TAPE LOG

A BEHAVIORAL GAME METHODOLOGY FOR THE STUDY OF PROXEMIC BEHAVIOR

(**With brief proxemics reading list attached.)**

NOTE: The methodology described in this videotape is probably of potential interest mostly to researchers who would find a non-verbal measure of the interpersonal attractiveness of various personal characteristics, behaviors, etc. useful. It may also be of interest to researchers concerned with the attractiveness of impersonal objects.

It is assumed that the viewer has gained some familiarity with the methodology before viewing the tape. Probably the quickest way to get an overview of the methodology is to read the METHOD section of the paper PSYCHOLOGICAL CHARACTERISTICS AND INTERPERSONAL DISTANCE which is available from the website www.sharktown.com . If it appears that the methodology might be useful in your research, the videotape describes its features in greater detail.

Major sections of the videotape are separated each other by title screens with blue backgrounds. These title screens are reproduced in the log below, **in blue, like this text,** to provide landmarks that may be helpful to viewers trying to locate specific topics.

Each section of the tape is briefly summarized in the notes below. Concepts or terminology that are particularly important are highlighted in **bold type** in the summaries. It may be useful to refer to these notes as you view the tape.

APPROX TIME (HR:MIN:SEC)	TOPIC
0:00	Begin tape
0:20	**Title - A BEHAVIORAL GAME METHODOLOGY FOR THE STUDY OF PROXEMIC BEHAVIOR**
0:40	Introduction to the videotape. Suggests some types of research for which the methodology might be useful. Briefly describes the sequence of topics.

APPROX TIME (HR:MIN:SEC)	TOPIC
5:40	**BLUE TITLE** **A BRIEF INTRODUCTION TO PROXEMICS** E. T. Hall's Framework for categorizing interpersonal distance This four minute segment is provided only as an introduction to some basic ideas in the study of proxemics for those completely unfamiliar with the field. A good review of the literature for those who would like to familiarize themselves with the research in the field is Aiello (1987).See the reading list attached to this tape log.

APPROX TIME (HR:MIN:SEC)	TOPIC
9:55	**BLUE TITLE** **SHIPPING AND STORING THE EXPERIMENTAL APPARATUS** This section shows the size of the disassembled experimental apparatus. The device can be stored in three footlockers and shipped via UPS or U.S. mail to make it accessible to experimenters

APPROX TIME (HR:MIN:SEC)	TOPIC
11:40	**BLUE TITLE** **ASSEMBLING THE EXPERIMENTAL APPARATUS** **STEP 1: THE FLOOR** The pattern on the floor of the apparatus is the central feature of the methodology. The floor with this pattern is shown. Certain points on the pattern are defined as **"nodes."** A **"move"** is demonstrated. The concept that all possible moves can be categorized as **increasing** the interpersonal separation, **decreasing** it, or leaving it **unchanged**, is introduced. (This concept is developed in the next section.)

APPROX TIME (HR:MIN:SEC)	TOPIC
14:40	**BLUE TITLE** **ANALYSIS OF BEHAVIOR IN THE EXPERIMENTAL APPARATUS** **PART 1: SOME BASIC CONCEPTS** Several concepts that are important to understanding the methodology are presented in this section. The explanations are illustrated with a "game board" scale model of the experimental apparatus.
14:50	The game board scale model used in the explanation is described.
15:30	Demonstration of a **typical experimental setup** used by the author.
16:10	Explanation of the concept of **distance measured in moves.** Brief description of a sample experimental scenario or **"game."**
18:30	Using distance measured in moves allows one to "digitize" the distancing behavior of experimental subjects, which is advantageous for analysing the data obtained.
19:50	A discussion of **"distance error."**
22:00	A chart of distance error at various separations in moves.
25:25	The symmetry of the floor pattern makes distance in moves independent of which node distance is measured from.
26:30	An example of a **typical experimental run.**
30:45	A detailed demonstration of how **all "moves" can be categorized as either increasing the interpersonal separation (measured in moves), leaving it unchanged, or reducing it.**

32:20	The concept of generating **contingency tables** using the three categories of moves defined above is introduced. This technique is used to define and analyse **approach and avoidance drive strengths** in the paper "A Study on the Simulation of Proxemic Behavior," which is enclosed in this package.

APPROX TIME (HR:MIN:SEC)	**TOPIC**
35:45	**BLUE TITLE** **ASSEMBLING THE EXPERIMENTAL APPARATUS** **STEP 2: THE FRAMEWORK** The aluminum framework used to hang curtains that create a reproducible experimental setting is shown. The four computer programs discussed in the next section of the tape are introduced.

