Interpersonal Communication as a Function of Subject Representational Mode

Joseph Adrian Williams

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INTERPERSONAL COMMUNICATION AS A FUNCTION
OF SUBJECT REPRESENTATIONAL MODE
(TITLE)

BY

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Abstract

The study investigated aspects of a communications model of psychotherapy advanced by Grinder and Bandler. Subjects were thirty male and female undergraduate introductory psychology students at Eastern Illinois University during the summer of 1977. The subjects ranked a set of tape recorded statements for "understandability". These statements were presented in visual, auditory, and kinesthetic representational modes. Subject ratings provided a measure of which representational modes communicated most effectively to them. Three independent judges rated transcripts of recorded samples of the subject's actual language usage to determine the representational modes utilized by the subjects. Analysis of the ratings resulted in a confirmation of the experimental hypothesis that subjects would display a primary representational mode, while the hypothesis that subject preference and observed usage would be the same was not confirmed.
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INTRODUCTION

Clinical experience has led Grinder and Bandler (1975, 1976) to advance a communications theory of human experience which has been applied mainly in the context of psychotherapy. One small, but extremely important, part of their theory deals with the apparent tendency for people to communicate their experience as a function of their perceptual processes. Grinder and Bandler claim that all verbal communication can be categorized into three representational modes based on observation of the verbs and predicates utilized by the speaker. These modes are conceived of as being either visual, auditory, or kinesthetic.

The purpose of the present study is to experimentally examine the effects of visual, auditory, and kinesthetic representational modes in verbal interpersonal communication. The categorization of verbal interpersonal communication into representational modes appears to be unique to Grinder and Bandler (1976), but has been influenced in part by theories advanced by Gregory Bateson (1951).
Early work done by Bateson (Reusch and Bateson, 1951) postulated that communication was a function of the individual's interpretation of those perceptions impinging on his sensory apparatus, and that the intrapersonal processes are "distinctly different from the events in the external world". From this observation Bateson concluded that a process which he termed codification occurs. In codification the individual translates external events via some internal process into a reflection or representation of those external events. Thus, codification is considered to be that process by which an external event is represented internally, and then becomes that external reality for the individual. An example of this might be the process by which an individual converts, or codifies, his total perceptual experience into the representational system of language (see below under digital codification).

Beyond the initial proposition of the existence of a process termed codification, it is hypothesized that codifi-
cation must occur systematically, providing a constant method of relation between the external events and the internal assessment of those events. On the basis of this reasoning, Bateson (1951) specifies three types of codification, these being digital, analogic, and Gestalten.

Digital codification is a process by which an external experience is represented in a totally different representational system. As noted above, an example of this might be the description, in language, of something one felt. Thus, the perceptual input is altered before any cognitive manipulations are made with that perceptual data.

Analogic codification refers to a form of codification in which external events are represented internally on the basis of some sort of model. Changes in the external world are represented by changes in the internal model, and the internal results of such changes are then observed. Bateson (1951) hypothesized that certain very empathic people may do this by a process of kinesthetic imitation, thus utilizing their own body as the analogic model. A more recent interpretation of analogic codification includes such aspects of communica-
Gestalt codification refers to a process by which information is codified in distinct units, or wholes. Thus form, shape, and size are perceived and reacted to as a message of either the presence or absence of a particular event, which fits a formal category or definition, and may then be processed as a single unit.

Later work by Bateson (1955-a) led to the hypothesis that utilizing Bertrand Russell's Theory of Logical Types (Russell, 1910), each communication by a human can be placed into one of two levels of abstraction. These messages are considered to be either metalinguistic or metacommunicative. Metalinguistic messages refer to the language itself, i.e. the content of the message. For example:

The verbal sound "cat" stands for any member of such and such class of objects.

(Bateson, 1972, p 178).

Or:

The word "cat" has no fur and cannot scratch.

(Bateson, 1972, p 178).
Metacommunicative messages refer to the relationship between the speakers. For example:

My telling you where to find the cat was friendly.

(Bateson, 1972, p 178).

Finally, Bateson (1955-a) used Korzybski's (1948) concept of the map-territory relation to emphasize the point that language is not the object which it denotes. As Bateson phrased it:

"...language bears to the objects which it denotes a relationship comparable to that which a map bears to a territory."

