

UNCLASSIFIED

AD 268 310

*Reproduced
by the*

**ARMED SERVICES TECHNICAL INFORMATION AGENCY
ARLINGTON HALL STATION
ARLINGTON 12, VIRGINIA**



UNCLASSIFIED

NOTICE: When government or other drawings, specifications or other data are used for any purpose other than in connection with a definitely related government procurement operation, the U. S. Government thereby incurs no responsibility, nor any obligation whatsoever; and the fact that the Government may have formulated, furnished, or in any way supplied the said drawings, specifications, or other data is not to be regarded by implication or otherwise as in any manner licensing the holder or any other person or corporation, or conveying any rights or permission to manufacture, use or sell any patented invention that may in any way be related thereto.

268 310

62-1-5
XEROX

Behavior in Groups
Contract N7 ONR 35609
Group Psychology Branch
Office of Naval Research
Technical Report 30
November, 1961

AS AD NO. 268310

MOOD CHANGES DURING A MANAGEMENT TRAINING LABORATORY

Bernard M. Bass

University of California¹

The increasing interest in sensitivity training for management is illustrated by Tannenbaum, Weschler & Massarik (1961) who build the first part of their recent book on leadership and organization around the need of managers for sensitivity. Then, they proceed to examine how sensitivity is learned. A rationale for relating sensitivity to successful leadership is provided by Bass (1960, p. 167). Yet published, objective evaluations of what happens to supervisors during and after training are scarce. In a previous article (Bass, in press), data was presented showing that trainees do seem to increase their sensitivity to interpersonal phenomena, as measured by reactions to the film "Twelve Angry Men" before and after training.

Sensitivity training has been described as "guts" learning; learning at an emotional level about group dynamics, known intellectually, but not fully accepted by trainees. Despite considerable experience and much commentary about how feelings are shifted during ten days or two weeks of sensitivity training, relatively little objective information is available.

527000

The present paper reports the results of sampling trainee moods at various points during the course of a ten day sensitivity training laboratory.

Method

Nowlis and Green (1957) developed, factored, and validated a mood adjective check list. Ss' responses to the check list were affected by viewing various kinds of films having emotional impact as well as by experiencing contrived frustrations. Eight factors could account for the common variance in responding to 110 mood adjectives (Green & Nowlis, 1957). In the present study, the eight factors were assessed using 27 adjectives from the original list. Each selected adjective correlated highly with one but not the other factors. An exception was made. The adjectives, "suspicious" and "skeptical" included in Green & Nowlis' aggression factor were treated as a ninth factor, skepticism; for it was guessed that the "suspiciousness" component of aggression would be affected more by the laboratory experience than the "rebelliousness" or "boldness" aspect.

The factors examined by determining the mean response to all mood adjectives representing a factor were as follows:

<u>Mood Factors</u>	<u>Mood Adjectives</u>
A. Concentration	concentrating, serious, earnest, engaged in thought
B. Aggression	angry, bold, defiant, rebellious
C. Pleasantness	pleased, elated, lighthearted
D. Activation	energetic
E. Egotism	boastful, self-centered, egotistic
F. Social Affection	forgiving, kindly, warmhearted
G. Depression	blue, lonely, regretful, insecure
H. Anxiety	anxious, clutched up, fearful
I. Skepticism	skeptical, suspicious

Ss responded by inserting each of the 27 words in the appropriate blank of the following scale:

4. I definitely feel _____ at this moment.
3. I feel slightly _____ at this moment.
2. I cannot decide whether or not I am _____ at this moment.
1. I am sure I am not _____ at this moment.

Thirty supervisors, engineers and administrators from the same petro-chemical refinery completed mood check lists at five times during a ten day laboratory: 1. at the beginning; 2. on the third morning just prior to an exciting twenty-four hour intergroup competition; 3. the next day at the end of the competition; 4. upon return from a week-end holiday lasting from Saturday noon to Sunday night; and, 5. at the end of the tenth day, the close of the laboratory.

Stable Mood Differences in Level

Inspection of mean responses in Figure 1 revealed clear and consistent differences in reporting experiencing of the nine moods. Concentration, activation, social affection and pleasantness remained during all periods between means of 2.3 and 3.3; anxiety was less frequently experienced; while egotism, aggression and depression never rose above 1.7.

No analysis was made of these absolute differences since the three levels were obvious; rather, repeated measurements analyses were run of each mood factor to see whether the shifts during the laboratory were significant.²

Mood Shifts

Concentration rose and declined significantly at the 1 per cent level of confidence according to the appropriate F test. Likewise, the steady decline in skepticism was significant at the 1 per cent level. Significant fluctuations at the 5 per cent level of confidence were obtained for activation and depression while the overall fluctuations of the other five factors by all trainees combined could be accounted for by chance.

