THE USE OF SYSTEMATIC DESENSITIZATION IN
THE PREVENTION OF PERSASIVE ANXIETY

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This investigation was concerned with the potential effectiveness of systematic desensitization as a technique in the prevention of pervasive anxiety. Pervasive anxiety was defined in this investigation as fear that is elicited by a wide variety of specific stimuli. It was hypothesized for investigatory purposes, that if two specific, potentially anxiety-evoking stimuli could be pre-desensitized, this would be strongly suggestive that pre-desensitization programs might also prove successful in the prevention of pervasive anxiety. The stimuli to be pre-desensitized in this study were those associated with 1) snakes, and 2) public speaking. These stimuli were selected because they hold relatively universal potential for anxiety elicitation.

Two groups of ten subjects were matched on the basis of their scores on the Taylor Manifest Anxiety Scale. One group, the placebo control group (PC), received eight sessions of pre-desensitization using an anxiety hierarchy of irrelevant scenes. The experimental treatment group (ET) received eight sessions of pre-desensitization in which the first
half of each session was devoted to pre-desensitization of live snakes. The second half of each session was devoted to pre-desensitization of public speaking. At the end of pre-desensitization, all subjects engaged in two potentially anxiety-evoking situations. The first situation required a subject to approach a snake, and the second situation required a subject to speak in front of a group of people. Prior to participating in both of these sessions, subjects filled out a General Fear Survey Schedule. In addition, prior to the public speaking situation, subjects also filled out a Specific Fear Survey Schedule concerned with public speaking. Therefore, the data for each subject consisted of four measures: a score on the General Fear Survey Schedule given prior to the snake approach test, distance of physical approach to the live snake, a score on the General Fear Survey Schedule given prior to the public speaking situation, and a score on the Specific Fear Survey Schedule also given prior to the public speaking engagement. On all four measures the placebo control group's scores were significantly higher (p < .05) than the experimental group's scores, which confirmed the hypothesis regarding the potential efficacy of pre-desensitization.
The pragmatic application of pre-desensitization, and its general usefulness as a preventative behavior therapy technique were discussed.
THE USE OF SYSTEMATIC DESSENSITIZATION IN
THE PREVENTION OF PERSISTENT ANXIETY

THESIS

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By

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INTRODUCTION

In the last ten years a number of sources have both advocated and demonstrated the efficacy of the behavior therapies (e.g. Wolpe and Lazarus, 1966; Ullman and Krasner, 1965). These articles have strongly suggested that the behavior therapy techniques are more effective and economical than the traditional psychodynamic or medically oriented approaches to psychotherapy (Lazarus, 1963). One of these behavior therapy techniques has been especially successful in alleviating various kinds of anxiety. This technique is called systematic desensitization (Wolpe and Lazarus, 1966). In this technique, a client's fear, or anxiety, is gradually and systematically reduced by the presentation of anxiety stimuli when the client is experiencing deep muscle relaxation, a state which is assumed to be incompatible with anxiety. It is further assumed that, by this process of counterconditioning, the client's anxiety will be eliminated.

It should be noted that in most cases systematic desensitization has been used in the alleviation of fears which the client can readily identify and which he already experiences or has experienced. In a rather innovative
experiment, Shank (1970) demonstrated the effectiveness of applying systematic desensitization in the prevention of anxiety which was not currently in evidence, and not part of the clients' past experience. These clients did, however, have reason to believe that they might have an anxiety experience in the future. Shank's experiment consisted of one desensitization session with a group of subjects. This desensitization session was directed at the presumably anxiety-evoking effects of major lung surgery. Following desensitization, the subjects viewed a film of major lung surgery while autonomic indices of their anxiety were being monitored. Another group received relaxation training only and then viewed the film. Analysis of the results indicated that the groups which received pre-desensitization and pre-relaxation showed less arousal than a no-treatment control, although there was no significant difference between the two experimental groups. Shank concluded that his experiment offered some evidence for the efficacy of pre-desensitization.