In still later work (1968-a) Bateson differentiated his concept of content and relationship messages by considering content messages to be expressed through verbal means (digital) and relationship messages to be conveyed nonverbally (analogic). In several examples (below) Bateson takes the position that relationship messages (i.e. nonverbal) are to be considered meta
(i.e. of a higher logical type) to the content messages when there is an incongruity between the two. Thus the meta message is considered to be the "true" message being communicated by the "speaker". Bateson illustrates determination of the meta message by the following examples:

When a boy says to a girl, "I love you," he is using words to convey that which is more convincingly conveyed by his tone of voice and his movements, and the girl, if she has any sense, will pay more attention to those accompanying signs than to the words.

(Bateson, 1972, p 412).

and

What is known to occur at the animal level is the simultaneous presentation of contradictory signals--- postures which mention both aggression and flight, and the like. These ambiguities are, however, quite different from the phenomena familiar among humans where the friendliness of a man's words may be contradicted by the tension of aggres-
siveness of his voice or posture. The man is engaging in a sort of deceit, an altogether more complex achievement. (Bateson, 1972, pp 424-425).

Grinder and Bandler's (1975, 1976) work differs significantly from that of Bateson, though it does build on concepts he developed. Grinder and Bandler have constructed a model of communication which is easily applied to psychotherapy, with the aim of both facilitating therapeutic changes and making those changes readily specifiable. They have employed three broad concepts in their model, derived both from Bateson's theories and from principles developed elsewhere in the study of transformational grammar.

First, the model developed by Grinder and Bandler allows for only one possible message per output channel at any given instant. Thus, Grinder and Bandler may observe multiple messages from a client, any or all of which may be checked for incongruities. This is opposed to Bateson's (1955-a) binary scheme which limits the observation of output channels to either content or relationship messages. For example, Grinder and Bandler may check verbal content messages, voice tone messages, and any num-
ber of "body language" messages for incongruency in any one communication. Thus they have more information available by which to infer client congruity or incongruity.

Second, Grinder and Bandler have found it clinically useful to view all of the simultaneous messages presented to them as para (i.e. of the same logical level) to one another. Thus, rather than automatically distinguishing analogic messages as being meta (of a higher logical level, or in transformational grammar terms, a comment on another message) to digital (verbal) messages, Grinder and Bandler consider both messages to be equally valid representations of the client's experience, with each of the messages representing a portion of that person's model of the world. Incongruities are viewed as indicative of the person's resources for dealing with the world, and the problem of determining which message is meta with respect to the other loses significance (Grinder and Bandler, 1976, p 38).

Third, Grinder and Bandler assert that, given that all simultaneous messages are para to one another (i.e. not comments on one another) there are no restrictions on the integration of the person's conflicting models of the world represented by the para-messages when they are incongruent (1976, p 38).
This differs widely from Bateson's model, in which any attempt to integrate incongruent messages necessarily results in a violation of the Theory of Logical Types, which implies paradox.

Thus, in summary of Grinder and Bandler's model:

1. there are many possible simultaneous messages from a "speaker";

2. these messages are para with respect to one another, and are all valid representations of the person's experience; and

3. integration of these messages, when they are incongruent is possible, and results in a more complete model of the world.

Another aspect of Grinder and Bandler's work has to do with their conceptualization of various para messages each representing the person's model, or models, of the world. As mentioned above, they state that incongruity is the sure sign that the person holds differing, incompatible views of the world. In
their observations of verbal messages they noted that people tended to represent their experience in three, rather easily specifiable ways. These three representational modes are, in effect different cognitive maps for interpreting the data contained in the incoming language. Grinder and Bandler state that data taken in by the human organism is derived through the five senses of sight, smell, hearing, touch and taste. They hypothesize that only three of these senses play any significant role in verbal interpersonal communication, these being sight, sound, and touch. Consequently, all verbal communication can be categorized in terms of either visual, auditory, or kinesthetic components. This may be accomplished through an analysis of the predicates utilized in the grammatical structure of the communication. More specifically, they state that:

Predicates are words used to describe the portions of a person's experience which correspond to the processes and relationships in that experience. Predicates appear as verbs, adjectives, and adverbs in the sentences which the client uses to describe his experience.