Absolute versus Relative Interpretation

A folk-lore has grown among management laboratory trainers. Our results tend to support some, but not all of these beliefs. For example, much is made of the initial high level of anxiety most trainees are supposed to experience. Figure 1 suggests that the absolute anxiety level is not particularly high (assuming the absolute scale is a valid indicator). However, in line with trainer beliefs, whatever initial anxiety occurred seems to have diminished considerably by the end of the laboratory. The mean drop from the first to the last session (2.3 to 1.8) was eleven times the standard error of the mean, estimated from the within-subjects variance in anxiety.

Again, the absolute level of initial skepticism was not as high as trainers might have expected, possibly because most trainees in this lab had already discussed participation with former trainees back at the plant; but the steady, significant, decline from a mean of 2.1 to a mean of 1.3 is in accordance with trainer expectations.

Coming back from a week-end rest affected trainees on Sunday night as trainers usually infer from observation: increased depression, reduced concentration and activation.

Victory, Defeat and Mood

Of particular interest was the impact of the intergroup competition near the end of the first week of the laboratory. As Blake and Mouton (1961) note, the intergroup is an involving experience where matched training groups suddenly are pitted against each other to see ostensibly which is the best group. Previously free of any assigned tasks, each group must now produce an essay, then try to convince the opposing training group of its superiority. Despite much debate and balloting, each group continues to favor its own product. Only when impartial judges are brought in, is a clear victory experienced by one group and clear defeat by another.

As seen in Figure 1, conforming to trainer observations, the intergroup competition succeeded in increasing concentration and activation. Social affection was at a low point at the end of the struggle and aggression at its high.

A more detailed analysis of variance of the shift from before-to-after the intergroup competition by winners and losers showed significantly different patterns of shift in aggression, depression and pleasantness. Winners or losers also shifted differentially in skepticism and concentration.

Table 1 shows the significantly different (at the 1 per cent level) patterns of shifting in aggression by winners and losers. The results support results of the frustration-aggression hypothesis, but mainly in one direction. Winning does not seem to reduce reported feelings of aggression anywhere as much as losing increases feelings of aggression ($F=5.8$).

The pattern of change in depression and pleasantness shown in Table 1 reflects the involvement of trainees in winning or losing intergroup competitions and corroborates Blake and Mouton's (1961) observations that training groups suffering defeat do a great deal of soul-searching while victory makes groups "fat and happy, content to rest on their laurels". The interaction patterns for depression and pleasantness yielded highly significant F 's of 17.5 and 20.0 when the variance due to before-versus-after means was contrasted with the variance-within-subjects.

Concentration significantly increased, but only for losers while skepticism significantly decreased (at the 1 per cent level) from before to after the competition for both winners and losers, but particularly (and significantly) for winners. These shifts conform to observers' impressions that trainees value highly the intergroup experience as a means of learning about the dynamics of groups in conflict; at the end, losers feeling a greater sense of effort; winners feeling less skepticism about laboratory procedures.

Summary and Conclusions

Thirty trainees completed a mood adjective check list at five periods during a ten day sensitivity training laboratory for management.

Results reported here indicate that differences, and predictable shifts in mood do occur. Specifically, skepticism and anxiety decrease as most trainers would expect; and other moods like depression and aggression show the effects of particular training laboratory procedures.

The results also provide independent evidence of the validity of the factored Nowlis and Green check list of mood adjectives.

Laboratory experience by trainers has resulted in a body of generalizations about how trainee feelings change during the course of the sensitivity training laboratory. The design of a laboratory is based on these generalizations to some degree. For example, most trainers agree that trainees are not in the mood for work on Sunday evening after a holiday rest---and Sunday night activities are planned accordingly. Our results with the mood adjective check list confirm this trainer impression. Moreover, our findings generally are consistent with other trainer beliefs about mood changes in trainees including trainees' reduction in skepticism and anxiety during the course of a laboratory and increased concentration as a consequence of introducing intergroup competition. Our results also conform to expectations about the effects on mood of defeat or victory in the competition.

References

- BASS, B. M. Leadership, psychology and organizational behavior. New York: Harper & Bros., 1960.
- BASS, B. M. Reactions to "Twelve Angry Men" as a measure of sensitivity training. J. appl. Psychol., in press.
- BLAKE, R. & MOUTON, J. S. Competition, communication and conformity. In Berg, I. A. & Bass, B. M. Conformity and deviation. New York: Harper, 1961.
- GREEN, R. F. & NOWLIS, V. A factor analytic study of the domain of mood with independent validation of the factors. Tech. Report 4, Contract Nonr-668(12), University of Rochester, 1957.
- TANNENBAUM, R., WESCHLER, I. R. & MASSARIK, F. Leadership and organization. New York: McGraw-Hill, 1961.

