

Chapter 2

The Personality of Young Artists: An Empirical and Theoretical Exploration

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Despite venerable stereotypes and even some recent empirical observations regarding the personality of artists, the following questions remain unanswered in any objective way: (1) Do personality factors differentiate art students from other students of the same age and sex? (2) Is there a relationship between the personality of art students and the values they hold? (3) Are there differences in the personality factors of art students in the several fields of specialization, e.g. commercial art v. fine art? (4) Is there a relationship between the personality factors of art students and their performance in art school? (5) Finally, what is the relationship between the personality factors of successful young artists and eminent scientists, both groups presumably engaged in creative endeavour? The present investigation of a sample of 205 advanced art students applied Cattell's 16 Personality Factor Questionnaire supplemented by the Allport–Vernon–Lindzey Study of Values in an attempt to answer these questions. The findings are placed in a tentative theoretical framework regarding the personality of artists and the expectations of their professional role.

Artists have been viewed with suspicion for at least four centuries, i.e. since the time of the Renaissance historian Vasari, who wrote that the artists he knew all shared an 'element of savagery and madness' (1550, 1959 ed., p. 232). Paradoxically, the disturbing qualities attributed to artists are also believed to fulfil a positive function. As Hauser (1960, p. 325) suggests, these qualities have been widely held a necessary component of creativity.

But does this paradoxical image of the artist have any basis in reality? And if it does, are the 'negative' factors in the artist's personality necessary to the performance of his task *qua* artist, or are they simply accidental by-products of his vocation? These are the two main general questions to be explored empirically and

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theoretically in this paper. In so doing we hope not only to clarify some central issues of creativity, but also to delineate some connections between personality traits and culturally defined requirements for role performance in art.

The psychological literature already contains many studies dealing with the artist's personality; for instance, those by Kris (1952), Roe (1946), Anderson (1959, 1960), Barbon (1969), Cross et al. (1967). Most of this work, however, has focused on professional and often eminent artists who had long since been settled in their careers; and, with the exception of the study by Cross et al., the data tend to consist of depth-psychological material not amenable to comparative or quantifiable analysis.

Ours is an attempt to contribute to the literature by applying normative personality instruments to a sample of young artists who are at the intermediate stage between being students and professionals. Although still in school, a number of them were already selling and exhibiting their work professionally, and winning prizes and commissions in the process. The relative advantage of such a sample (while also having some obvious limitations) is that it allows the study of fledgling artists before their answers on personality tests might have changed as a result of long-term identification with the established artist's way of life; it allows comparisons with other young people of the same sex and educational level; it allows comparisons between more successful and less successful young artists as defined by the training institution, thus contributing to an understanding of the selective factors operating in the *process* of becoming an artist; and finally, it allows comparisons among a large number of young artists who have had relatively similar formal training and exposure to art.

Method

Sample and Procedure

The study was conducted at the School of the Art Institute of Chicago, one of the largest and most respected art schools in the country. The data for this report are derived from a larger investigation of students at that institution (Getzels and Csikszentmihalyi 1964, 1966). Available for the present analysis were the protocols of 205 second- and third-year students (94 males, 111 females) on Cattell's 16 Personality Factor Questionnaire (Cattell 1958; Cattell and Stice 1962) which is the focal instrument of this inquiry, plus 179 completed protocols of the Allport-Vernon-Lindzey Study of Values (1960), as well as school grades and other relevant information collected both through testing and from the school files. The sample completing the 16 PFQ constituted 56 percent of all students registered at the School in the two classes. It did not differ from them on any of the descriptive variables such as age and sex, or any of the other measures such as intelligence or course grades which were available for the two classes as a whole. The instruments were administered and scored according to standard directions given in the Manuals.

Results

The data obtained will be presented in five sections structured around the main empirical questions of this study, namely: Are there personality factors differentiating art students from the relevant age and sex norms? Is there a relationship between personality factors and the values held by art students? Are there internal differentiations in terms of personality factors within the sample of art students depending on future career goals (e.g. commercial art as opposed to fine art)? What is the relationship between personality factors and success in art school? And finally, what is the relationship between the personality profile of successful young artists and eminent scientists, both groups presumably engaged in creative endeavours? In the concluding section of the paper the answers to these questions will be related to yield a model of the interaction of personality variables and social expectations, which it is hoped will begin to describe the dynamics of career choice and activity in this field.

