

# WHAT MAKES A PERSON CREATIVE?

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SIX years ago, a group of psychologists began a nationwide study of human creativity. They wanted the scientific answers to the mystery of human personality, biology, intelligence, and intuition that makes some persons more creative than others.

Working under a grant by the Carnegie Corporation of New York, the researchers were faced with the usual stereotypes that picture the highly creative person as a genius with an I.Q. far above average, an eccentric not only in thinking but in appearance, dress, and behavior, a Bohemian, an egghead, a longhair. According to these unproved stereotypes, he was not only introverted but a true neurotic, withdrawn from society, inept in his relations with others, totally unable to carry on a conversation with others less gifted than himself. Still others held that the creative person might be profound but that his intelligence was highly one-sided, in a rather narrow channel, and that he was emotionally unstable. Indeed, one of the most commonly held of these images was that he lived just this side of madness.

The psychological researchers who sought a more precise picture of the creative person conducted their investigations on the Berkeley campus of the University of California in the Institute

of Personality Assessment and Research. At the Institute, the persons to be studied have been brought together, usually ten at a time, for several days, most often a three-day weekend. There they have been examined by a variety of means—by the broad problem posed by the assessment situation itself, by problem-solving experiments, by tests designed to discover what a person does not know or is unable to reveal about himself, by tests and questionnaires that permit a person to manifest various aspects of his personality and to express his attitudes, interests, and values, by searching interviews.

The professional groups whose creative members were chosen for study were writers, architects, research workers in the physical sciences and engineering, and mathematicians. In no instance did the psychological assessors decide which highly creative persons should be studied. Rather, they were nominated by experts in their own fields; and to insure that the traits found to characterize the highly creative were related to their creativity rather than indigenous to all members of the profession, a wider, more representative sample of persons in each of the professional groups was also chosen, though for somewhat less intensive study. All told, some 600 persons participated.

As the study has progressed it has become abundantly clear that creative persons seldom represent fully any of the common stereotypes, and yet in some respects and to some degree there are likenesses. It is not that such images of the creative person are fantastic but that they are caricatures rather than characterizations, heightening and sharpening traits and dispositions so as to yield a picture recognizable, yet still out of accord with reality. There are, of course, some stereotypes that reflect only error, but more often the distortion of the reality would seem to be less complete.

As for intellectual capacity, it will come as no surprise that highly creative persons have been found to be, in the main, well above average. But the relation between intelligence and creativity is not as clear-cut as this would suggest, if for no other reason than that intelligence is a many-faceted thing. There is no single psychological process to which the term "intelligence" applies; rather, there are many types of intellectual functioning. There is verbal intelligence, and on a well-known test of this factor creative writers on the average score higher than any of the other groups. But there is also spatial intelligence—the capacity to perceive and to deal with spatial arrangements—and on a test of this aspect of intelligence creative writers as a group earn the lowest average score, while creative architects as a group are the



star performers. There are, of course, many elements of intelligence in addition to these two.

If for the moment we ignore those patterns of intellective functioning which clearly and most interestingly differentiate one creative group from another, there are some more general observations that may be noted. It is quite apparent that creative persons have an unusual capacity to record and retain and have readily available the experiences of their life history. They are discerning, which is to say that they are observant in a differentiated fashion; they are alert, capable of concentrating attention readily and shifting it appropriately; they are fluent in scanning thoughts and producing those that serve to solve the problems they undertake; and, characteristically, they have a wide range of information at their command. As in the case of any intelligent person, the items of information which creative persons possess may readily enter into combinations, and the number of possible combinations is increased for such persons because of both a greater range of information and a greater fluency of combination. Since true creativity is defined by the adaptiveness of a response as well as its unusualness, it is apparent that intelligence alone will tend to produce creativity. The more combinations that are found, the more likely it is on purely statistical grounds that some of them will be creative.

**Y**ET intelligence alone does not guarantee creativity. On a difficult, high-level test of the more general aspects of intelligence, creative persons score well above average, but their individual scores range widely, and in several of the creative groups the correlation of intelligence as measured by this test and creativity as rated by the experts is essentially zero.

Certainly this does not mean that over the whole range of creative endeavor there is no relation between general intelligence and creativity. No feeble-minded persons appeared in any of the creative groups. Clearly a certain degree of intelligence, and in general a rather high degree, is required for creativity, but above that point the degree of intelligence does not seem to determine the level of one's creativeness. In some fields of endeavor, mathematics and theoretical physics for example, the requisite intelligence for highly creative achievement is obviously high. But it does not follow that the theoretical physicist of very superior I.Q. will necessarily be creative, and in many fields of significant creative endeavor it is not necessary that a person be outstanding in intelligence to

be recognized as highly creative, at least as intelligence is measured by intelligence tests.