Although Shank's basic idea seemed to be reasonable, there were two points concerning his experimental design and subsequent conclusions that were somewhat questionable.
The first of these concerns the lack of a significant difference between the two experimental groups. On the basis of the obtained difference between the two experimental groups and the control group, Shank concluded that the subjects were actually "pre-desensitized." In view of the possibility that this obtained difference was due to a placebo effect, Shank's conclusions may be somewhat questionable. The second point concerns Shank's use of only one "pre-desensitization" therapy session. Although he took the position that the use of only one session was a step forward in the direction of short-term therapy, it may be that such a brief period of therapy was of insufficient duration for desensitization to manifest any appreciable, non-placebo effect. It would seem reasonable, then, that had Shank's groups been given more pre-desensitization sessions, his experiment may have produced more definitive results.

The present experiment was an extension of Shank's study and differed in that there were considerably more therapy sessions, and two, rather than one, potential anxiety elicitors were employed. These two situations were 1) presentation of a snake, and 2) speaking before a group. These two particular situations were being used because
they are among the most anxiety-evoking situations for "normal" subjects, according to the Geer Fear Survey Schedule (Geer, 1965). In addition, this research study utilizes non-symptomatic subjects rather than symptomatic ones. This is because Shank (1970) has shown that it is possible to induce fear in non-symptomatic subjects. Again it is hypothesized that pre-desensitization would be effective in reducing a potential anxiety elicitor that one might encounter on some future occasion.
This research study proposed to test the efficacy of a systematic desensitization technique that can be used to simultaneously prevent anxiety in two specific, potentially anxiety-evoking situations. Instead of waiting, for instance, to desensitize an already established phobia, it was considered feasible to use systematic desensitization to prevent the learning of a wide range of irrational fears. Eventually, this technique might serve to prevent anxiety from being experienced in specific stimuli settings, by pre-desensitization prior to the actual experience of anxiety in those situations.

Therefore, the general hypothesis of the experiment was that pre-desensitization would be effective in reducing or ameliorating a potential anxiety elicitor that one has not yet experienced, but might encounter on some future occasion.

The specific hypothesis was that subjects who are trained to relax and then are desensitized along hierarchies involving 1) functioning while near snakes, and 2) speaking before a group, will be more relaxed and will demonstrate
less anxiety during 1) a potential anxiety-evoking situation involving the handling of snakes, and 2) a potential anxiety-evoking situation involving speaking before a group; than will subjects who are trained to relax and who are desensitized along irrelevant hierarchies prior to their participation in the potentially anxiety-evoking situations.
METHOD

Subjects

All subjects were volunteer female students enrolled at North Texas State University in the first summer session of 1972. Subjects were notified of the experiment via a semi-formal letter of petition to participate that was posted on various bulletin boards in the Psychology Department.

Twenty subjects were used in this study. They were matched on the criterion of scores on the Taylor Manifest Anxiety Scale (TMAS). The majority of the subjects were clustered around plus-one standard deviations on the TMAS.

Design

There was one experimental treatment group (ET group) and one placebo control group (PC group). After pairs of subjects had been matched on the TMAS, one member of the pair was randomly assigned to the ET group and the other member of that pair was assigned to the PC group. All Ss were informed about the general nature of the experiment. This information was that they were not going to be physically hurt in any way and that they would be required
to attend about ten therapy appointments. Following this orientation, differential treatment for each group of Ss was as follows:

The ten Ss in the ET group were given one session of relaxation training. On succeeding sessions they received desensitization on a snake-approach hierarchy for the first half of each session. In the second half of each session, they were desensitized along a hierarchy of public speaking. After eight sessions of desensitization, Ss engaged in a test of approach to a live snake and a test in which they had to recite a short speech before a group. Immediately prior to each of these situations, Ss filled out a General Fear Survey Schedule (Appendix E). Prior to the public speaking test, Ss filled out a Specific Fear Survey Schedule (Appendix F) concerned with public speaking. The PC group received the same treatment as the ET group, except that they were "desensitized" along hierarchies of irrelevant imagery, for instance, walking to class. The two groups were compared on the basis of 1) scores on the General Fear Survey Schedules, administered prior to both anxiety situations, 2) distance of physical approach to the snake, and 3) scores on the Specific Fear Survey Schedule concerned with public speaking.
Data for each group were compared as follows: 1) means and differences were computed for each group, 2) the t-test method for comparing non-independent means was used to determine if a significant difference existed between the two groups.

The self-report inventories were used because of their ease in administration and because a number of studies have shown that such subjective fear estimates are reliable and valid for discriminating between people who are frightened of a particular stimulus and those who are fearless (Walk, 1956; Langon and Manosevitz, 1966; and Geer, 1965).

