

PERSONALITY CORRELATES OF MARIJUANA USE

by

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ABSTRACT

This investigation was concerned with the experiential aspects of marijuana use, since this dimension seems to have been largely ignored in the past. Ss were drawn from introductory psychology classes and were administered the Sixteen Personality Factor Questionnaire (16-PF), the Personal Opinion Survey (POS), and the Experience Inventory (EI). The POS measures experience of control on seven factors, and the EI measures openness to experience on seven factors. Marijuana users were found to be different from nonusers on only Factor G (Self-ruled vs. Rule-bound) of the 16-PF, with users being more self-ruled. Three factors of the POS yielded significant differences. Users scored lower on Factor 1 (Achievement through Conscientious Effort) and Factor 5 (Self-control over Internal Processes). Users scored higher on Factor 3 (Ability of Mankind to Control Its Own Destiny vs. Supernatural Power or Fate). The lack of a larger number of significant factors differentiating between users and nonusers is explained on the basis of a rapidly growing population of users that is becoming more and more heterogeneous.

INTRODUCTION

One of the most controversial subjects of recent years has been the question of drug use. Special concern has been directed toward the increasing use of one drug in particular--marijuana. Until very recently there was a dearth of scientific information pertaining to the subject of marijuana use. Much of the discussion about drug use has been based on emotional and moral aspects rather than empirical evidence. Goode (1970) has raised the question of whether or not empirical investigation into an area so fraught with political and moral overtones will produce evidence that can be interpreted with reason. One of the first respectable examples of research into the effects of marijuana was done only three years ago (Weil, Zinberg, and Nelsen 1968). Since that time there has been a proliferation of investigations in this area, frequently yielding very conflicting results.

Although the amount of research on marijuana use and its effects has increased prodigiously of late, there is one area of research that has been severely neglected--the experiential realm. It is curious that experience should be neglected, since it, too, is an area of current interest to many psychologists. Throughout the literature

describing personal experience with drugs, there is a common element. The "high" one gets from smoking marijuana is described as an intensely personal, subjective experience (Anonymous, in Tart 1969; Tart 1971). The key concept is experience, not behavior or abstract thoughts but subjective experience. The existential movement in psychology has had much to say about human experience and with its upsurge in recent years, one would expect to find some existential influence in drug research. This, however, has not been the case. The present study has attempted to explore some of the aspects of the experience of marijuana use.

Two variables in the experiential realm were of particular interest: experience of control and openness to experience. Past research (Goldstein et al. 1970, Hogan et al. 1970, McAree, Steffenhagen, and Zheutlin 1969) has found control to be a significant factor differentiating users from nonusers. Users in general seemed to be less controlled. If the "high" obtained from marijuana is the intense new experience it has been described as being, one would assume that the user would have to relinquish some of his self-control in order to let the effects of the drug take over. This relinquishment of self-control has been expressed quite cogently by at least one author (Anonymous,

in Tart 1969) and is consistent with the findings from previous studies.

The second experiential variable of interest was openness to experience. The idea has been expressed that an individual must be able to achieve a state of receptivity to the new experience in order for the drug's effects to be felt (Becker 1953; Anonymous, in Tart 1969). This idea led to the prediction that marijuana users would manifest more openness to experience than nonusers.

Although it seemed reasonable to expect some differences between users and nonusers, the investigator did not expect to find a distinct "marijuana user" personality type. No distinct type was expected because it was predicted that the burgeoning use of marijuana has made the user population a heterogeneous group. Hogan et al. (1970) did find a considerable number of factors on the California Psychological Inventory (CPI) differentiating between frequent users and principled nonusers. They did not, however, control for the presence of hallucinogen users in their group, and McAree et al. (1969) have found a difference in personality characteristics between marijuana users and multiple drug users. The investigator in the present study predicted that if hallucinogen use were eliminated as a factor, many of the differences found in previous studies would disappear.

METHOD

Ss were drawn from introductory psychology classes. No statement was made during recruitment regarding the exact purpose of the study. The students were simply asked to volunteer to participate in research concerning the relationship of personality characteristics and certain habits. The Ss were divided into four groups: male marijuana users (n = 22), male nonusers (n = 29), female marijuana users (n = 22), and female nonusers (n = 25).