It should be noted that the personality variables used in this study (i.e. the 16 PF factor scores) are not presented as ultimate traits but only as measures of certain motivational trends. Although several recent studies have had difficulty in replicating the factor structures claimed by Cattell (Eysenok and Eysenok 1969; Greif 1970; Schneewind 1970; Sell et al. 1970; Howarth and Browne 1971), a substantial number of other studies find high reliability and behavioural correlates using the 16 PF test; see, for instance, Demangeon 1968; Aberman and Chansky 1970; Roubertoux 1970; O'Dell 1971; Baohtold and Werneb 1971. The situation here is no different from that obtaining with other inventories of the sort. Given the present state of the art, reference to personality characteristics based on factor scores must be read with a note of caution.

Art Students and College Norms

The comparison of the subjects' scores with those of average college students on Cattell's 16 PFQ is presented in Table 2.1. It is readily apparent that both male and female subjects differ significantly from the respective norms on 11 of the 16 factors; on six of the 11 factors both sexes differ jointly and in the same direction.

The factors on which *both* sex groups differ significantly from the norms, and in the same direction, are factors A, F, G, M, Q₁, Q₂. They outline a personality syndrome that could be summarized as follows: young artists, compared to college students of their age and sex, tend to be significantly more socially reserved and cool, aloof in their relations with other people (factor A). They tend to be serious and introspective as opposed to carefree and other-directed (factor F). They are low on 'superego strength', which points to alienation from conventional social and cultural standards (factor G). They are 'unconventional, bohemian, self-

Table 2.1 16 PFQ personality factors: comparison of male and female art student means with general college norms

Personality factors	Art school males (<i>n</i> = 94)	College males (<i>n</i> = 535)	Significance level of <i>t</i>	Art school females (<i>n</i> = 111)	College females (<i>n</i> = 559)	Significance level of <i>t</i>
A Cylothymia	7.63	9.79	0.001	8.89	12.08	0.001
B Intelligence	8.04	7.92	n.s.	8.08	7.57	0.05
C Ego strength	13.99	15.35	0.01	14.06	14.58	n.s.
D Dominance	14.17	13.78	n.s.	12.96	10.61	0.001
F Surgenoy	12.70	16.00	0.001	13.19	16.09	0.001
G Superego	11.24	12.64	0.01	9.68	13.14	0.001
H Parmia	11.41	12.99	0.01	12.27	12.20	n.s.
I Premsia	9.95	8.65	0.01	11.88	11.95	n.s.
L Protension	10.10	8.76	n.s.	9.45	8.00	0.01
M Autia	14.34	11.49	0.001	15.65	12.71	0.001
N Shrewdness	10.46	10.96	n.s.	9.43	10.56	0.01
O Guilt	11.38	10.14	0.01	11.33	11.24	n.s.
Q ₁ Radicalism	10.36	9.65	0.05	10.34	8.74	0.001
Q ₂ Self-sufficiency	13.33	9.86	0.001	13.49	9.66	0.001
Q ₃ Self-sentiment	9.72	10.08	n.s.	9.38	10.81	0.01
Q ₄ Ergio tension	14.02	12.26	0.01	13.86	13.51	n.s.

absorbed, imaginative and creative', with an intensely subjective mental life (factor M). The high score on factor Q₁ indicates an inclination to experiment with problem solutions and a radically questioning attitude towards experience. And finally, the high score on Q₂ points to a trait possessed by persons who, according to the Test Manual, are 'resolute and accustomed to making their own decisions'.

Thus the personality profile of this sample of aspiring artists suggests that as students they tend already to have the characteristics usually associated with 'artistic temperament': they are asocial, introverted, amoral as defined by cultural norms, subjective, questioning and self-contained. The personality scores of second-year students and those of third-year students were almost identical, suggesting—however tenuously, given the small difference in experience between second- and third-year students—that the personality profile of the young artist is most likely not the result of socialization into the professional training institution, but was present prior to entrance into the art school. It is also important to note that five of these six factors which significantly differentiate subjects from their age peers are included among the ten factors cited by Cattell (1963) as characteristic of the 'creative personality'. Another way of analysing the data in Table 2.1 is to apply the weights recommended by Cattell. When the weighted scores are added and converted into sten scores, the means of both male and females correspond to the eighth sten on a normal curve, indicating that by this criterion the mean 'general creativity' of the sample is higher than the 89th percentile of the normative college population.