**Apparatus and Materials**

The only apparatus used in this study was a tape recorder used in the relaxation training for all Ss. A General Fear Survey Schedule (Appendix E) was used to determine if anxiety was present in the two experimental situations. A Specific Fear Survey Schedule concerned with public speaking (Appendix F) was used to determine if anxiety was present in the public speaking situation. A live, 24-inch long, green tree snake was used as a fear stimulus in the snake approach test.
Procedure

Since both groups of Ss received identical treatment, with the exception that the PC group received irrelevant hierarchy items, the procedure is described once for both groups.

Ss were seen individually in a dimly lighted, cool, comfortable room in which there was a desk, a chair, and a soft lounge. Each S was given one thirty-to forty-minute training session in deep muscle relaxation, utilizing the abbreviated procedure based on the "Jacobson Method" (Jacobson, 1938), that was presented to the clients via a tape recorder. A transcript of the relaxation procedure is attached to this study (Appendix A).

After these two sessions of relaxation training, Ss engaged in eight additional sessions of desensitization. The ET group had the first half of each session devoted to the presentations of hierarchy items concerning snakes (Appendix B). The second half of each session for the ET group was devoted to the presentation of hierarchy items concerning public speaking (Appendix C). The Ss in the PC group had each of the ten sessions devoted to the presentation of hierarchy items concerning irrelevant items or events (Appendix D).
All desensitization sessions were handled in the same way for all Ss, except for the content of the hierarchy items. Ss were told to come into the room, lie down, and relax (by this time relaxation was easily achieved). The desensitization procedure was then introduced to the Ss as follows:

Now while you continue to relax, I am going to ask you to imagine some scenes. You will imagine them clearly but they will interfere little, if at all, with your state of relaxation. If, however, at any time you feel disturbed or worried and want to attract my attention, you will be able to do so by raising your left index finger.

If a subject indicated anxiety on a scene, he was told to stop imagining that scene and to continue to relax. The scene immediately prior to the anxiety eliciting scene was then re-presented. This was followed again by the scene which previously elicited anxiety until the subject could imagine this scene without any discomfort. Scenes from the hierarchy were presented for a total of eight sessions irrespective of whether or not a given subject was able to complete all the items in the hierarchy without experiencing anxiety. Most subjects did complete all of the items of the anxiety hierarchies.

After desensitization, each S was tested on the dependent variables relevant to the study. First of all, Ss were instructed that they would soon go into a room in which there
was a snake tied to the top of a table. They were told to go into the room, and approach the snake as closely as possible, and to pick it up if they felt they could do so comfortably. Before they went into the room, they were given the General Fear Survey Schedule (Appendix E). The proximity with which each S approached the snake was recorded.

Following this test, and at a later date, Ss were instructed that they would be required to go before a class of students and recite a prepared speech of approximately one minute duration. Prior to the entry of each S into the class, he was given the General Fear Survey Schedule and the Specific Fear Survey Schedule concerning public speaking (Appendix F).
RESULTS

Scores on the General Fear Survey Schedule and the distance a given subject was able to approach the live snake are presented in Table I. Means, t-values, and p-values are also included. Scores on the General Fear Survey Schedule and the Specific Fear Survey Schedule for the public speaking test are presented in Table II. As in Table I, means, t-values, and p-values are also included. The data listed in column one of Table I are the scores of each pair on the General Fear Survey Schedules given prior to the snake approach test. The data in the second column are the differences between the scores of the pair. Column three gives the amount of distance to the snake for each pair, and column four indicates the difference between each pair. Table I also provides the means of each group. The t- and p-values indicated in the last two rows were obtained by using a t-test for matched groups.

Table II is arranged in the same way as Table I. The first column gives the scores of the General Fear Survey Schedule given prior to the public speaking situation.
**TABLE I**

Scores on the General Fear Survey Schedule and the Snake Approach Distance for Each Subject*

<table>
<thead>
<tr>
<th>Subject Pair</th>
<th>General Fear Survey Schedule</th>
<th>Distance to Snake</th>
<th>Difference</th>
<th>Difference</th>
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<td>PC Group</td>
<td>ET Group</td>
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<td>PC Group</td>
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<td>22</td>
<td>4</td>
<td>2</td>
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<td>36</td>
<td>25</td>
<td>11</td>
<td>2</td>
</tr>
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<td>19</td>
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Means 37.3 30.7 6.6 1.8 0.6 1.2