APPROX TIME (HR:MIN:SEC)	**TOPIC**
39:35	**BLUE TITLE** **ANALYSIS OF BEHAVIOR IN THE EXPERIMENTAL APPARATUS** **PART 2: STATISTICS & COMPUTER PROGRAMS**
39:45	A diagram showing how the experimental apparatus was set up for an experiment in a larger room is discussed.
41:30	A form used for recording the behavior of experimental subjects during an experimental run is discussed

APPROX TIME (HR:MIN:SEC)	TOPIC
42:25	LIGHT BLUE SUBHEADING COMPUTER PROGRAM #1 SPATIAL PROBABILITY DISTRIBUTION FOR ONE SUBJECT MAKING RANDOM MOVES A computer program that generates spatial probability distributions is discussed. The program computes the probability that an experimental subject will be on any node on the floor, given any arbitrary starting position (node) and having made any arbitrary number of moves, assuming that the subject is making moves in a random manner. **Probability distribution(s) generated by this program can be used to set up experimental tests of a null hypothesis that subjects are moving randomly. Although most experimenters will probably be more interested in comparing the behavior of two groups of actual subjects, this computer program and the following two illustrate a number of basic statistical techniques that may be of interest.**

APPROX TIME (HR:MIN:SEC)	TOPIC
49:55	LIGHT BLUE SUBHEADING COMPUTER PROGRAM #2 GENERATING A NULL HYPOTHESIS OF RANDOM MOVEMENT FOR ONE SUBJECT IN THE DEVICE This program generates a probability distribution for the separation (measured in moves) between a stationary object on the floor pattern and an experimental subject making moves randomly.

APPROX TIME (HR:MIN:SEC)	TOPIC
58:20	**LIGHT BLUE SUBHEADING** **COMPUTER PROGRAM #3** **GENERATING A NULL HYPOTHESIS OF RANDOM MOVEMENT FOR TWO MOVING SUBJECTS IN THE DEVICE** This program generates a probability distribution for the separation (measured in moves) between two moving subjects who are making moves randomly.

APPROX TIME (HR:MIN:SEC)	TOPIC
1:08:10	**LIGHT BLUE SUBHEADING** **COMPUTER PROGRAM #4** **RECORDING AND CATEGORIZING THE MOVES OF SUBJECTS IN ACTUAL EXPERIMENTAL RUNS** This program accepts data from actual experimental runs (coordinates for the position of each subject after each move taken from the form for recording the behavior of subjects discussed at time 41:30 on this tape) and **computes a number of variables that are useful for the analysis of behavior.** Values are computed for actual interpersonal separations in meters, separations in moves, whether moves reduced the interpersonal separation, increased it, or left it unchanged, and other variables that may be of interest.
1:17:05	The statistical techniques presented in the preceding section of the tape are fairly basic and mostly directed toward illustrating the nature of this methodology and making the data produced by the methodology available in a useful form. There are a number of more **advanced issues related to the analysis of data of this nature** which are discussed in the paper "A General Framework for the Statistical Analysis of Sequential Dyadic Interaction Data" by Iacobucci and Wasserman (Psychological Bulletin, 1988, Vol.103, No.3, 379-390). See the reading list attached to this tape log.

APPROX TIME (HR:MIN:SEC)	TOPIC
1:17:30	BLUE TITLE **ASSEMBLING THE EXPERIMENTAL APPARATUS** **STEP 3: CURTAINS & ONE WAY MIRRORS** The completed experimental apparatus is shown. The final components, curtains to produce a setting that is - as much as possible - standard and reproducible at different sites, and one way windows for filming or taping experimental runs are assembled.

APPROX TIME (HR:MIN:SEC)	TOPIC
1:19:30	BLUE TITLE **EXCERPTS FROM EXPERIMENTAL RUNS** Four excerpts from actual experimental runs are shown. Runs included were selected on the basis of a number of criteria including acceptable quality of the original tape of the run, good camera angles, audible sound (there were audio problems caused by electrical interference from the fluorescent light fixtures in the room where the experiment was run) and other considerations. The runs are not presented as "representative" of the behavior of subjects in the experimental apparatus since there is considerable variation among subjects. However they do give some idea of how subjects responded to the experimental apparatus and the experimental scenario. As mentioned in the notes displayed on the tape itself, which are repeated below, all runs were made with one confederate (who was coached to present one of four possible conditions of verbal behavior x eye contact to the subject), and one "naive" experimental subject. The first three runs shown were made with the confederate instructed to maintain an easy flow of conversation. These runs give some idea of how experimental subjects responded to the experimental setting under these conditions. In the fourth run, the confederate has been instructed not to speak to the subject or make eye contact except as briefly as possible. The difference in the behavior of this subject, compared to that of the subjects in the first three runs, is very noticeable. I suspect that the unfamiliar setting may have, if anything, exaggerated the subjects' sensitivity to "cues" received from the confederate.