(Grinder and Bandler, 1976, p 9).
The visual representational mode utilizes verbs, adjectives, and adverbs which create a language map of a visual map for external experience (Grinder and Bandler, 1976, p 7). Examples include:

Do you see what I'm showing you?
Let's look at the situation and see if there's a solution.
Clearly you don't picture what I'm showing you.

In each of the above examples two things have occurred. First, external experience has been codified into another representational system (language), and then expressed (verbally) in visual terms. Since the process of digital codification occurs any time experiences are converted to language, it will not be remarked upon further.

The auditory representational mode makes use of verbs, adverbs, and adjectives with strong auditory components. Thus:

Listen to what I'm telling you.
I'm hearing you say...
Will you tell me that more clearly?
The kinesthetic representational mode is characterized by the use of verbs, adjectives, and adverbs which convey feeling and/or movement. Thus:

I just hate it when I feel like this.
I feel so guilty when I act like that.
I try so hard to please.

Grinder and Bandler state that each individual's use of verbs, adjectives, and adverbs reveals a characteristic representational mode through which he perceives and interprets the world most effectively. This primary mode is identified by the relative frequency of the verbs, adjectives, and adverbs used in that representational mode. Grinder and Bandler also assert that the individual is able to make a larger number of distinctions in his primary mode than in his secondary or tertiary representational mode. They further state that stress generally results in the person's retreating into more exclusive use of the primary mode, where he has the most distinctions available, and where he is best able to cope. These hypotheses, based on clinical observation and experience, have some impor-
tant implications, particularly as applied to the practice of psychotherapy.

First, a therapist, by observing the verbs, adjectives, and adverbs used by a client may note the client's primary representational mode and phrase his responses to the client in that mode. This should have the effect of allowing the therapist and client to communicate more effectively, thus facilitating the client's acceptance and trust in the therapist.

Second, a client who retreats into using his primary representational mode will cut his level of understanding of messages presented in other modes. Thus it is inferred that he is restricting his choices or options for dealing with the world, often resulting in confusion and feelings of helplessness. The implication is that one method of dealing with this problem is for the therapist to assist the client in utilizing all three representational modes to structure his experience, thus increasing the client's options for coping.

Third, the model developed by Grinder and Bandler is based on observable, quantifiable, non-dynamic grammatical principles. Thus, the application of Grinder and Bandler's model may be readily integrated with techniques and theories from other
schools of psychotherapy, resulting in a facilitation of the therapeutic change process.

Fourth, the model developed by Grinder and Bandler is also applicable to the general population, not just psychiatric patients.

The model of communication developed by Grinder and Bandler is intriguing, and has been supported by application in the clinical setting (Dimmer, 1977; Lankton, 1977). The purpose of this study is to experimentally test the effects of visual, auditory, and kinesthetic representational modes in interpersonal communication. Therefore the following hypotheses will be tested:

(1) an examination of the verbs, adjectives, and adverbs used by experimental subjects will reveal each subject to be communicating in one representational mode (corresponding to Grinder and Bandler's "most highly valued" representational mode) at a higher frequency than the other two representational modes;
(2) Experimental subjects will experience verbal communication phrased in the verbs, adverbs, and adjectives of their primary representational mode as being more effective (understandable) than communication phrased in the verbs, adjectives, and adverbs of their secondary and/or tertiary representational mode.

It is expected that each subject will exhibit a primary representational mode, as determined by a frequency count of the visual, auditory, and kinesthetic verbs, adjectives, and adverbs utilized by the subject in verbal interaction. It is also expected that the second hypothesis will be supported, and that subjects will indeed experience messages in their primary representational mode as more effective communication than messages in less favored representational modes.
METHOD

Subjects

The subjects were volunteers from introductory college psychology courses at Eastern Illinois University. All introductory students were given an opportunity to participate in the experiment through the reading of a standardized announcement in their class (see below).

The experimental sample consisted of thirty (30) subjects. There were fifteen (15) males, comprising fifty (50%) per cent of the sample, and fifteen (15) females, also comprising fifty (50%) per cent of the sample. Ages of the subjects ranged from seventeen (17) years to forty-eight (48) years, with a mean age of twenty-three and one half (23.5) years.

Apparatus

Subject responses in the monologue portion of the experi-
ment were tape recorded on a Ross Mark 8600 cassette tape recorder equipped with a 600 Ohm Realistic Omnidirectional Electret Microphone #33-1055. Messages in the three representational modes were presented from the same machine using a standardized, prerecorded tape.