**t-Values** 2.256 1.856

**p-Values** <.05 <.05

*df = n - 1 = 10 - 1 = 9.
TABLE II

SCORES OF THE PUBLIC SPEAKING TEST*

<table>
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<tr>
<th>Subject Pair</th>
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<th>Specific Fear Survey</th>
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<tr>
<td></td>
<td>PC Group</td>
<td>ET Group</td>
<td>Difference</td>
<td>PC Group</td>
<td>ET Group</td>
<td>Difference</td>
</tr>
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<td>68</td>
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<td>16</td>
<td>27</td>
<td>52</td>
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<td>5</td>
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</tbody>
</table>

Means: 37.2 (PC Group) 29.8 (ET Group) 7.4 Difference:
54.0 (PC Group) 47.4 (ET Group) 6.6 Difference:

$t$-Values: 2.4302 1.8857
$p$-Values: $<.025$ $<.05$

*df = n - 1 = 10 - 1 = 9.
Column two gives the differences between those scores. Column three gives the scores of the Specific Fear Survey Schedule given prior to the public speaking situation. The differences between each pair are given in column four. The means of all groups are given, and the t- and p-values are also indicated.

It should be noted that all differences are in the predicted direction, with statistical significance of .05 or better. Each column of data was analyzed using the t-test for matched groups. This required that the statistical test was applied four times to different data. Each time the difference between the placebo group's mean and the experimental group's mean was analyzed for significance. As is indicated in Tables I and II, all differences are significant at better than .05.

These results would seem to support the empirical hypothesis that systematic pre-desensitization is an effective technique for the prevention of fear.

It should be noted at this point that the subject matching procedure was successful. The mean score on the Taylor Manifest Anxiety Scale for the experimental treatment group was 17.0. The mean score for the placebo control group was 17.1.
DISCUSSION

The results of this study support the use of pre-desensitization as a therapeutic technique in the prevention of anticipated fear or anxiety. Since all differences were in the predicted direction and proved to be statistically significant, it appears reasonable to conclude that the experimental treatment group subjects actually had their fear of the two experimental situations reduced or prevented. In reiteration, the obtained differences in the fear indices of the experimental and placebo groups suggest that while the placebo control group experienced fear, the experimental treatment group experienced appreciably less fear because of the pre-desensitization therapy.

One implication of this study is that if it is feasible to prevent or reduce fear in two specific and independent situations, pre-desensitization may provide a basis for the prevention of pervasive anxiety. This implication would seem to hold credence if pervasive anxiety is defined as fear elicited by a wide variety of specific and independent stimuli. The ramifications of this implication are exciting. Of more practical importance, the viability of
the systematic pre-desensitization of pervasive anxiety is subject to empirical investigation, and its confirmation could have considerable therapeutic import. For example, it might be possible to pre-desensitize a person to all the major aspects of a way of life into which he is about to enter. For example, a client might be quite apprehensive about making the transition from under-graduate school to graduate school. He is apprehensive because he does not know what to expect. In such a case, it would be possible and very beneficial to pre-desensitize the person to all the major pitfalls and setbacks of graduate school. In this way it is assumed that fear in the new situation will not occur because it has been prevented by pre-desensitization. Other situations in which this technique could be used are the transitions from single life to married life, working life to retirement, civilian life to military life, military life to civilian life. The possibilities are great.

In addition to demonstrating the effectiveness of pre-desensitizing pervasive anxiety, this study also implies that specific fear-envoking stimuli can be individually pre-desensitized. The practical applications of this are also
boundless. A client might feel apprehensive about going to
the dentist, or a first-year medical student might be
fearful of the trauma he would experience upon witnessing
his first operation. Other possibilities include visits
with a mother-in-law, important entrance exams, or job
interviews.

In recent years, there has been a trend in the sciences
of medicine and dentistry to shift emphasis from the curative
to the preventive. With this shift, these disciplines are
making an effort to more effectively deal with the problems
in their respective areas. An emphasis on prevention
obviates a great deal of effort that could be expended
elsewhere. Pre-desensitization seems to have the possi-
bilities of orienting the science of behavior to the
preventive. At the very least the applications implied in
systematic pre-desensitization as a "preventive measure"
seem to justify further investigatory effort.
APPENDIX A
RELAXATION TECHNIQUES

Let me explain how we shall proceed. You are lying on a comfortable couch. Let's take a moment right now to get you in the most comfortable position. Just relax and let the couch completely support and hold your body. Now close your eyes. You will probably want to keep them closed throughout the relaxation training so you will not be distracted by light or anything around you.