The Ss were asked to fill out an anonymous questionnaire adapted from Rogers and Rogers (1970) pertaining to frequency of drug use and were queried as to whether or not they considered themselves regular users, occasional users, nonusers, or principled nonusers. For purposes of the analysis, however, Ss were classified simply as users and nonusers. Anyone who reported ever having used marijuana was considered a user, and anyone who reported never having used the drug was considered a nonuser.

To assess the Ss' experience of control, a questionnaire entitled Personal Opinion Survey (POS) developed by Dr. Richard Coan (1971) was used. The POS attempts to measure experience of control on seven factors (see Appendix B).

To tap openness to experience, another questionnaire developed by Coan (1971) was used, the Experience Inventory (EI). This questionnaire, too, has seven factors (see Appendix B).

Although the main thrust of the investigation was in the realm of experiential variables, it was decided to include an instrument for measuring other personality characteristics as well, since past research has reported that certain personality variables differentiate between drug users and nonusers (Goldstein et al. 1970, Hogan et al. 1970, Kleckner 1968, McAree et al. 1969). The Sixteen Personality Factor Questionnaire (16-PF), Form C (Cattell, Saunders, and Stice 1957), was chosen for this purpose.

The Ss were tested as a group and completed all items at one sitting. The testing session required approximately 90 minutes. Of the 113 usable questionnaires, 15 reported using hallucinogens or narcotics, and these 15 were excluded from the analysis in order to maintain the user category as marijuana-only users. The number of Ss finally included in the analysis was 98: 51 males and 47 females.

RESULTS

It was found that an individual's reported frequency of use of marijuana corresponded highly with his subjective rating of himself as a regular or occasional user. Nearly all of the Ss in the present study who considered themselves regular users reported using marijuana twice a week or more, while those Ss who used marijuana less than twice a week tended to consider themselves occasional users. Ss who considered themselves nonusers admitted more willingness to try marijuana than those Ss who considered themselves principled nonusers:

$$\chi^2 = 6.775, \quad df = 1, \quad p < .01$$

The analyses of variance showed a significant difference between marijuana users and nonusers on only one factor of the 16-PF, Factor G (Self-ruled vs. Rule-bound), with users scoring more toward the self-ruled end of the factor (see Table A-1). This difference was expected from the fact that marijuana is illegal and a rule-bound individual would not want to break the law to use it. Factor L (Trusting and Adaptable vs. Suspicious) and Factor O (Placid and Confident vs. Worrying and Apprehensive) showed differences ($p < .1$) with users tending to be trusting and placid. Even though these differences were not significant,

the author thought it was interesting that these two factors showed differences in the opposite direction from what earlier research showed (Kleckner 1968).

On the POS, three factors showed significant differences: Factors 1, 3, and 5 (see Table A-2). On Factor 1, Achievement through Conscientious Effort, users tend to score lower than nonusers, suggesting that they do not believe in the idea of being able to accomplish goals simply through hard work and perseverance. They do not experience this kind of control over their activities. On Factor 3, Capacity of Mankind to Control Its Destiny vs. Supernatural Power or Fate, users score higher than do nonusers ($p < .05$) suggesting that they view mankind as being able to exert more influence over his environment and fellow men than do the nonusers. On Factor 5, Self-control over Internal Processes, nonusers again score more toward the high end ($p < .01$).

No significant effects were found on the Experience Inventory (see Table A-3), and there were no significant interactions between sex and marijuana use on any of the three personality inventories.

An informal analysis of the data with the scores of hallucinogen users included produced two more significant differences on the 16-PF. The author felt that this

result justified his elimination of hallucinogen users from the initial analysis.

DISCUSSION

Putting together the scores on the significant factors of the POS, it becomes evident that marijuana users tend to experience more group control than individual control. Group control, in this instance, does not mean that the group has control over the individual. What the pattern of scores implies is that marijuana users tend to view groups as having more control over their destiny than individuals do. The difference on Factor 2, while not significant ($p < .1$), is consistent with the differences on Factors 1, 3, and 5. On Factor 2, users do not experience confidence in their own abilities as individuals. All of the differences on the POS are consistent with the direction of the difference on Factor G of the 16-PF. High scorers on Factor G show more self-control (Cattell et al. 1957). Marijuana users scored lower than nonusers on this factor, which coincides with their scores on the POS indicative of a lack of self-control.