While the six factors mentioned above might be considered as ‘core artistic personality’ factors in that they yield large differences for both sex groups, Table 2.1 shows also some strong differences between male and females. For instance, female subjects score significantly higher on Dominance (factor E) than their norms, while male subjects do not differ significantly on this factor from other males. At the same time, male subjects score significantly lower on Parmia (factor H) than the norms, suggesting that they are more shy, withdrawn, less adventurous in an outgoing physical sense than is ‘normal’ for males of their age and status. Furthermore, male sub-subjects score higher on Premsia (factor I) than the norms, indicating higher sensitivity and more ‘effeminacy of feeling’ than other college men. Female subjects, on the other hand, do not differ significantly from their norms on factors H and I. This pattern suggests a reversal in culturally defined sex-appropriate personality characteristics among artists. Male artists are more timid, more sensitive, more feminine in feelings than they should be according to social expectations, while female artists are more dominant or masculine than they should be. The pattern brings to mind Torrance’s (1962) observation that creativity in children dips sharply when heavy demands for ‘sex-appropriate behaviour’ are placed on them. A boy who is not allowed to express ‘feminine’ interests, or a girl who has to repress ‘masculine’ traits, are in effect deprived from using a part of their potential range of feeling and expression. Apparently artists have either been ‘improperly’ socialized as to sex-related attitudes, or they have learned to transcend the limitations imposed upon their range of admissible feelings.

Personality Factors and Values

A way to test the internal validity of the findings reported in the section above is to correlate the 16 PFQ factors with the values from the Allport–Vernon–Lindzey Value Scale that have been found to discriminate most between artists and non-artists. Several studies (Deignan 1958; MacKinnon 1964; Getzels and Csikszentmihalyi 1968a, b) indicate that the value structure of artists and art students is characterized by very high Aesthetic Values and very low Economic Values. Table 2.2 presents the correlation between these two values and the 16 personality factors.

The correlation coefficients reported in Table 2.2 tend to support the validity of the personality profile and the significance of the individual personality factors discussed above. For instance, Superego strength (factor G), Shrewdness (N) and Self-sentiment (Q₃) are *positively* correlated with Economic Value but *negatively* with Aesthetic Value for both male and female subjects. Conversely the factors of Sensitivity (I), Imagination (M) and Self-sufficiency (Q₂) are *negatively* correlated with Economic and *positively* with Aesthetic Value.

Considering only those factors that attain significance in at least three of the four possible correlations with the two values, one can say that subjects who have

Table 2.2 Correlations between art students' economic and aesthetic values, and scores on the 16 PFQ personality variables

Personality factors		Economic value		Aesthetic value	
		Males (n = 86)	Females (n = 93)	Males (n = 86)	Females (n = 93)
A	Cyclothymia	0.16	0.16	- 0.26*	- 0.15
B	Intelligence	- 0.17	- 0.11	0.14	0.16
C	Ego strength	0.21	0.04	- 0.13	- 0.18
E	Dominance	0.07	- 0.06	0.05	0.25*
F	Surgency	0.16	0.06	- 0.12	0.05
G	Superego	0.11	0.24*	- 0.24*	- 0.28**
H	Parmia	0.20	0.03	- 0.18	0.11
I	Premsia	- 0.45***	- 0.33**	0.46***	0.27**
L	Protension	- 0.12	- 0.09	0.19	0.06
M	Autia	- 0.40***	- 0.19	0.42***	0.30**
N	Shrewdness	0.30**	0.36***	- 0.25*	- 0.26*
O	Guilt	- 0.04	0.05	0.14	- 0.03
Q1	Radicalism	- 0.12	- 0.13	0.06	- 0.04
Q2	Self-sufficiency	- 0.25*	- 0.36**	0.18	0.23*
Q3	Self-sentiment	0.22*	0.26*	- 0.20	- 0.29**
Q4	Ergio tension	- 0.14	- 0.06	0.30**	0.19

* $P < 0.05$ ** $P < 0.01$ *** $P < 0.001$

low Superego strength (G), who tend to be unspoiled rather than worldly-wise (N), who do not model themselves on social expectations (Q₃), also tend to have significantly lower Economic Values and higher Aesthetic Values. Low Economic and high Aesthetic Values are held by subjects who are highly sensitive (I), imaginative (M) and self-sufficient (Q₂).