Regardless of the level of his measured intelligence, what seems to characterize the creative person—and this is especially so for the artistically creative—is a relative absence of repression and suppression as mechanisms for the control of impulse and imagery. Repression operates against creativity, regardless of how intelligent a person may be, because it makes unavailable to the individual large aspects of his own experience, particularly the life of impulse and experience which gets assimilated to the symbols of aggression and sexuality. Dissociated items of experience cannot combine with one another; there are barriers to communication among different systems of experience. The creative person, given to expression rather than suppression or repression, thus has fuller access to his own experience, both conscious and unconscious. Furthermore, because the unconscious operates more by symbols than by logic, the creative person is more open to the perception of complex equivalences in experience, facility in metaphor being one specific consequence of the creative person's greater openness to his own depths.

This openness to experience is one of the most striking characteristics of the highly creative person, and it reveals itself in many forms. It may be observed, for example, in the realm of sexual identifications and interests, where creative males give more expression to the feminine side of their nature than do less creative men. On a number of tests of masculinity-femininity, creative men score relatively high on femininity, and this despite the fact that, as a group, they do not present an effeminate appearance or give evidence of increased homosexual interests or experiences. Their elevated scores on femininity indicate rather an openness to their feelings and emotions, a sensitive intellect and understanding self-awareness, and wide-ranging interests including many which in the American culture are thought of as more feminine, and these traits are observed and confirmed by other techniques of assessment. If one were to use the language of the Swiss psychiatrist C. G. Jung, it might be said that creative persons are not so completely identified with their masculine *persona* roles as to blind themselves to or deny expression to the more feminine traits of the *anima*. For some, of course, the balance between masculine and feminine traits, interests, and identifications is a precarious one, and for several it would appear that their presently achieved reconciliation of

these opposites of their nature has been barely achieved and only after considerable psychic stress and turmoil.

It is the creative person's openness to experience and his relative lack of self-defensiveness that make it possible for him to speak frankly and critically about his childhood and family, and equally openly about himself and his problems as an adult.

One gets the impression that by and large those persons who as adults are widely recognized for their creative achievements have had rather favorable early life circumstances, and yet they often recall their childhood as not having been especially happy.

In studying adult creative persons, one is dependent upon their own reports for the picture they give of their early years. Although they may often describe their early family life as less harmonious and happy than that of their peers, one cannot know for certain what the true state of affairs was. In reality the situation in their homes may not have been appreciably different from that of their peers. The differences may reside mainly in their perceptions and memories of childhood experiences, and it seems the more likely since one of the most striking things to be noted about creative persons is their unwillingness to deny or to repress things that are unpleasant or troubling.

**T**HE theme of remembered unhappiness in childhood is so recurrent that one is led to speculate about its role in fostering creative potential. In the absence of a sensitive awareness of one's own experience and of the world around one, without considerable development of and attention to one's own inner life, and lacking an interest in ideational, imaginal, and symbolic processes, highly creative responses can hardly be expected to occur. Something less than complete satisfaction with oneself and one's situation in childhood, if not a prerequisite for the development of a rich inner life and a concern for things of the mind and spirit, may nevertheless play an important contributory role.

There is no doubt, too, that some of the highly creative persons had, as children, endured rather cruel treatment at the hands of their fathers. These, to be sure, constitute the minority, but they appear today to be no less creative than those who could more easily identify with their fathers. There is some evidence, however, that those who were harshly treated in childhood have not been so effective or so successful in the financial and business (masculine) aspects of their profession as the others. There is in these persons more than a hint that they have had some difficulty

in assuming an aggressive professional role because, through fear of their fathers, their masculine identifications were inhibited.

Both in psychiatric interviews that survey the individual's history and present psychological status, and in clinical tests of personality, creative persons tend to reveal a considerable amount of psychic turbulence. By and large they freely admit the existence of psychological problems and they speak frankly about their symptoms and complaints. But the manner in which they describe their problems is less suggestive of disabling psychopathology than of good intellect, richness and complexity of personality, and a general candor in self-description. They reveal clearly what clinical psychologists have long contended: that personal soundness is not an absence of problems but a way of reacting to them.

