

## Heightened Responsivity to Stress in Nonassertive, Low Self-Confident Subjects

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Despite a long tradition of research concerned with psychophysiological characteristics of psychiatric populations such as schizophrenics, psychopaths, and depressives, there has been little psychophysiological research with groups manifesting less serious, but more common, interpersonal problems. In this experiment we have applied psychophysiological techniques to study a group with a common interpersonal difficulty: nonassertiveness and low self-confidence.

Fifteen assertive and 15 nonassertive male college students were selected on the basis of an empirically derived self-report inventory (Levenson & Gottman, 1978). These subjects were exposed to a stressful situation designed to make strong demands on their self-confidence and assertiveness. Following an adaptation period, subjects were told by a female experimenter that they would have to prepare and deliver a 3 minute speech in which they were to tell her about their personal strengths in a way that would make a good impression. She informed them that she would listen to the speech, evaluate it, and then provide critical feedback about their performance. Two procedures were utilized to further increase the stressfulness of the experiment. First, a countdown timer was activated during the 6 minute period of speech preparation to increase the sense of time urgency. Second, the subjects viewed the woman (on a video monitor) as she listened to his speech, thus adding immediacy to the experience of being evaluated. A broad spectrum of physiological measures was monitored continuously throughout the experiment, including heart rate, heart rate variability, somatic activity, skin conductance level, and pulse transmission times to the ear and to the finger. All measures were recorded on a Grass Model 7 polygraph averaged over 10 second periods by an online PDP 11/10 digital computer.

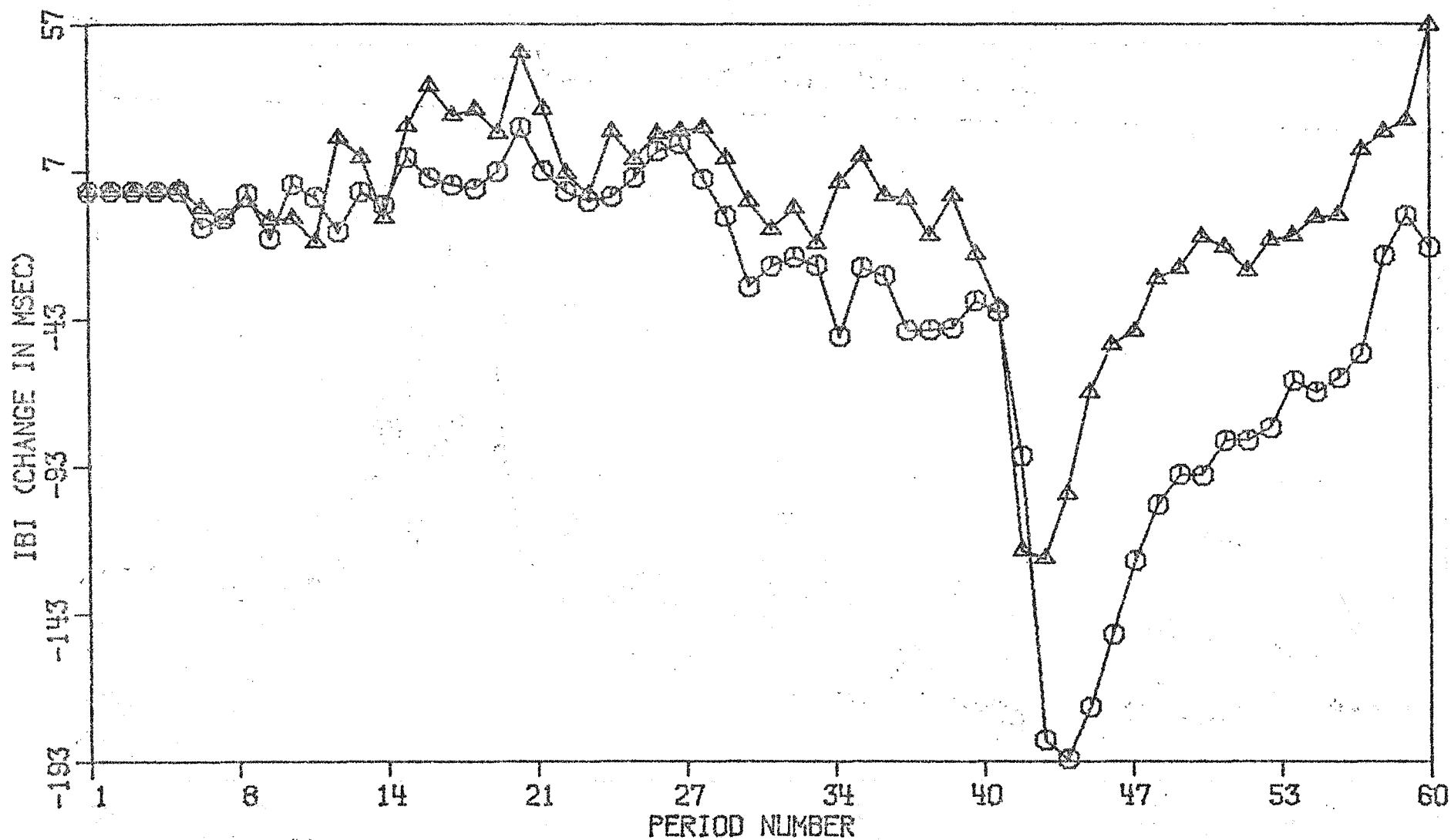
Results indicated the procedure was highly stressful for all subjects, producing significant responses in all measured variables during speech preparation and delivery. In addition, clearcut differences emerged between the nonassertive and assertive subjects. On measures of heart rate, skin conductance level, finger pulse transmission time, and ear pulse transmission time, nonassertive subjects had significantly larger response magnitudes during the speech compared to assertive subjects (Figures 1-4). There were no differences between the two groups during baseline and speech preparation periods. Heightened cardiovascular responsivity in nonassertive subjects during the speech was not a result of heightened somatic activity; the two groups had similar levels of somatic activity during the speech (Figure 5). We conclude that nonassertive individuals may become physiologically overaroused in social situations which demand self-confident, assertive behavior. This overarousal may result from their inability to perform competently. In either case, physiological overarousal may further disrupt the production of socially competent behavior and may lead to the establishment of reinforcement contingencies in which certain social situations are avoided.