Personality Differences Among Artists in Different Fields of Specialization

The total sample of art students can be further analysed into four subgroups based on the specific art field in which the student 'majors'. The four curricular specializations available in the School are Fine Arts, Art Education, Advertising Arts, and Industrial Arts. Although the faculty and the administration of the School claim that there is no difference in the entrance qualifications of students who subsequently choose one or the other of these four divisions, and despite the fact that the first two years' curriculum is largely similar for all students, one would still expect personality differences between students specializing in one or the other of these fields. A young person who majors in Fine Arts ought to be even

more extreme on the 'core artistic personality' factors than his peer who chooses to concentrate on the applied and educational aspects of art. This expectation is confirmed by the result reported in Table 2.3. The analysis of variance indicates significant differences due to the field of specialization on six factors. With only a few exceptions, the Fine Arts students do in fact tend to be at the appropriate end of the distribution of scores.

Viewing each factor separately, one notes that on Cyclothymia (A), which measures personal warmth and sociability, there are significant F values due to both sex and field of specialization. It is clear that female subjects are more 'sociable' than males. More important are the noteworthy differences due to the field of specialization:

Fine Arts majors of either sex are more cold and aloof than any other group, while the Advertising Arts majors are more 'sociable'. A t test shows that on this factor both male and female fine artists are significantly different from all three other groups.

This pattern recurs with some regularity throughout the factors: the Fine Arts majors also score lowest on adherence to conventional morality (G), while the future Advertising artists score highest (the t test shows significant difference for both sexes); the Fine Arts majors score highest on sensitivity (I) while the Advertising Arts majors are significantly lower on this factor. Again, the Fine Arts majors score highest on the imaginative factor (M); here the Advertising Arts majors are again significantly lower, followed closely by the Industrial Arts majors. The same pattern tends to be repeated for the other two factors on which significant differences result in the analysis of variance, namely Shrewdness (N), and Self-sentiment (Q_3), although the t test shows significant differences only for the female art students.

Students who plan to become full-time fine artists possess to the highest extent four of the six characteristics measured by the 'core artistic personality' factors previously identified. Those students who plan to become commercial artists or advertising illustrators are lowest on these characteristics. In between are the future art teachers and product designers. As far as it goes, the pattern makes good sense. At the largely undifferentiated stage of the common school curriculum, these students already show a separation into vocational groups that corresponds to certain presumably deeply ingrained personality characteristics: aloofness lack of conventionality sensitivity, etc. The next and perhaps more critical question is, are these personality traits related only to choice of vocation, or are they also relevant to success? In other words, is personality related to achievement in art school?

Personality and Success in Art School

The most obvious criterion of success for art students is the grade-point average in art courses (as opposed to courses in art history, humanities, etc.) accumulated during residence at the School. This criterion has also some obvious limitations: there is no assurance, for instance, that the best art students will also become the

Table 2.3 Comparison of art students in different fields of specialization on the 16 PFQ personality factors: analysis of variance, means and F values

Field of specialization	Personality factors															
	n	A	C	E	F	G	H	I	L	M	N	O	Q ₁	Q ₂	Q ₃	Q ₄
<i>Male</i>																
FA	35	6.28	13.28	13.54	11.83	10.60	10.23	11.14	10.48	15.26	9.66	11.28	10.74	13.54	9.34	14.16
AE	12	8.50	14.58	13.00	11.17	11.92	11.83	10.50	8.92	14.75	11.00	10.83	11.17	14.67	10.58	12.75
AA	16	9.19	13.44	14.50	15.25	12.62	12.19	8.62	10.87	13.87	10.87	13.00	10.12	12.62	9.31	14.31
IA	23	7.78	15.30	15.00	12.78	11.35	11.48	10.61	9.65	13.74	11.13	10.69	10.00	13.13	10.61	14.39
<i>Female</i>																
FA	44	8.13	14.48	13.48	13.34	8.73	12.23	12.52	10.16	16.66	8.43	11.34	11.16	14.34	8.61	14.41
AE	15	9.67	13.27	11.67	11.40	10.00	11.07	11.80	8.80	15.13	10.00	11.87	10.60	13.27	8.67	13.80
AA	7	10.43	16.28	12.43	12.57	12.00	13.00	10.43	6.14	13.57	12.43	8.28	10.43	11.86	10.86	10.43
IA	27	9.48	13.37	12.55	13.52	10.74	12.44	11.48	9.30	14.52	10.41	11.81	9.67	12.44	10.74	13.85
<i>F value effects</i>																
Sex		13.57 ^{***}	0.03	4.57	1.01	9.17 ^{***}	2.21	14.75 ^{***}	3.52	3.50	3.88	0.00	0.01	0.09	0.97	0.40
Major		5.48 ^c	0.12	1.16	2.61	6.41 ^{***}	0.38	6.14 ^{***}	2.23	5.37 ^{***}	8.68 ^{***}	0.03	1.85	2.75	4.14 ^{***}	0.67
Interaction		0.12	2.78	1.24	1.39	0.62	0.51	0.48	3.63 [*]	0.48	1.69	3.13	0.29	1.18	1.73	1.14