The present study did not achieve the same significant results that characterized earlier studies (Hogan et al. 1970, Goldstein et al. 1970, Kleckner 1968, McAree et al. 1969); however, this outcome was anticipated. The use of marijuana has grown to encompass a large portion of the

college population (Goode 1970). With this increase, one can reasonably assume that the population is now an extremely heterogeneous group of people. Any substantial group differences that might have earlier been expected to characterize the "pothead" personality will begin to disappear. There will still be some differences by virtue of the fact that marijuana is illegal and one must be willing to break the law in order to use it. But, in general, it would not be surprising if other differences began to disappear (if, in fact, they ever existed) because of the variability of individuals in the marijuana-using population. The fact that the population of marijuana users is changing is also reflected in two other findings. Although Goldstein et al. (1970) could not find any "potheads" (people using only marijuana), the present study found that most (64 percent) of the Ss who reported marijuana use used only that drug. Hogan et al. (1970) split nonusers of marijuana into two groups on the basis of whether or not they would ever try marijuana. Of the Ss in the present study who responded, only 22 percent of those who had never used marijuana said they would ever consider trying it. This result could imply that the group of nonusers who have never tried marijuana but are willing to is getting smaller as more and more of them are trying it.

The author would like to suggest an explanation for the wide range of findings in this field of research. When a new fad starts to develop, there will be a particular type of individual who will be in the first group to participate. Individuals of this type would very probably show distinct personality differences from those who are not in the vanguard. As the fad picks up momentum and becomes more popular, there will be a more heterogeneous group of people participating, and group differences between participators and nonparticipators could be expected to start decreasing. When the fad or movement stays around long enough to become extremely popular, there may again start to be differences between the "in-group" and the "out-group" as they become more and more polarized. These differences will, however, probably not be the same differences that characterized the initial group as opposed to the rest of the population when the movement first began. On the one hand will be that portion of the population which has adapted (acquiesced) to the fad. On the other hand will be the rigid (staid) traditionalists who will not accept (give in to) the new idea. If the new idea becomes pervasive enough to become an institution in the society, there will be a disappearance of all differences because there will no longer be two groups to compare. The above speculations are simply an adaptation

of Hegel's philosophy of history being composed of stages of thesis, antithesis, and synthesis. This philosophy has also been discussed relative to personality by Coan (1971).

The breakdown into stages seems to characterize what has happened in the area of drug use. Originally, the people who started popularizing the use of marijuana were probably quite different from those who did not use it. As it became more popular, these differences began to disappear. It would seem that marijuana use is presently at some point in the second stage, where the group differences are beginning to disappear, or at least change. This would account for many of the seeming contradictions found in drug research. One must also keep in mind, however, that drug research is complicated further by unknown pharmacological effects of the drugs.

As marijuana use continues to spread, the population of users is constantly changing, and research is outdated almost before it is published. Drug research is also hampered by prejudiced points of view, because of the politics involved. Goode (1970) has discussed at length the problems involved in doing research in a political area, and his discussion should be read by all drug researchers.

From the results of this study and from reviewing the results of past research into the area of marijuana use, it would seem that the only path to follow is to keep a continuous flow of research coming out on various aspects of drug use so that all of the changes can be known. The seemingly contradictory studies that have been reported follow a pattern of change that the investigator in this study feels it would be well to keep in mind. The findings here would also seem to indicate that if differences are to be found at all between marijuana users and nonusers and if the phenomenon of widespread drug use is to be better understood, the realm of experiential variables would be the most likely area to research.

APPENDIX A

TABLES OF MEANS AND PROBABILITY LEVELS
FOR THE SIXTEEN PERSONALITY FACTOR
QUESTIONNAIRE, THE PERSONAL OPINION
SURVEY, AND THE EXPERIENCE INVENTORY

Table A-1

Means and Probability Levels for Sixteen
Personality Factor Questionnaire

	<u>Users</u>	<u>Nonusers</u>	<u>Prob.</u>
Factor <u>A</u>	7.386	7.080	ns
Factor <u>B</u>	4.773	4.559	ns
Factor <u>C</u>	6.864	7.110	ns
Factor <u>E</u>	5.796	5.988	ns
Factor <u>F</u>	7.318	6.990	ns
Factor <u>G</u>	4.432	5.276	p < .02
Factor <u>H</u>	5.841	5.708	ns
Factor <u>I</u>	6.614	6.063	ns
Factor <u>L</u>	5.773	6.472	ns
Factor <u>M</u>	6.886	6.696	ns
Factor <u>N</u>	5.500	5.341	ns
Factor <u>O</u>	3.977	4.561	ns
Factor <u>Q₁</u>	6.409	6.312	ns
Factor <u>Q₂</u>	6.909	7.532	ns
Factor <u>Q₃</u>	5.341	6.109	ns
Factor <u>Q₄</u>	5.886	5.697	ns