All instructions, tape recording, and subject participation in the study were carried out in a small testing cubicle (approximately 6' by 9'), which contained two chairs and a small table to hold the recording device and writing supplies for the subject.

Procedure

Students in all introductory psychology courses at Eastern Illinois University were given the opportunity to participate in the study. They were read a standardized announcement which was worded as follows:

Anyone interested in participating as an experimental subject in a communications patterns study is requested
to sign the sheet of paper being passed around at this time. Approximately one hour of your time will be required, including a full explanation of the experiment at the end, and feedback, if desired, on your own style of communication. Those interested in participating will be contacted to arrange a convenient time to do the experiment.

Subjects reported to the experimental room (as described above), where they were greeted by the experimenter, and seated. The actual experimental procedure was initiated by tape recording a short subject monologue in which the subject was given a set of written instructions directing him/her to:

Describe the relationship with your closest friend. Are you able to talk to each other? What feelings do you have for each other? How do you see the relationship? You will have three minutes in which to complete this task, from when the experimenter instructs you to begin speaking/

Each subject was given the further verbal instruction from the experimenter, "I'll give you one minute to organize your thoughts". The purpose of this first step was to collect a sample of the subject's verbal communication. This sample was later transcribed verbatim and analyzed for frequency of verbs, adjectives, and adverbs in each representational mode. The
time limit was introduced in order to induce some element of "stress", with the intention of inviting the subject to "re-treat" more strongly into his/her primary representational mode. The primary representational mode was defined, as per Grinder and Bandler (1976), to be that mode through which the subject primarily interprets the world, and is identified as that mode most frequently utilized (verbs, adverbs, and adjectives) by the subject.

The next step in the procedure consisted of presenting the subject with the written instructions:

The purpose of this experiment is to gather information on the ways in which people communicate, and ways they can do so more effectively. In this part of the experiment you will listen to 7 statements, with each statement being expressed in three equivalent forms. Your task is to rank the equivalent form of each statement, with 1 being the form which best communicates the meaning of the statement to you, 2 the next best form, and 3 the form which least communicates the meaning of the statement. You will have twenty seconds to rank each set of 3 forms, and the forms will be presented only once. All forms must be ranked.

The subject was then immediately presented, via tape recording, the set of statements on the following page.

The purpose of this step was to test which representational
I. 1. I see what you're showing me
   2. What you're saying sounds right to me.
   3. That feels right to me.

II. 1. I want you to see my point.
     2. I want you to listen to what I'm saying.
     3. I want you to get in touch with this.

III. 1. Show me how you see things now.
     2. Tell me more about what you're saying.
     3. Put me in touch with what you're feeling.

IV. 1. I really like what I see here.
     2. This really sounds good to me.
     3. What we're doing here feels good to me.

V. 1. Do you clearly see the point I'm making?
     2. Does what I'm saying sound right to you?
     3. Does this feel right to you?

VI. 1. What do you see as the problem?
     2. Will you tell me what the problem is?
     3. What do you feel to be the problem?

VII. 1. Do you see the problem more clearly now?
     2. Does the problem sound clearer now?
     3. Do you feel like you're in touch with the problem now?
mode the subject experienced as the most effective communication. (See Appendix A for information on the pilot study testing this procedure). This portion of the experiment presented the above-mentioned statements by a standard tape recording. Thus each subject was exposed to the same voice qualities of rhythm, tone, inflection, and pronunciation. The instruction to rank each set of statements within twenty seconds and the information that the items would be presented only once were, again, intended to elicit responses in the primary representational mode through inducing a slight amount of stress. Subjects' ratings were scored on a standard sheet provided for the purpose which was collected at the end of the rating period (see Appendix A).

The next step in the experimental procedure was the subject debriefing period. During this period the experimenter explained the basics of the theory advanced by Grinder and Bandler (1976), outlined the hypotheses being tested, and (when requested) explained the purpose of each step of the experiment. The debriefing was concluded with the request that the subject not reveal the details or purpose of the experiment to any other subjects, or potential subjects.
The purpose of the present study was to determine whether communication in a subject's primary representational mode is associated with higher levels of communication than communication in other representational modes. In accordance with statistical principles suggested by Siegel (1956, pp 42-43) and by Downie and Heath (1970, p 196), it was decided that non-parametric statistics were most appropriate for analyzing the data. The chi square statistic was chosen as the appropriate test of significance (Runyon-Haber, pp 248-249).