* $P < 0.05$ ** $P < 0.01$ *** $P < 0.001$

F = Fine arts

AE = Art education

AA = Advertising arts

IA = Industrial arts

best practising artists. However, inasmuch as the grades are given by recognized artist-teachers it is not unreasonable to assume that at this stage in the subjects' development, the art-grade average is as viable a predictor of future performance as one can feasibly obtain. At any rate, for most art students no other criterion is as yet available.

An analysis of the relationship of personality and artistic accomplishment, however, has to be undertaken *within each subgroup* rather than for the total sample. It has previously been found (Getzels and Csikszentmihalyi 1966) that the criterion of success is not related uniformly to other variables within subsamples that differ in terms of sex and field of specialization. A successful young female Advertising Arts major, for instance, tends to have quite different perceptual, cognitive and value attributes from a successful female Fine Arts major or, for that matter, even a male Advertising Arts major. Both on commonsense grounds and in terms of the results reported in the previous section, it can be assumed that Fine Arts majors are probably the most representative art students, those who embody the artistic temperament and goals *par excellence*. It is therefore only with male students in this subgroup that the present analysis will be concerned.

Table 2.4 compares the mean score on the 16 PFQ for male college norms, for male Fine Arts students, and for the 10 male Fine Arts majors in the highest third of the distribution of art course grade-point averages and the 10 Fine Arts majors in the lowest third of the distribution. The first observation is that on all six factors identified as 'core artistic personality' factors without exception the scores of the successful subjects are at the expected extreme relative to the scores of the unsuccessful subjects. The successful subjects are less warm (A), less outgoing (F), less conventional (G), more imaginative (M), more radical (Q₁), and more self-sufficient (Q₂). However, on only one of these six factors (G) does the difference reach a statistically significant level.

In evaluating the magnitude of the differences it should be noted that on all six 'core' factors the whole sample had scored at a significantly different level from the norms, and that Fine Arts majors had further differed from the rest of the art student sample. Thus it is indeed difficult to obtain additional differences within this already so refined and differentiated subgroup. In light of this fact the pattern in Table 2.4 appears to recommend itself to attention despite the lack of more 'significant' differences.

Besides the six 'core' factors, two more attract attention in the table. The first is the factor of Ego strength (C), on which a relatively large, but not significant, difference exists. This suggests that too strong an ego is not an advantage for artistic achievement in the school. The largest difference between the two subgroups is found in the factor measuring Self-sentiment (Q₃), a difference significant at the 0.005 level. Cattell defines Self-sentiment as 'conforming to socially accepted behaviour' as well as 'self-control', 'foresight' and 'exacting will-power'. One might interpret this to mean that the subjects who achieve success in school tend to hold an image of themselves which is not dependent on other people's expectations or approval; their self-concept is autonomous, their

Table 2.4 Mean personality scores (16 PFQ) for college norms, male fine arts students, and high and low achieving male fine arts students

