave purpose so largely at the mercy of learning.

The behaviorist is well satisfied with motivation in terms of organic drive and conditioning because he feels that he somehow has secure anchorage in the neural structure. (For some strange reason, the closer he approaches nervous tissue the happier the behaviorist is.) But the truth of the matter is that the neural physiology of organic drive and conditioning is no better established, and no easier to imagine, than is the neural physiology of the type of complex autonomous units of motivation we have described.

Two behavioristic principles will be said to account adequately for the instances of functional autonomy previously cited, *viz.*, the circular reflex and cross-conditioning. The former concept, acceptable enough when applied to infant behavior, merely says that the more activity a muscle engages in, the more activity of the same sort does it engender through a self-sustaining circuit.²⁰ This is, to be sure, a clear instance of autonomy, albeit on a primitive level, over-simplified so far as adult conduct is concerned. The doctrine of cross-conditioning refers to subtle recession of stimuli in the process of conditioning, and to the intricate possibility of cross-connections in conditioning. For instance, such ubiquitous external stimuli as humidity, daylight, gravitation, may feed collaterally into open channels

¹⁸ H. Cantril, "General and Specific Attitudes," *Psychol. Monog.*, 1932, No. 192.

¹⁹ H. Cantril and G. W. Allport, *J. Abnorm. & Soc. Psychol.*, 1933, 28, 259-273.

²⁰ E. B. Holt, *op. cit.*, p. 38.

of activity, arousing mysteriously and unexpectedly a form of conduct to which they have unconsciously been conditioned. For example, the angler whose fishing expeditions have been accompanied by sun, wind, or a balmy June day, may feel a desire to go fishing whenever the barometer, the thermometer, or the calendar in his city home tells him that these conditions prevail.²¹ Innumerable such crossed stimuli are said to account for the arousal of earlier patterns of activity.

Such a theory is highly mechanistic. It inherits, first of all, the difficulties resident in the principle of conditioning whenever it is applied to human behavior in general (cf. pp. 151-153). Further, though the reflex circle and cross-conditioning may in fact exist, they are really rather trivial principles. They leave the formation of interest and its occasional arousal almost entirely to chance factors of stimulation. They give no picture at all of the spontaneous and variable aspects of traits, interests, or sentiments. These dispositions are regarded as purely *reactive* in nature; the stimulus is all-important. The truth is that dispositions *sort out* stimuli congenial to them, and this activity does not in the least resemble the rigidity of reflex response.²²

A variant on the doctrine of cross-conditioning is the principle of *redintegration*.²³ This concept admits the existence of highly integrated dispositions of a neuropsychic order. These dispositions can be aroused *as a whole* by any stimulus previously associated with their functioning. In this theory likewise the disposition is regarded as a rather passive affair, waiting for reactivation by some portion of the original stimulus. Here again the variability of the disposition and its urge-like quality are not accounted for. The stimulus is thought merely to reinstate a complex determining tendency. Nothing is said about how the stimuli themselves are *selected*, why a motive once aroused becomes insistent, surmounting obstacles, skillfully subordinating conflicting impulses, and inhibiting irrelevant trains of thought.

In certain respects the principle of autonomy stands midway between the behavioristic view and the thoroughgoing purposive psy-

²¹ *Ibid.*, p. 224.

²² The basic fact that complex "higher" centers have the power of inhibiting, selecting, and initiating the activity of simpler segmental responses is a fact too well established to need elaboration here. It constitutes the very foundation of the psychophysiological theories advanced by Sherrington, Herrick, Dodge, Köhler, Troland, and many others.

²³ Cf. H. L. Hollingworth, *Psychology of the Functional Neuroses*, 1920.

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chology of the hormic order. It agrees with the former in emphasizing the *acquisition* of motives, in avoiding an a priori and unchanging set of original urges, and in recognizing (as limited principles) the operation of the circular response and cross-conditioning. It agrees with the hormic psychologist, however, in finding that striving-from-within is a far more essential characteristic of motive than stimulation-from-without. It agrees likewise in distrusting the emphasis upon stomach contractions and other "excess and deficit stimuli" as "causes" of mature behavior. Such segmental sources of energy even though conditioned cannot possibly account for the "go" of conduct. But functional autonomy does not rely as does hormic theory upon modified instinct, which after all is as archaic a principle as the conditioning of autonomic segmental tensions, but upon the capacity of human beings to replenish their energy through a plurality of constantly changing systems of dynamic dispositions.

The hormic psychologist, however, will not accept the autonomy of new motivational systems. If mechanisms can turn into drives, he asks, why is it that habits and skills as they become exercised to the point of perfection do not acquire an ever increasing driving force? ²⁴ The mechanisms of walking, speaking, or dressing, cannot be said to furnish their own motive-power. One walks, speaks, or dresses in order to satisfy a motive entirely external to these learned skills.²⁵ The criticism is sufficiently cogent to call into question Woodworth's form of stating the principle, *viz.*, "Mechanisms may become drives." It is not an adequate statement of the case.

