

# Consistency in the Psychologic Reaction to Mescaline

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**Intoxication with this alkaloid is characterized by changes in perception and thinking. The authors have studied the consistency of reactions to this intoxication in the same person.**

THIS STUDY attempts to demonstrate the degree to which persons receiving mescaline on 2 separate days are consistent in their reaction to the drug. It is generally assumed that the drug induces in almost any person some degree of psychosis-like behavior and experience. How

valid is this assumption? Will a previous experience with the drug alter the individual's subsequent reaction to it?

In an attempt to answer these questions, behavior was rated by one of us (I.P.S.) on 2 separate days during which each subject was given mescaline.

On the basis of previous discussion, it was decided to rate the following variables on an eight point scale:

|                                                                                                                                                                                                                                    |                                                                                      |     |                                                          |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|-----|----------------------------------------------------------|
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| This work was supported by a grant from the Scottish Rite Schizophrenia Research Committee of the National Association of Mental Health.                                                                                           |                                                                                      |     |                                                          |
| 1a                                                                                                                                                                                                                                 | Anxiety (before administration)<br>Tense, tremulous, fearful, obviously upset        | vs. | Calm, controlled, relaxed                                |
| 1b                                                                                                                                                                                                                                 | Anxiety (after administration of drug)<br>Tense, tremulous, fearful, obviously upset | vs. | Calm, controlled, relaxed                                |
| 2                                                                                                                                                                                                                                  | Mood<br>Severely retarded emotionally                                                | vs. | Euphoric, expansive                                      |
| 5                                                                                                                                                                                                                                  | Communicativeness<br>Good contact with experimenter, easily interacts                | vs. | No contact with environment                              |
| 4a                                                                                                                                                                                                                                 | Imagery and Fantasy<br>No imagery apparent                                           | vs. | Highly impressive visual and/or other images             |
| 4b <sub>1</sub>                                                                                                                                                                                                                    | Direction of Attention<br>Completely egocentric: outer environment no concern        | vs. | Oriented entirely toward outer environment               |
| 4b <sub>2</sub>                                                                                                                                                                                                                    | Fixation of Attention<br>Distractable, easily diverted                               | vs. | Completely absorbed in subjective experiences            |
| 5a                                                                                                                                                                                                                                 | Perception of Body<br>Experiences body in usual way                                  | vs. | Hands or skin or legs seem abnormal                      |
| 5b                                                                                                                                                                                                                                 | Perception of objects in external environment<br>Hallucinated                        | vs. | Intact                                                   |
| 6a                                                                                                                                                                                                                                 | Depersonalization<br>Exaggerated sense of self                                       | vs. | Loss of control of thoughts                              |
| 6b                                                                                                                                                                                                                                 | Insight into current situation<br>Aware of role in real situation                    | vs. | Denial of reality of life situation                      |
| 7                                                                                                                                                                                                                                  | Paranoid trends<br>Complete acceptance of own responsibility                         | vs. | Suspicious, blames others entirely for present situation |
| 8                                                                                                                                                                                                                                  | Sensitivity to reduced control<br>Indifferent to situation                           | vs. | Panic                                                    |

Subjects for the study were 15 medical students and residents and one graduate student in psychology. All 16 subjects were volunteers.

### Results

In table 1 appear the mean ratings for the group of 16 subjects for the first and second administrations of mescaline; in the third column appear *t* values for the significance of differences. Any *t* value of 1.8 or more should be considered seriously as indicating a significant difference.

From table 1 it may be inferred that the subjects in their second experience with mescaline were significantly less anxious prior to the administration of the drug than they were the first time. During mescaline on the second occasion they were more communicative and showed a greater degree of depersonalization and distortion of perception of their environment. For other variables they showed no significant change between trials.

Consistency for individuals in the group

TABLE 1

| Variable                                | Mean         |              | <i>t</i> |
|-----------------------------------------|--------------|--------------|----------|
|                                         | Experiment 1 | Experiment 2 |          |
| 1a Anxiety (before)                     | 2.6          | 2.0          | 1.8      |
| 1b Anxiety (during)                     | 2.0          | 2.2          | 0.3      |
| 2 Mood (elation)                        | 5.9          | 5.6          | 0.2      |
| 3 Communicativeness                     | 5.1          | 6.2          | 2.1      |
| 4a Imagery and fantasy                  | 5.7          | 5.3          | 1.3      |
| 4b <sub>1</sub> Attention (inward)      | 5.9          | 5.9          | 0.0      |
| 4b <sub>2</sub> Attention (strong)      | 5.2          | 5.1          | 0.3      |
| 5a Body perception (distorted)          | 4.7          | 5.1          | 1.0      |
| 5b Environmental perception (distorted) | 5.3          | 5.9          | 2.0      |
| 6a Depersonalization                    | 4.4          | 5.1          | 2.3      |
| 6b Insight (poor)                       | 2.1          | 2.0          | 0.0      |
| 7 Paranoid                              | 2.0          | 1.8          | 0.0      |
| 8 Sensitivity (panic)                   | 3.6          | 3.4          | 0.3      |

Mean ratings on 15 variables for 16 subjects who were given mescaline in 2 experiments, and the *t* values for the significance of differences between them. Capitalized term designating variable indicates higher score.

between trials is best shown by the degree of intercorrelation between sessions. Following are Pearson coefficients of such correlation:

|                 |                           |     |
|-----------------|---------------------------|-----|
| 1a              | Anxiety (before)          | .46 |
| 1b              | Anxiety (during)          | .47 |
| 2               | Mood                      | .08 |
| 3               | Communicativeness         | .22 |
| 4a              | Imagery and fantasy       | .05 |
| 4b <sub>1</sub> | Attention: direction      | .59 |
| 4b <sub>2</sub> | Attention: fixation       | .34 |
| 5a              | Perception of body        | .01 |
| 5b              | Perception of environment | .47 |
| 6a              | Depersonalization         | .72 |
| 6b              | Insight                   | .63 |
| 7               | Paranoid trends           | .14 |
| 8               | Sensitivity               | .47 |

With a population of 16 cases, a coefficient should be about .50 at the 5% level of expectancy, and about .62 at the 1% level.

It is seen that there is greatest consistency for *depersonalization*, *insight* and *direction of attention*. There is no consistency for *mood*, *communicativeness*, *imagery* and *fantasy*, *perception of body* and *paranoid trends*. There is a fair degree of consistency for *anxiety*, both before and during the experiment and for *perception of the environment*; *fixation of attention* shows a slight consistency.

### Summary and Conclusion

As a group, these 16 subjects seem less apprehensive at the beginning of the second experiment, and during it they were more communicative toward the experimenter. They showed greater depersonalization and greater distortion of perception of the environment.

As regards individuals in the group, it was found that subjects who are high (or low) on depersonalization, insight and direction of attention remain so in the second experiment.