Table A-2

Means and Probability Levels for
Personal Opinion Survey

	<u>Users</u>	<u>Nonusers</u>	<u>Prob.</u>
Factor <u>1</u>	7.546	8.562	p < .05
Factor <u>2</u>	8.136	9.203	ns
Factor <u>3</u>	10.818	9.525	p < .05
Factor <u>4</u>	12.364	13.356	ns
Factor <u>5</u>	9.091	11.106	p < .01
Factor <u>6</u>	12.932	13.671	ns
Factor <u>7</u>	7.477	8.377	ns

Note: Further description of the factors is in Appendix B.

Table A-3
Means and Probability Levels for
Experience Inventory

	<u>Users</u>	<u>Nonusers</u>	<u>Prob.</u>
Factor <u>1</u>	9.477	8.989	ns
Factor <u>2</u>	2.296	2.621	ns
Factor <u>3</u>	7.386	7.545	ns
Factor <u>4</u>	4.091	4.185	ns
Factor <u>5</u>	9.273	9.308	ns
Factor <u>6</u>	8.614	7.540	ns
Factor <u>7</u>	7.614	7.823	ns

Note: Further descriptions of the factors are in Appendix B.

APPENDIX B

EXPLANATION OF FACTORS

Presented here is a list of the factors on the Personal Opinion Survey and the Experience Inventory, along with a short description of each factor. The descriptions are adapted from Coan (1971).

DESCRIPTION OF FACTORS ON THE
PERSONAL OPINION SURVEY

Factor 1: Achievement through Conscientious Effort

The high scorer here generally expresses the view that one can accomplish many things if one tries hard enough. Success may lie in the academic, social or physical realm.

Factor 2: Personal Confidence in Ability to Achieve
Mastery

The high scorer expresses the confidence that he, as an individual, has the capacity for accomplishments in various realms: mathematical, mechanical, scientific, athletic, linguistic. The areas of success tend to be intellectual in character and tend to be deemed more appropriate for men than for women in our society.

Factor 3: Capacity of Mankind to Control Its Destiny vs.
Supernatural Power or Fate

High scorer feels that man has the ability to build a just society, to control both his own evolution and natural physical phenomena, and to act to eliminate war.

Factor 4: Successful Planning and Organization

High scorer feels he has successful self-control in the realm of work.

Factor 5: Self-control over Internal Processes

High scorer feels he has more control of somatic, affective, and cognitive processes.

Factor 6: Control over Large-scale Social and Political Events

Both the subject himself and people in general are seen by the low scorer as helpless with respect to major societal processes.

Factor 7: Control in Immediate Social Interaction

This factor is concerned with whether the subject is able to secure desired reactions from other people. High scorer experiences more success.

DESCRIPTION OF FACTORS ON THE
EXPERIENCE INVENTORY

Factor 1: Aesthetic Sensitivity vs. Aesthetic Insensitivity

High scorers report a variety of aesthetic experiences. Low scorers reflect a more prosaic orientation.

Factor 2: Unusual Perceptions and Associations

High scorer reports an inclination to perceive things in various odd and novel ways and to entertain unusual associations to all objects of perception. Low scorer shows fact-mindedness and adherence to logical and systematic thought.

Factor 3: Openness to Theoretical or Hypothetical Ideas

High scorer shows a sort of willingness to entertain novel and unusual ideas that is likely to be high in avid readers of fantasy and science fiction.

Factor 4: Constructive Utilization of Fantasy and Dreams

High scorer reports creation and problem solving in dreams, reception of telepathic communications, and the experience of inspiration. Suggests an access to unconscious processes.

Factor 5: Openness to Unconventional Views of Reality vs. Adherence to Mundane Material Reality

The high scorer on this factor directly indicates an interest in a specific class of unconventional ideas (which the low scorer explicitly rejects).

Factor 6: Indulgence in Fantasy vs. Avoidance of Fantasy

High scorer dreams in color, daydreams, experiences painful loneliness, tends to be absentminded, and reports some experiences like those of the high scorer on Factor 2. Low scorer reports an absence of night dreams and says he avoids fantasy and rumination about the past.

Factor 7: Deliberate and Systematic Thought

The high scorer frequently experiences a need for this and may find it pleasurable.

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