We may resort again to Jung's theory of the psychological functions and types of personality as an aid in depicting the psychology of the creative person. According to this view it might be said that whenever a person uses his mind for any purpose he either perceives (becomes aware of something) or he judges (comes to a conclusion about something). Everyone perceives and judges, but the creative person tends to prefer perceiving to judging. Where a judging person emphasizes the control and regulation of experience, the perceptive creative person is inclined to be more interested and curious, more open and receptive, seeking to experience life to the full. Indeed, the more perceptive a person is, the more creative he tends to be.

In his perceptions, both of the outer world and of inner experience, one may focus upon what is presented to his senses, upon the facts as they are, or he may seek to see, through intuition, their deeper meanings and possibilities. One would not expect creative persons in their perceptions to be bound to the presented stimulus or object but rather to be intuitively alert to that which is capable of occurring, to that which is not yet realized; this capacity is, in fact, especially characteristic of the creative person.

One judges or evaluates experience with thought or with feeling, thinking being a logical process aimed at an impersonal analysis of the facts, feeling, on the other hand, being a process of appreciation and evaluation of things which gives them a personal and subjective value. The creative person's preference for thinking or for feeling in his making of judgments is less related to his creativeness as such than it is to the type of material or concepts with which he deals. Artists, in general, show

a preference for feeling, scientists and engineers a preference for thinking, while architects are more divided in their preference for one or the other of these two functions.

Everyone, of course, perceives and judges, senses and intuitively, thinks and feels. It is not a matter of using one of the opposed functions to the exclusion of the other. It is rather a question of which of them is preferred, which gets emphasized, and which is most often used. So also is it with introversion and extroversion of interest, but two-thirds or more of each of the creative groups which have participated in the study have shown a rather clear tendency toward introversion. Yet, interestingly enough, extroverts, though they are in the minority in our samples, are rated as high on creativity as the introverts.

Whether introvert or extrovert, the creative individual is an impressive person, and he is so because he has to such a large degree realized his potentialities. He has become in great measure the person he was capable of becoming. Since he is not preoccupied with the impression he makes on others, and is not overconcerned with their opinion of him, he is freer than most to be himself. To say that he is relatively free from conventional restraints and inhibitions might seem to suggest that he is to some degree socially irresponsible. He may seem to be, and in some instances he doubtless is if judged by the conventional standards of society, since his behavior is dictated more by his own set of values and by ethical standards that may not be precisely those of others around him.

The highly creative are not conformists in their ideas, but on the other hand they are not deliberate nonconformists, either. Instead, they are genuinely independent. They are often, in fact, quite conventional in matters and in actions that are not central to their areas of creative endeavor. It is in their creative striving that their independence of thought and autonomy of action are revealed. Indeed, it is characteristic of the highly creative person that he is strongly motivated to achieve in situations in which independence in thought and action are called for, but much less inclined to strive for achievement in situations where conforming behavior is expected or required. Flexibility with respect to means and goals is a striking characteristic of the groups we have studied.

On a test that measures the similarity of a person's expressed interests with the known interests of individuals successful in a variety of occupations and professions, creative persons reveal themselves as having interests similar to those of psychologists, architects, artists, writers, physicists, and musicians, and quite unlike those of purchasing agents, office men, bankers, farmers, carpenters, policemen, and morticians. These similarities and dissimilarities of interest are in themselves less significant than the abstractions and inferences that may be drawn from them. They suggest strongly that creative persons are relatively less interested in small details, in facts as such, and more concerned with their meanings and implications, possessed of consid-

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# In Laconic Words, a Revelation

By Granville Hicks

**I**VY COMPTON-BURNETT, born in 1892, published her first novel in 1925. "*The Mighty and Their Fall*" (Simon & Schuster, \$4.50) appears to be her seventeenth. She has been highly praised: for instance, according to the jacket, V. S. Pritchett has called her "the most original novelist now writing in English," and Rosamond Lehmann has said that she is "the purest and most original of contemporary English artists." On the other hand, she has never been widely popular in the United States, and even in England, I think, she appeals to a special taste.

Her work is remarkably homogeneous, and "*The Mighty and Their Fall*" is completely typical. The period is vaguely the past, probably the years before the First World War. The scene is a mansion, impressive enough, one gathers, but rather in decay. The principal characters belong in some undefined way to the upper class, and they live, none too well, on inherited money. Ninian Middleton, a widower of fifty-six, inhabits the mansion with his mother, his five children, and a foster-brother. As always in Miss Compton-Burnett's novels, servants have an important role in the story, acting as a kind of chorus.