Existence of a primary representational mode for the subjects was tested using a 2 X 3 contingency table of subject category (auditory or kinesthetic) and number of visual, auditory, and kinesthetic predicates used. The chi square analysis for the match between representational mode usage and preference was performed using a 2 X 3 contingency table of subject-rater agreement and representational mode (visual, auditory, or kinesthetic).

Ratings of the verbs, adjectives, and adverbs actually
used by the subjects were made from verbatim transcripts of the monologue portion of the experiment in accordance with grammatical principles outlined by Walsh (1959) and by Webster (1974). Three independent judges, who had been trained in using the system (see Appendix B), rated the transcripts. The judges rated a total of four hundred fifty-three (453) verbs, adverbs, and adjectives. Inter-rater reliability was measured by simple per cent agreement between all three raters for all thirty transcripts. All three judges were in agreement for ninety-two (92%) per cent of the ratings, two judges were in agreement for eight (8%) per cent of the ratings, and there were no instances (0%) of total inter-rater disagreement.
RESULTS

Results supported the first hypothesis, that subjects' would communicate in one of the three representational modes (i.e. visual, auditory, or kinesthetic) at a significantly higher frequency than in the other two representational modes. A chi square analysis of the data yielded a $X^2_{obs}$ of 44.07 for auditory and kinesthetic subjects. The critical value of $X^2$, at $p = 0.001$, with two degrees of freedom, was 13.82 (see table 1). Thus, as predicted, auditory subjects utilized auditory verbs, adverbs, and adjectives at a significantly higher frequency than the other two representational modes. Likewise, kinesthetic subjects used significantly more kinesthetic predicates. There was insufficient data to statistically analyze either the visual or the mixed (auditory-kinesthetic) subjects' performance. The three independent raters found twenty-two (22) subjects to be primarily utilizing the kinesthetic mode, five (5) subjects primarily utilizing the auditory mode, one (1) subject primarily utilizing the visual mode, and two (2) subjects equally utilizing the audi-
tory and kinesthetic representational modes. This was determined by a frequency count of the visual, auditory, and kinesthetic verbs, adjectives, and adverbs used by the subjects during the monologue portion of the study. The actual number of visual, auditory, and kinesthetic verbs, adjectives, and adverbs utilized by each of the above-named groups are presented in table 2.

Results did not support the second hypothesis that the representational modes that subjects reported as the most effective communication would match the representational mode they actually used during the monologue portion of the experiment (as determined by a frequency count of the judges' ratings of subjects' visual, auditory, and kinesthetic verbs, adjectives, and adverbs). A chi square analysis produced a $X^2_{obs}$ of 335.2. The critical value of $X^2$, at $p = 0.001$ and with two degrees of freedom, was 13.82. This resulted in the rejection of the null hypothesis that the two groups did not differ in their relative frequency distributions of subjects among the categories. $H_1$, that the groups were different, was accepted. Table 3 shows that the second experimental hypothesis was not supported. Thus, subject representational
mode usage and preference did not match.

Subjects' ratings of the communication presented in tape recorded form resulted in twelve (12) subjects choosing the visual as their preferred representational mode, twelve (12) subjects choosing the auditory as their preferred representational mode, and six (6) subjects choosing the kinesthetic as their preferred representational mode.
## Observed and Expected Subjects' Representational Mode Usage

<table>
<thead>
<tr>
<th></th>
<th>Visual Predicates</th>
<th>Auditory Predicates</th>
<th>Kinesthetic Predicates</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Auditory Subjects</strong></td>
<td>5 (4.1)</td>
<td>49 (24.8)</td>
<td>24 (49.1)</td>
</tr>
<tr>
<td><strong>Kinesthetic Subjects</strong></td>
<td>19 (19.9)</td>
<td>95 (119.2)</td>
<td>261 (235.1)</td>
</tr>
</tbody>
</table>

\[
X^2_{obs} = 44.07 \quad X^2_{crit} = 13.82 \quad p = 0.001
\]