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### Reference

Levenson, R. W. and Gottman, J. M. Toward the assessment of social competence. Journal of Consulting and Clinical Psychology, 1978, 46, 453-462.

# CARDIAC INTERBEAT INTERVAL



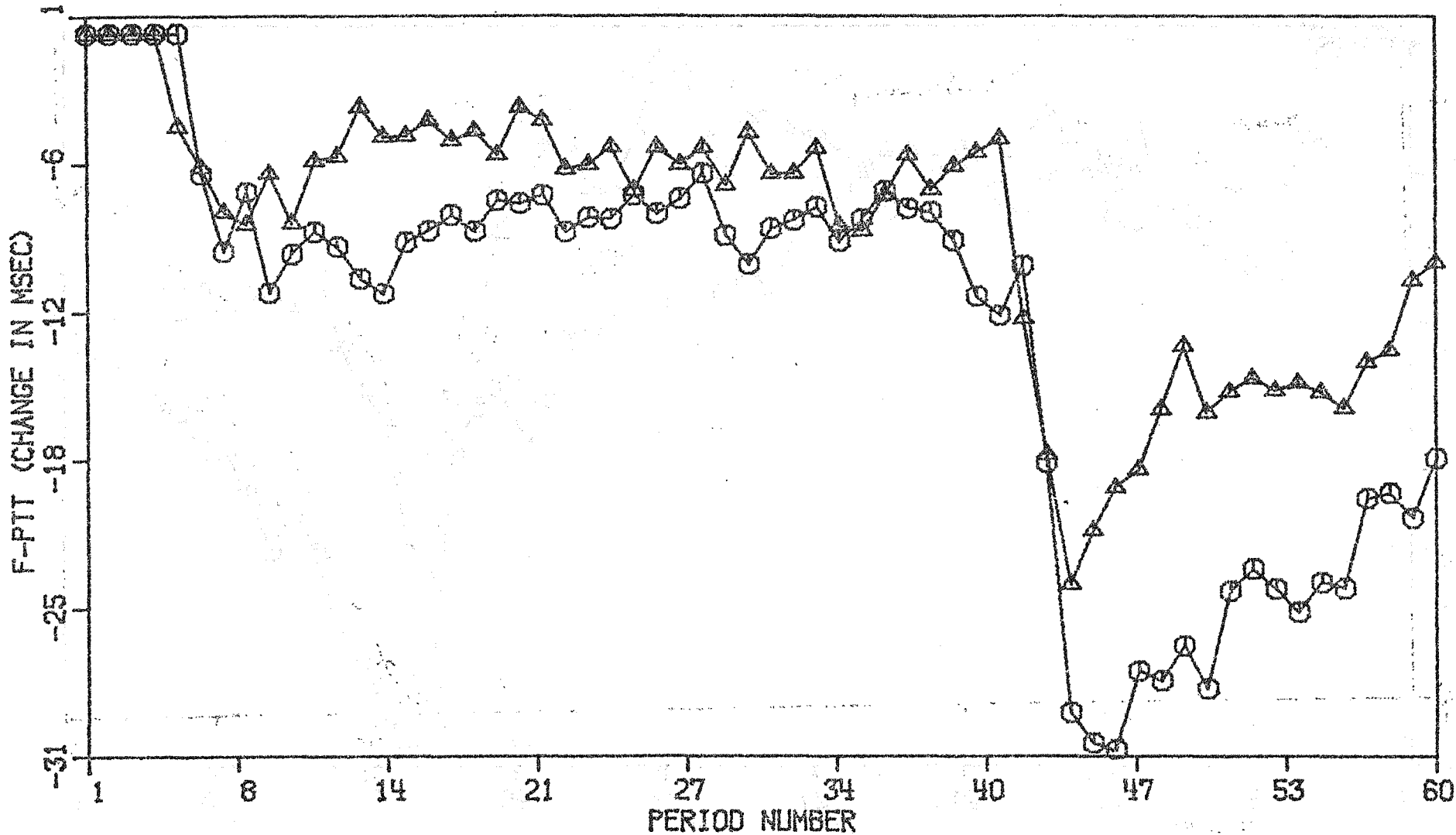
## LEGEND

- LOW ASSERTIVE SUBJECTS
- △ HIGH ASSERTIVE SUBJECTS

## COMMENTS

- PERIODS 1-5 BASELINE
- PERIODS 6-41 COUNTDOWN (6 MINUTES)
- PERIODS 43-60 SPEECH (3 MINUTES)