As one has come to expect, the novel is completely unfurnished. By contrast, Willa Cather, who once wrote an essay called "*The Novel Demeublé*," seems to crowd her stage. We have no idea what the mansion looks like, or the rooms in it, or the grounds about it. The appearance of the characters is described only in the most cursory fashion. To do more, the author has suggested, is a waste of effort: "However detailed such description is, I am sure that everyone forms his own conceptions that are different from every one else's, including the author's."

It is the dialogue, in short, that carries the whole burden, and there has never been dialogue quite like Miss Compton-Burnett's. I have tried to find a passage of suitable length to quote, but each conversation relies so completely on its context that excerpting would be unfair. The characters are not given long speeches, in the manner of the later Henry James; on the con-

trary, they use few words, but the words they use carry the greatest possible weight. Each sentence is charged with implications, and since all the characters, including the children and the servants, immediately grasp all the implications of whatever anybody else says, the most casual exchange is heavy with meaning.

It has been observed a hundred times that people don't talk and couldn't conceivably talk like Miss Compton-Burnett's characters. No one knows this better than she, and no one could care less, for she is not interested in realism of any sort. She has stated:

I think that actual life supplies a writer with characters much less than is thought. . . . People in life hardly seem to be definite enough to appear in print. They are not good enough or bad enough, or clever enough or stupid enough, or comic or pitiful enough. As regards plots I find real life no help at all. Real life seems to have no plots.

Certainly real life does not often provide the kind of plot to which Miss Compton-Burnett's fancy runs. The plot of "*The Mighty and Their Fall*," coldly summarized, would seem tawdry melodrama, with such ingredients as an intercepted letter, the opportune return of a long-lost brother, the destruction of a will.

Miss Compton-Burnett makes no concessions to the reader's preconceptions about fiction: not only is her dialogue unrealistic and her plot ridiculous; the mighty of her novel are not much above ordinary stature, and their fall is not spectacular. And yet, if you happen to be an addict, she can compel your attention as few novelists can. Coleridge's famous phrase, "the willing suspension of disbelief," is applicable up to a point; but I feel that, for myself at least, the suspension could almost be described as unwilling. That is, I do resist to begin with, but resistance always proves vain.

How does this magician weave her spells? One answer is that her skill is itself a fascination; she does what she does magnificently, and always has. But there is a deeper answer than that. Suddenly, in these moldy old mansions with their stuffy inhabitants, the reader feels himself in the presence of a revelation. Stuffy these people may

be, but they are people, and as we look into their hearts we are likely to feel more terror than amusement. Here in "*The Mighty and Their Fall*," for instance, is Lavinia, the oldest daughter of the household, a girl of twenty, who is so devoted to her father that she is willing to commit a base act to prevent his remarriage. And the father, Ninian, when put to the test by his prodigal brother, proves himself no better. "You have not a high opinion of people," Lavinia says to her grandmother. And the old lady replies, "Why should I have? What of the examples before me?" Miss Compton-Burnett might be speaking.

Her insight is so penetrating that in the end, unlikely as it seems, the reader comes to identify himself with the characters. He asks, "Would I do as Lavinia did, as Ninian did, as Hugo did?" And the answers he arrives at do not make for complacency. In a sense the destruction of complacency might be regarded as Miss Compton-Burnett's mission in life.

England is rich in novelists who have a great gift for comedy and who never forget how close to tragedy comedy lies. I have recently written about two of them, Muriel Spark (SR, Jan. 20) and Anthony Powell (SR, Jan. 27). Some of the others are Henry Green, Iris Murdoch, Angus Wilson, and Kingsley Amis. (Perhaps there is



something in the position of England today that helps to explain this phenomenon; perhaps it is just an accident.) None of these writers, with the possible exception of Henry Green, seems

to have been influenced by Miss Compton-Burnett, but I am sure that they all respect her as the dean of their company. No eye is colder or sharper, no hand more practiced.

If she had done nothing else, she would have made herself useful by proving how risky all generalizations about the novel are. Her settings, her plots, her characters, her dialogue break every rule. She makes no effort to be timely, but ignores everything that has happened since 1914. At the outset of her long literary career she adopted one of the most difficult techniques that can be imagined, the almost complete reliance on dialogue, and she has never abandoned or modified it. In many important ways all her books are exactly alike, and yet each is completely individual. There is no sign of growth and no sign of decay, and she is today, as she always has been, superbly herself.