Table 1
<table>
<thead>
<tr>
<th></th>
<th>Visual Predicates</th>
<th>Auditory Predicates</th>
<th>Kinesthetic Predicates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visual Subjects (N = 1)</td>
<td>4</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Auditory Subjects (N = 5)</td>
<td>5</td>
<td>49</td>
<td>24</td>
</tr>
<tr>
<td>Kinesthetic Subjects (N = 22)</td>
<td>19</td>
<td>95</td>
<td>261</td>
</tr>
<tr>
<td>Mixed Mode Subjects (N = 2)</td>
<td>1</td>
<td>13</td>
<td>13</td>
</tr>
</tbody>
</table>

Table 2
### Subject-Rater Agreement and Disagreement in Three Representational Modes

<table>
<thead>
<tr>
<th></th>
<th>Visual</th>
<th>Auditory</th>
<th>Kinesthetic</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Subject-rater Agreement</strong></td>
<td>0 ( (5) )</td>
<td>2 ( (5) )</td>
<td>3 ( (5) )</td>
</tr>
<tr>
<td><strong>Subject-rater Disagreement</strong></td>
<td>30 ( (5) )</td>
<td>28 ( (5) )</td>
<td>27 ( (5) )</td>
</tr>
</tbody>
</table>

\[
x^2_{\text{obs}} = 335.2 \quad x^2_{\text{crit}} = 13.82 \quad p = 0.001
\]

Table 3
DISCUSSION

This study examined theoretical assertions of Grinder and Bandler (1976) that interpersonal communication is significantly affected by the representational modes utilized by the communicators. The first experimental hypothesis, i.e. that subjects would use one representational mode at a significantly higher frequency than other modes, was supported. The second hypothesis, i.e. that subjects' representational mode usage and preference would match, was not supported. These results have some interesting implications, which will be discussed below.

A strong implication of the study is that Grinder and Bandler's model of communication and therapy may be based on inaccurate assumptions regarding the role and/or significance of representational modes in interpersonal communication. If the results of the present study are replicable with a broader population under a variety of conditions, then the validity of Grinder and Bandler's theory must be seriously questioned. It is, of course, possible to speculate that the results of the present study might have been different had the experimental conditions been
different. For example, one objection might be that the level of stress induced in the subjects was not sufficient to produce a retreat into the "real" primary mode. Until Grinder and Bandler state how much or just what kind of psychological stress is necessary, however, such questions will have to remain unanswered.

Reports of clinical work utilizing Grinder and Bandler's theory have been favorable (Dimmer, 1977; Lankton, 1977). One implication of these findings, in the context of the results of the present study, is that there are other, unknown, factors present that are responsible for the clinical results. Given the manner in which Grinder and Bandler's theory is applied clinically (Grinder and Bandler; 1975, 1976), this writer speculates that the process of reframing (Watzlawick, Weakland, and Fisch; 1974) may be at least one factor actually responsible for the production of clinical results. Reframing has been defined as:

... to change the conceptual and/or emotional setting or viewpoint in relation to which a situation is experienced and to place it in another frame which fits the "facts" of
the same concrete situation equally well or even better, and thereby change its entire meaning.

(Watzlawick, Weakland, and Fisch; 1974).

An example of reframing is noted in the following case report:

... Erickson was once consulted by a woman whose 14-year-old daughter had developed the conviction that her feet were grotesquely large and as a result of it had begun to withdraw from her friends, from school, and from most other activities outside the home. As can be imagined, everybody tried to convince her that her feet were perfectly normal and that the whole idea was just ridiculous. As a result of these well-meant, commonsensical exhortations, a typical game without end had established and consolidated itself between the girl and her human environment. The more the others tried to make her come to her senses, the more she insisted on the huge size of her feet. Erickson arranged for a home visit, the ostensible reason being a medical examination of the mother. In the course of this examination he had the girl fetch a towel and stand behind him, holding the towel ready in case he needed it. He then suddenly moved back, "inadvertently" stepping on one of her feet. As she cried out in pain he turned around and said angrily: "If you would grow these things large enough for a man to see, I wouldn't be in this sort of situation." Erickson reports that this one intervention was sufficient to bring about the desired change in the girl's body image.

Grinder and Bandler's method, in which the client's problem is defined as a lack of options in all three representational modes, seem to this writer to essentially produce a reframing of the problem. Thus, as in the example above, where the problem was reframed from the girls feet being too large to her feet being too small, Grinder and Bandler's method may merely redefine the problem as "really" being an inability to adequately utilize all three representational modes. Their concept of the representational modes thus may not be a valid phenomena in of itself.