Looking at the issue more closely it seems to be neither the perfected talent nor the automatic habit that has driving power, but the imperfect talent and the habit-in-the-making. The child who is *just learning* to speak, to walk, or to dress, is, in fact, likely to engage in these activities for their own sake, precisely as does the adult who has an *unfinished* task in hand. He remembers it, returns to it, and suffers a feeling of frustration if he is prevented from engaging in it. Motives are always a kind of striving for some form of completion; they are unresolved tension, and demand a "closure" to activity under way. (Latent motives are dispositions that are easily thrown by a stimulus or by a train of associations into this state of active tension.)

²⁴ W. McDougall, *Mind*, 1920, N. S., 29, 277-293.

²⁵ Though this objection is usually valid, it is not always so, for there are cases where the liking for walks, for talking for the sake of talking, or for dressing, playing games, etc., seem to be self-sustaining motivational systems.

The active motive subsides when its goal is reached, or in the case of a motor skill, when it has become at last automatic. The novice in automobile driving has an unquestionable impulse to master the skill. Once acquired the ability sinks to the level of an *instrumental* disposition and is aroused only in the service of some other *driving* (unfulfilled) motive.

Now, in the case of the permanent interests of personality, the situation is the same. A man whose motive is to acquire learning, or to perfect his craft, can never be satisfied that he has reached the end of his quest, for his problems are never completely solved, his skill is never perfect. Lasting interests are recurrent sources of discontent, and from their incompleteness they derive their forward impetus. Art, science, religion, love, are never perfected. But motor skills are often perfected, and beyond that stage they seldom provide their own motive power. Only skills in the process of perfecting (mechanisms-on-the-make) serve as drives. With this emendation, Woodworth's view is corrected, and McDougall's objection is met.²⁶

If the dynamic psychologist finds in such a pluralistic system a displeasing lack of unity, he may, without damage to the principle of autonomy, fall back upon the elemental home. All motives—diverse as they are—*may* be regarded as so many channels of the original Will-to-Live. (Such a monistic under-pinning to a theory of motivation is preferable to a list of arbitrarily distinguished propensities or instincts.) But, as was previously pointed out (p. 109), the Will-to-Live, however acceptable it may be in the underlying metaphysics of personality, does not itself aid in the task of psychological analysis.

Only such a principle as that under discussion can provide a flexible enough account of the plurality of motives and their countless expressions in human life. Its specific advantages stand out in the following summary:

1. It clears the way for a completely dynamic psychology of *traits, attitudes, interests, and sentiments*, which can now be regarded as the ultimate and true dispositions of the mature personality.

2. It avoids the absurdity of regarding the energy of life now, in the *present*, as somehow consisting of early archaic forms (instincts, prepotent reflexes, or the never-changing Id). Learning brings new

²⁶ This theory embraces very easily the work of K. Lewin and his associates upon the nature of "quasi-needs." The urgency of these needs is greatest just before a goal is reached, after which time the motive subsides completely.

systems of interests into existence just as it does new abilities and skills. At each stage of development these interests are always contemporary; whatever drives, drives *now*.

3. It dethrones the stimulus. A motive is no longer regarded as a mechanical reflex or as a matter of redintegration, depending entirely upon the capricious operation of a conditioned stimulus. In a very real sense dispositions select the stimuli to which they respond, even though *some* stimulus is required for their arousal.

4. It readily admits the validity of all other established principles of growth. Functional autonomy *utilizes* the products of differentiation, integration, maturation, exercise, imitation, suggestion, conditioning, trauma, and all other processes of development; and allows, as they do not, considered by themselves, for their *structuration* into significant motivational patterns.

5. It places in proper perspective the problems of the origin of conduct by removing the fetish of the genetic method. Not that the historical view of behavior is unimportant for a complete understanding of personality, but so far as *motives* are concerned the cross-sectional dynamic analysis is more significant. Motives being always contemporary should be studied in their present structure. Failure to do so is probably the chief reason why psychoanalysis meets so many defeats, as do all other therapeutic schemes relying too exclusively upon uncovering the motives of early childhood.

6. It accounts for the force of delusions, shell shock, phobias, and all manner of compulsive and maladaptive behavior. One would expect such unrealistic modes of adjustment to be given up as soon as they are shown to be poor ways of confronting the environment. Insight and the law of effect should both remove them. But too often they have acquired a strangle hold in their own right.

7. At last we can account adequately for socialized and civilized behavior. The principle supplies the correction necessary to the faulty logic of *bellum omnium contra omnes*. Starting life as a completely selfish being, the child would indeed remain entirely wolfish and piggish throughout his days unless genuine transformations of motives took place. Motives being completely alterable, the dogma of Egoism turns out to be a callow and superficial philosophy of behavior, or else a useless redundancy.

8. It explains likewise why a person often *becomes* what at first he merely *pretends* to be—the smiling professional hostess who grows fond of her once irksome role and is unhappy when deprived of it;