Personality factors	Male college norms (n = 535)	Low achieving male fine arts students (n = 10)	Male fine arts students (n = 35)	High achieving male fine arts students (n = 10)	Direction of difference on 'Core' factors for high and low achieving students
<i>A Cyclothymia</i>	9.8	6.7	6.7	5.3	<i>Expected</i>
C Ego strength	15.4	14.3	13.3	11.3	–
E Dominance	13.8	13.4	13.5	13.3	–
<i>F Surgency</i>	<i>16.0</i>	<i>12.3</i>	<i>11.8</i>	<i>10.4</i>	<i>Expected</i>
<i>G Superego</i>	<i>12.6</i>	<i>11.8</i>	<i>10.6</i>	<i>8.8</i>	<i>Expected</i>
H Parmia	13.0	9.5	10.2	9.3	–
I Premsia	8.7	11.7	11.1	12.1	–
L Protension	9.8	11.3	10.5	10.8	–
<i>M Autia</i>	<i>11.5</i>	<i>15.4</i>	<i>15.3</i>	<i>16.0</i>	<i>Expected</i>
N Shrewdness	11.0	9.7	9.7	9.6	–
O Guilt	10.1	11.9	11.3	11.4	–
<i>Q₁ Radicalism</i>	<i>9.7</i>	<i>9.7</i>	<i>10.7</i>	<i>10.7</i>	<i>Expected</i>
<i>Q₂ Self-sufficiency</i>	<i>9.9</i>	<i>13.0</i>	<i>13.5</i>	<i>13.6</i>	<i>Expected</i>
Q ₃ Self-sentiment	10.1	10.3	9.3	7.2	–
Q ₄ Ergio tension	12.3	14.8	14.5	14.5	–

'Cora artistic personality' factors are given in italics

self-respect independent of outside judgement. The similarity between this factor and the other in which the difference attains significance (factor G) should not escape notice (Fig. 2.1).

Finally, when the 'composite creativity score' is obtained from the 16 PFQ according to the weights suggested by Cattell (1963), it is found that the 10 'high' subjects have a mean creativity score equivalent to sten 10 on a normal curve (higher than that of 99 percent of the normal college population), while the 10 'low' subjects place at sten 8. Thus even within such an already highly selected sample (the whole male Fine Arts group's mean score was at sten 9), personality differences, however small, are apparently related to differences in artistic success.

Comparison of the Personality of Successful Young Artists with that of Eminent Researchers

The results have shown that a specific personality configuration tends to distinguish art students in general from college students, future fine artists from art students in general, and the successful from the unsuccessful young fine artist. The configuration includes the six 'core personality' factors, namely low Cyclothymia, Surgency, Superego strength, high Autia, Radicalism and Self-sufficiency. To