One major value of the present study is that it has provided one of the first experimental tests of the theory advanced by Grinder and Bandler. As with any research of such a ground-breaking nature, there was a lack of previously existing methodology in the area. Before definite conclusions can be drawn as to the validity of Grinder and Bandler's theory, it will be necessary to see the present results replicated. Additional research might well be addressed to testing Grinder and Bandler's theory against different populations, under different conditions, and utilizing a variety of measures for the variables under consid-
eration.

In conclusion, the present study has provided a first test of Grinder and Bandler's theory. The results appear not to support their assumptions about representational mode usage and preference matching. Replication of the present study, and testing of the theory under other experimental conditions with different measures and with a different population was suggested.
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APPENDIX A
Pilot Study

The purpose of the pilot study was to test the reliability of the rating device to be used by subjects in the main study. The pilot sample consisted of fourteen (14) undergraduate psychology students. They were administered the rating device by a professor (Dr. William Kirk), who distributed the instruction and rating forms, played the tape recording, and collected the complete forms. The same device was readministered after a one week interval, and test-retest reliability calculated. Since the rating device dealt with ordinal data, the Spearman rank correlation coefficient was employed. A test-retest correlation of 0.98 was achieved, which was significant at the 0.01 level of probability for a two-tailed test. It must, however, be kept in mind that since there were only three possible rankings for each slot in the test scale that there is a good possibility that this correlation is spuriously elevated. The critical value of $r_{\rho}$ is less than 0.478 however, so it is reasonable to assume that the device is reliable.

A transcript of the tape recorded statements read to the
subjects follows, along with a sample of the rating form used by the subjects in the study.
Tape Transcript

I. 1. I see what you're showing me.
   2. What you're saying sounds right to me.
   3. That feels right to me.

II. 1. I want you to listen to what I'm saying.
     2. I want you to get in touch with this.
     3. I want you to see my point.

III. 1. Put me in touch with what you're feeling now.
      2. Show me how you see things now.
      3. Tell me more about what you're saying.

IV. 1. I really like what I see here.
       2. This really sounds good to me.
       3. I feel good about what we're doing here.

V. 1. Does what I'm saying sound right to you?
    2. Does this feel right to you?
    3. Do you clearly see the point I'm making?

VI. 1. What do you feel to be the problem?
     2. What do you see as the problem?
     3. Will you tell me what the problem is?

VII. 1. Do you see the problem more clearly now?
      2. Does the problem sound clearer now?
      3. Do you feel like you're in touch with the problem now?
The purpose of this experiment is to gather information on the ways in which people communicate, and ways they can do so more effectively. In this part of the experiment you will listen to 7 statements, with each statement being expressed in three equivalent forms. Your task is to rank the equivalent forms of each statement, with 1 being the form which best communicates the meaning of the statement to you, 2 the next best form, and 3 the form which least communicates the meaning of the statement. You will have twenty seconds to rank each set of 3 forms, and the forms will be presented only once. All forms must be ranked.

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RATER'S MANUAL
To the Rater:

Your part in this study will be to rate transcripts obtained in an earlier phase of the study. These transcripts will be rated for their visual, auditory, and kinesthetic content. The transcripts will be presented to you with the words to be rated already underlined. Your task will be to assign a rating of either V (visual), A (auditory), or K (kinesthetic) to each of the underlined words or set of words. Should you note words which you think should be rated, but are not underlined, please rate these words and make a notation of the word and where it appears in the transcript.

Enclosed in this manual are three practice transcripts. After reading the section of rating guidelines, rate the practice transcripts. Following each transcript is a correctly scored copy. These corrected keys will serve to provide feedback as to your performance. Please leave each practice transcript as you originally rated it; make no corrections or alterations after viewing the key. After you have completed the three practice transcripts return the entire rating manual to me. The experimental transcripts will be mailed to you to be rated. Thank you for your participation and cooperation in this study.
Guidelines for Rating Transcripts

A theory advanced by Grinder and Bandler (Structure of Magic, Vols. I and II) has hypothesized that humans interpret the world around them through a "most-favored" sensory modality, or representational mode. Thus, though most humans have available to them five senses with which to interpret the world, Grinder and Bandler assert that most people primarily interpret the world through one representational mode, converting data in other modes to that most favored mode. Thus a person may be primarily visual, or auditory, or kinesthetic (olfaction and gustation are considered to be used only at a minimal level). Grinder and Bandler further assert that it is possible to deduce a person's primary representational mode by analyzing the verbs and predicates found in his speech. Thus, a person who primarily interprets the world visually will be expected to use visual verbs and predicates, and similarly for a person whose primary mode is auditory or kinesthetic.