Footnote

¹On leave of absence from Louisiana State University 1961-2

²Analyses were designed and executed by Mr. George Dunteman

TABLE 1

Mean Changes in Moods As a Consequence
of Victory and Defeat

<u>Mood</u>	<u>Before Competition Began</u>	<u>After Victory or Defeat</u>	<u>Difference</u>
A. <u>Concentration</u>			
Winners	1.23	1.22	-.01
Losers	1.40	1.75	+.35
B. <u>Aggression</u>			
Winners	1.33	1.28	-.05
Losers	1.43	1.83	+.40
C. <u>Pleasantness</u>			
Winners	2.87	3.27	+.40
Losers	3.23	2.03	-1.20
G. <u>Depression</u>			
Winners	1.47	1.31	-.16
Losers	1.18	2.00	+.82
I. <u>Skepticism</u>			
Winners	1.97	1.30	-.67
Losers	1.73	1.63	-.10

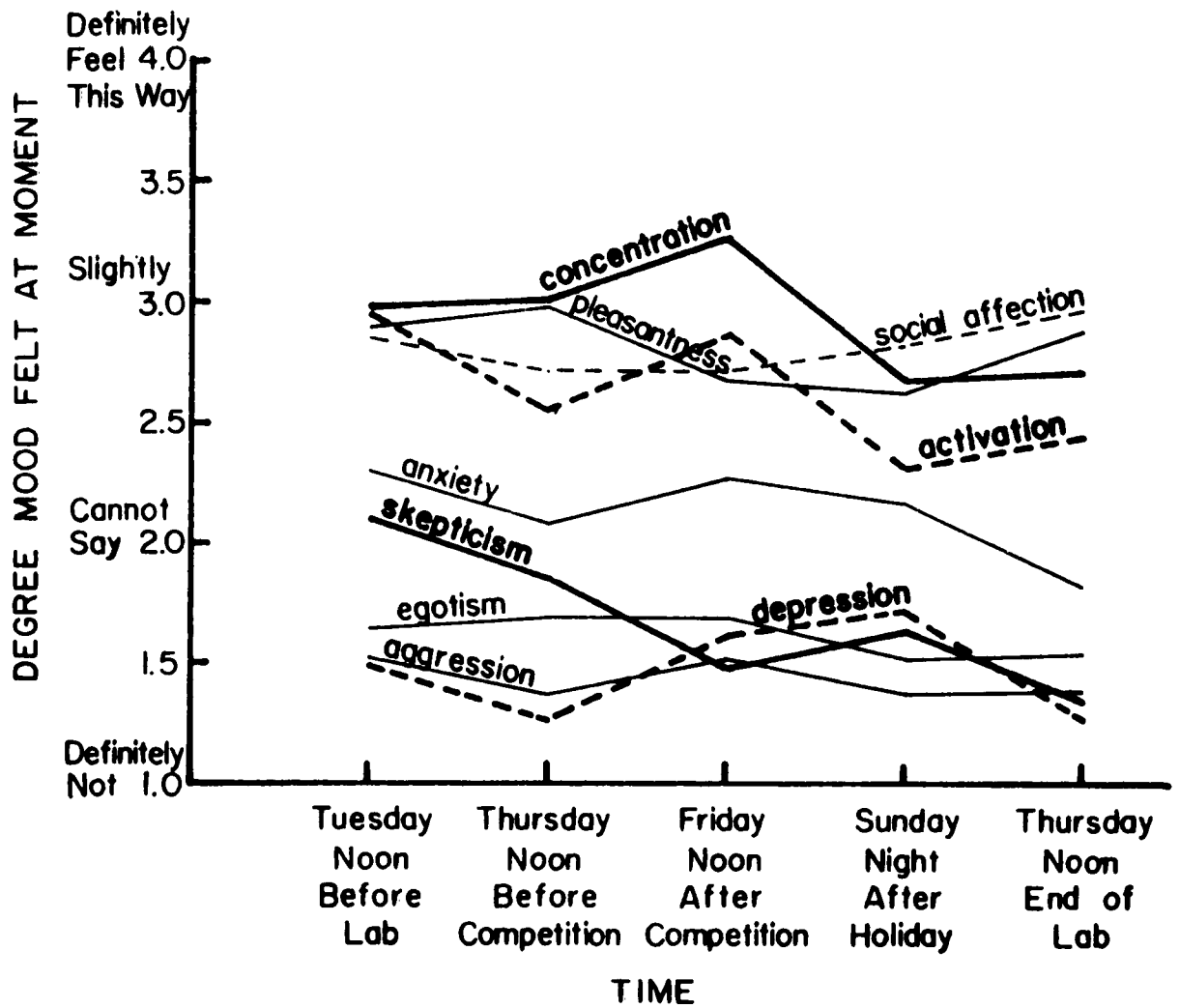


FIG. 1. Changes in Mood During Course of the Laboratory