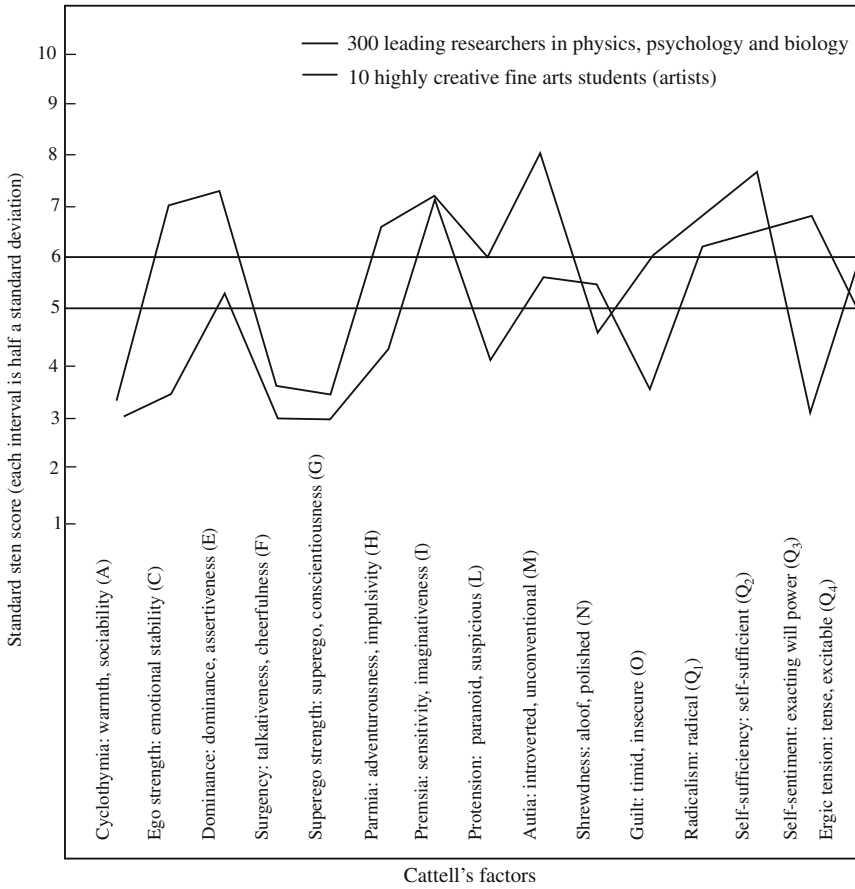


Fig. 2.1 Comparison of the personality profile (16 PFQ) of highly creative fine arts students and of leading researchers in science

these one might add, at least for male fine artists, high Premsia and low Self-sentiment; finally, to round out the picture, one should remember that high Aesthetic Values and low Economic Values are also always present in the pattern.

This configuration is essentially the same that Cross et al. (1967) found in practising artists, and is in several significant ways similar to that of leading researchers in physics, psychology and biology. In fact, when the personality profile of the 10 successful subjects in Table 2.4 is compared with that of Creative scientists studied by Cattell and Drevdahl (1955), it is seen that both Fine Arts students and scientists score very low on factors A, F and G, and relatively high on factors I, Q₁ and Q₂.

Both successful art students and successful scientists tend to be aloof, non-gregarious, unconcerned with moral standards, sensitive, radical and self-sufficient. On five of the six ‘core artistic personality’ factors art students and scientists

score alike, suggesting that these factors are relevant to creativity in general, not just to an artistic vocation. On the other hand, relative to successful scientists, successful art students have much lower ego strength (C)—the difference in means is of the order of two standard deviations—are less adventurous (H), more suspicious (L), more subjective (M), more insecure (O), and significantly lower on self-sentiment (Q₃).

Discussion

Despite the fact that an association between certain personality characteristics (as measured by the 16 PF factor scores) and an artistic vocation—even more, a *successful* artistic vocation, at least during the art school stage—seems clearly established, the nature of the association is still in question.

A distinction might help to clarify the various connections that are logically possible between personality and artistic activity. The personality configuration found in this study could be a necessary aptitudinal factor which is intrinsic to the task requirements of ‘artistic’ activity. In other words, a person who is outgoing, conforming, gregarious, objective, etc., might simply not engage in the kind of behaviour that is necessary to produce art. There are certain intrinsic requirements for most occupations that pre-select the type of person intending to perform within their given limits. For instance, a career in classical music not only excludes people who are tone-deaf, but also those whose personality characteristics make them unwilling to concentrate, who lack self-discipline, or dislike sedentary activities. The professional behaviour of a salesman requires a personality that is gregarious, extraverted and not likely to become deeply concerned about casual encounters. Personality characteristics that are so to speak built into the function of the task we shall call *task requirements*.

But it is also possible that the personality configuration that has emerged in this study has nothing to do with the functional, intrinsic, substantive characteristics needed to do artistic work. Its presence might reflect only social-structural or extrinsic *context requirements*. That is, it could be that a person who is outgoing, conforming, gregarious, etc., will avoid becoming an artist not because he is incapable of performing the activities required to produce art, but because he cannot accept the conditions of the artistic role, which at the time includes poverty, ostracism, loneliness, and so on. It is possible to distinguish logically at least four reasons why artists will have a particular personality configuration: (1) it is a task requirement for any Creative work; (2) it is a task requirement for any work in art; (3) it is a context requirement for any Creative person; (4) it is a context requirement for any artist. Which one of these four reasons seems most cogent, given the present findings? The easiest and safest answer is that all four are involved in producing the reported pattern of associations. Yet despite the difficulty involved in extricating antecedent–consequent relations, it is possible to try locating with more precision the conditions that account for an artist’s personality system.