A visually oriented person will be expected to use verbs and predicates which presuppose a visual map of his experience.
Examples of this include statements such as:

I see what you're showing me.
The problem appears pretty clear to me.
I want you to focus in on the point I'm making here.

An auditorally oriented person, however, is expected to use verbs and predicates which presuppose an auditory map of his experience. Examples of this include:

Sounds like you're saying you're upset with him.
Can you tell me more about the problem?
If I'm hearing you clearly, you want...

A kinesthetically oriented person is expected to use verbs and predicates which presuppose a kinesthetic map of his experience. Examples of this include:

I've been wrestling with this problem all night.
He's really angry about the new ruling.
I'm really in touch with that feeling now.

At this point you should have a basic understanding of
how to interpret the practice transcripts. Please proceed to that section, carefully rating each transcript. Review the key for each transcript before proceeding to the next transcript.
I can see why it might be a good thing to get a bit uptight if the driver looked like he was about to go to sleep, or if he obviously didn't see some warning signs, because then you'd be motivated to alert him of what was happening. But in all of these situations you've mentioned, it doesn't sound like there is any need for you to get anxious, and the anxiety just makes you feel bad and not ride in a car, which is darned inconvenient.

Visual

Auditory

Kinesthetic
I can see why it might be a good thing to get a bit uptight if the driver looked like he was about to go to sleep, or if he obviously didn't see some warning signs, because then you'd be motivated to alert him of what was happening.

But in all of these situations you've mentioned, it doesn't sound like there is any need for you to get anxious, and the anxiety just makes you feel bad and not ride in a car, which is darned inconvenient.

Visual 3

Auditory 2

Kinesthetic 5
Well, I do want to talk it over, or else perhaps I wouldn't have asked the question. In regard to this, I had a big fight before I came here, I really got very angry and I was just beating you down, you know. Ah, and then of course by the time I got here I rationalized it to the extent where I think I can understand why I was so angry at you. First of all, would you like to know why I was so angry? Ah, I was angry in that I thought this whole thing is a fraud. I mean, now I'm being very frank. I think that--- at least I thought then, that this idea of coming here and talking and talking is not so terrific when you consider that you can always do that almost anywhere if you really take the time or trouble to get somebody who will listen to you.
Well, I do want to talk it over, or else perhaps I wouldn't have asked the question. In regard to this, I had a big fight before I came here, I really got very angry and I was just beating you down, you know. Ah, and then of course by the time I got here I rationalized it to the extent where I think I can understand why I was so angry at you. First of all, would you like to know why I was so angry? Ah, I was angry in that I thought this whole thing is a fraud. I mean, now I'm being very frank. I think that--- at least I thought then, that this idea of coming here and talking is not so terrific when you consider that you can always do that almost anywhere if you really take the time or trouble to get somebody who will listen to you.

Visual 0

Auditory 5

Kinesthetic 8
Martha, as you see her smiling, strong and brave, and not needing to take control over you, knowing that you can have both her toughness and your own tenderness when either is appropriate, let your hands come up slowly, grasping the picture before you, ever so slowly, watching her face. Now, slowly seeing her and feeling yourself pull her closer to you slowly... so slowly... until you feel her enter and become part of yourself, seeing what you see and feeling what you feel. That's right. What do you feel as you let this become part of you?

Visual

Auditory

Kinesthetic
Martha, as you see her smiling, strong and brave, and not needing to take control over you, knowing that you can have both her toughness and your own tenderness when either is appropriate, let your hands come up slowly, grasping the picture before you, ever so slowly, watching her face. Now, slowly seeing her and feeling yourself pull her closer to you slowly... so slowly... until you feel her enter and become part of yourself, seeing what you see and feeling what you feel. That's right. What do you feel as you let this become part of you?

Visual 5

Auditory 0

Kinesthetic 10