# PULSE TRANSMISSION TIME TO FINGER



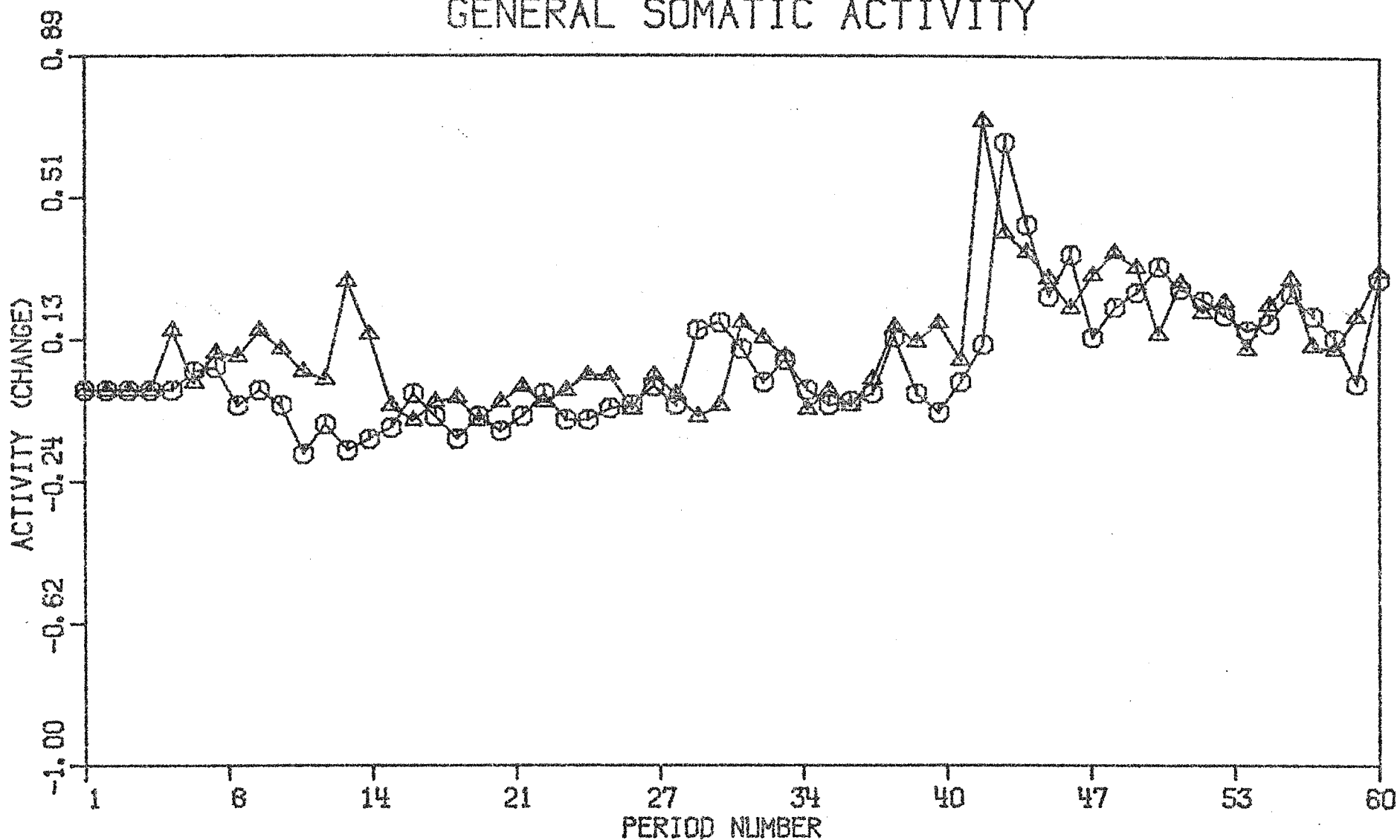
## LEGEND

- LOW ASSERTIVE SUBJECTS
- ▲ HIGH ASSERTIVE SUBJECTS

## COMMENTS

- PERIODS 1-5 BASELINE
- PERIODS 6-41 COUNTDOWN (6 MINUTES)
- PERIODS 43-60 SPEECH (3 MINUTES)

# GENERAL SOMATIC ACTIVITY



## LEGEND

- LOW ASSERTIVE SUBJECTS
- △ HIGH ASSERTIVE SUBJECTS

## COMMENTS

- PERIODS 1-5 BASELINE
- PERIODS 6-41 COUNTDOWN (6 MINUTES)
- PERIODS 43-60 SPEECH (3 MINUTES)