The data plus common sense suggest that high Sensitivity (I) and Self-sufficiency (Q_2) might be task requirements for producing any creative work. A person who is insensitive and lacks confidence in his own powers can hardly be engaged in the arduous challenge to existing norms that a Creative effort requires. Of course a person possessing these traits necessary for creative production might not necessarily be successful in his efforts; in fact, under certain frequent social conditions, he might be actively ostracized. In several historical periods creativity was not considered a positive value. In the splendid Egyptian civilization, for instance, hundreds of years passed during which innovation and originality—at least in art—were actively discouraged (Gombrich 1966, pp. 40–41). Europe in the Middle Ages, the Byzantine civilization, and perhaps the Soviet Union in the past half-century, were not so much incapable of artistic creativity as disinterested in it. The accepted art style was all of a piece with the rest of the culture and the social system, and any ‘creative’ artist was seen as a disruptive element to be contained and isolated. The successful artist in such a society was not the type of person we would call creative. Despite the fact that creativity as we understand it is not always conducive to recognition, we might say that *creative work can be accomplished only by people with high sensitivity and self-sufficiency*. This description matches the profile of both our artists and creative scientific researches (Cattell and Drevdahl 1955, 1956; Cattell and Butcher 1968, pp. 298, 349; Cattell and Eber 1970).

But there are other personality factors on which both the young artists and the scientists score similarly. These are factors A and F, the first implying coldness and aloofness, the second a reserved and taciturn disposition (Cattell and Butcher 1968, pp. 298, 349). Are these *task requirements* for creative production? While this question cannot be answered definitely, these two traits seem to be more *context requirements* for a creative worker in our days rather than being intrinsically necessary for creativity activity. It is possible that under certain socio-cultural conditions, when ‘creativity’ is neither discouraged as it was in ancient Egypt, nor popularized and vulgarized as it is in our day, the creative individual need not withdraw from interaction with other people to preserve his unique vision. From what we know of artists of the past, it would seem that in early Renaissance Florence the great creative geniuses were working in an unselfconscious manner, cheerfully integrated within the social matrix of their peers. But a few generations later, when the milieu of Renaissance culture had become aggressively innovative and originality-seeking, the genius who wanted to be true to his vision had to isolate himself and withdraw from the limelight (Vasari 1550). *Withdrawal and seclusiveness seem to be necessary for any creative person, whether artist or scientist, only under certain socio-cultural conditions.*

There are, finally, the personality factors that appear to be specific to artists as opposed to creative scientists. These include low emotional stability or Ego strength (C), low conformity to norms (G), high subjectivity and imagination (M), and low Self-sentiment (Q_3). Of these, a low G and a high M seem to be *task requirements* for carrying on artistic activities. It could be argued that low Ego strength is prevalent only when art is conceived of as dealing with unconscious contents, as in historical

periods of a romantic persuasion. It is questionable whether artists would tend to have weak egos in periods of classical art, or in what Sorokin (1963) has called 'ideational' phases of culture. Similarly, low Self-sentiment need only be a characteristic of the artist's personality in historical periods when he experiences his goals and values to be incongruent with those of the rest of society.

In summary, on the basis of the findings one might advance the hypothesis that high Sensitivity (I) and Self-sufficiency (Q_2) are *task requirements* for all individuals who are to perform creatively; while high Autia (M) and low Superego (G) are *task requirements* for artists only. Low Cyclothymia (A) and low Surgency (F) seem to be *context requirements* for creative people who want to preserve their autonomy under conditions when creativity is either repressed or over-popularized. Finally, low Ego strength (C) and low Self-sentiment (Q_3) are *context requirements* that are operative only when artists live under adverse cultural conditions. Creative people will also exhibit more of the characteristic traits of the opposite sex than is usually considered 'normal' by the definition of a given culture. This can be explained in terms of a *task requirement* for artists to use a full range of cognitive and emotional responses regardless of sex-linked socio-cultural expectations.

Admittedly the issues raised in the last section are speculative in nature, and they are offered only as hypotheses open to falsification, in the hope that future work will be able to sort out the correct inferences from the faulty ones. One suggestion for further methodological research is also in order. Whatever personality inventory is to be used, the results should be submitted to independent item factoring. Although we have no reason to doubt the applicability of the Cattell factors based on prior item groupings, it would be useful to see whether artists do in fact respond within the expected factorial structures. In any case, the results of this study indicate that the present factors of the 16 PF do meaningfully differentiate between various gradations of artistic vocation and success.

Finally, while it is important to know more about what personality traits characterize the creative person, and the creative artist in particular, it is also important to know more about the interaction of the personality traits of such an individual with the pattern of role expectations that impinge on him in his social environment.

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