THE FOLLOWING ARE NOTES APPEARING IN THE VIDEOTAPE ON SCREENS WITH BLACK BACKGROUNDS. THEY ARE REPEATED HERE TO MAKE THEM EASIER TO REFER TO WHILE VIEWING THE EXPERIMENTAL RUNS.

1:20:55 The excerpts that follow are from experimental runs made at Tulane University. The experimental scenario and results are described in the paper "Psychological Characteristics and Interpersonal Distance," Ickinger, W. & Morris, S. (available from www.sharktown.com)

1:21:00 There was one experimental subject in the device with a confederate who was presented to the subject as another subject. Confederates were trained to vary the amount of eye contact made and the amount of talking they did with the subject. The camera follows the subject.

1:21:15 **EXCERPT #1**
Female Confederate
Female Experimental Subject

Confederate instructed to maintain comfortable eye contact and a comfortable flow of conversation with the subject.
(HIGH EYE CONTACT/HIGH VERBAL EXPERIMENTAL CONDITION)

1:27:25 **EXCERPT #2**
Male Confederate
Male Experimental Subject

Confederate instructed to maintain comfortable eye contact and a comfortable flow of conversation with the subject.
(HIGH EYE CONTACT/HIGH VERBAL EXPERIMENTAL CONDITION)

1:33:30 **EXCERPT #3**
Male Confederate
Male Experimental Subject

Confederate instructed to avoid eye contact and to maintain a comfortable flow of conversation with the subject.
(LOW EYE CONTACT/HIGH VERBAL EXPERIMENTAL CONDITION)

1:35:35 **EXCERPT #4**
Male Confederate
Male Experimental Subject

Confederate instructed to avoid eye contact and to not initiate conversation with the subject.
(LOW EYE CONTACT/LOW VERBAL EXPERIMENTAL CONDITION)

1:37:45 **END OF EXCERPTS** - Brief concluding comments.

1:39:00 **CREDITS - END OF TAPE**

BRIEF READING LIST ON PROXEMIC BEHAVIOR

Aiello, John R. (1987) Human Spatial Behavior. in Stokols, D. & Altman I. (eds.) Handbook of Environmental Psychology. New York: John Wiley & Sons

The most recent comprehensive review of the proxemics literature. A very thorough summary of the theoretical frameworks and research findings related to proxemic behavior. Contains a five-page discussion of measurement issues and the measurement problems that have plagued proxemics research. The methodology described in this videotape is an attempt to address some of these problems.

Burgoon, J., Buller, D., & Woodall, W. (1989) Nonverbal Communication: The Unspoken Dialog. New York: Harper & Row

A fairly recent overview that summarizes the research on proxemic behavior in the broader context of nonverbal communication in general.

Hall, E. T. (1966) The Hidden Dimension. New York: Doubleday

The "classic" on proxemic behavior. Somewhat dated but still interesting and useful. An anthropological perspective.

Iacobucci, D. & Wasserman, S. (1988) A General Framework for the Statistical Analysis of Sequential Dyadic Interaction Data**.** Psychological Bulletin, 103, 379-390

(The abstract from the article.)

Recent interest in sequential dyadic interactions has motivated researchers to develop methods appropriate for the analysis of such data. After briefly reviewing a series of methodological papers focusing on the analysis of discrete-valued observations, we present a general framework for studying many substantive effects, including dominance and autodependencies, in social interactions measured on dyads. We show how this framework allows a researcher to study dyadic interactions measured at two or more time points on one or more relations. The methods described here are general enough to permit the simultaneous analysis of the sequential relational variables and attribute variables (such as sex of actors or emotional status of the dyad) recorded on either the dyad or the actors.

Patterson, M. (1983) Nonverbal Behavior: A Functional Perspective. New York: Springer-Verlag

An interesting theoretical perspective on non-verbal behavior. Describes two other approaches to a standardized experimental setting for proxemics research, the "Ickes paradigm" and the "Patterson paradigm."