Now as you become more and more completely relaxed, with your eyes closed, let me explain the rest of our procedure. I will ask you to tense and hold and then relax various muscle groups throughout your body. In this way, you will quickly become aware of the difference between muscular tension and relaxation. Also, each time a muscle group is tensed and then relaxed, it will become more completely relaxed than it was before.

We will begin with the hands, then the upper arms, then move to the face, neck, chest, stomach, and finish with the legs and feet. For each muscle group you are to experience a feeling of complete, total relaxation. As each muscle group is relaxed you will maintain its relaxation while
moving on to the next group. In this way, you will arrive at a final state of deep and complete relaxation in all muscle groups. As we proceed, follow the instructions as accurately and easily as you can without thinking about them as you do so. Just listen to the sound of my instructions. Do not fall asleep. Just focus all your attention on each muscle group as you tense, hold, then relax the muscles so that you relax all tension and achieve complete relaxation. As you become deeply relaxed, you may even have pleasant sensations of warmth and heaviness flowing through your muscles.

Let's begin now with your right hand and arm. Make a tight fist and hold it. Tense the muscles of this hand and forearm as tight as you can and hold it. Notice how the muscles pull across the top of the hand, in the fingers and in the upper and lower part of the forearm. Now relax. Let this arm and hand drop and go completely limp. Pay close attention to the feeling of relaxation in these muscles. Notice how their tension gives way to complete relaxation. Focus all your attention on how complete relaxation feels....

*Now once again with this same right hand, make a tight fist

*Note: Ellipses are used to indicate pauses of approximately five to thirty seconds.
and hold it. Again notice how the muscles tense and pull in your arm and forearm. Now relax. Feel how the relaxation flows over the hand and arm. Your hand and arm become more and more relaxed, more deeply relaxed than ever before....

Now without lifting or moving your right arm, tense your right biceps muscle and hold it tight—hold it. Notice how the muscle pulls on top and under the arm. Now relax. Let the relaxation flow down your arm. Your entire arm becomes more and more relaxed. Focus on this feeling of relaxation and go on relaxing. Allow your entire right arm and hand to become deeply and totally relaxed....

With your right arm remaining completely relaxed, make a fist with your left hand. Clench it tight so you can feel the muscles pull across the fingers and in the upper and lower parts of the forearm. Hold it—tightly. Now relax. Release the muscles and let the relaxation flow in. Pay close attention to this feeling of complete relaxation as your arm and hand become more and more relaxed.... Once again make a tight fist with your left hand, and hold it. Feel the tightness and pull in the fingers and forearm. Now relax. Notice how it feels as you let these muscles go completely limp. Permit this arm and hand to continue
relaxing until they are as totally relaxed as your other arm and hand—deeply and completely relaxed.

Now without lifting or tensing your left forearm, tense your left biceps muscle and hold it tight. Feel the sensation of the pull of the muscle on top and under the arm. Now relax. Let the relaxation spread throughout your arm and hand. Enjoy the relief and freedom from effort as you continue to let both arms and hands become more and more relaxed.

Now I want you to imagine two strings coming down from the ceiling above you, and each one connecting to one of your shoulders so that your shoulders could be lifted by them. With your arms still completely relaxed, raise both your shoulders as if pulled up by these two imaginary strings. Lift them as high as you can and hold it. Feel the pull of the large muscles across the shoulders. Now relax. Drop your shoulders as if the strings had been cut. Allow them to sag as far as they will. Let all these shoulder muscles relax. Experience the effortless, pleasant relaxation. Notice how the feelings of relaxation spread throughout your body.

Now as you continue to relax otherwise, this time tighten the muscles in your forehead and scalp by wrinkling
up your forehead and raising your eyebrows at the same time. Hold it. Now relax. Let your forehead smooth out and completely relax. Let your brow smooth out again, smoother and smoother. Notice how the tension vanishes from your forehead and scalp. Let it become more and more relaxed....

Now squint your eyes tightly and wrinkle up your nose. Tighter, tighter. Notice the tension around your eyes and nose. Now relax. Let all the muscles around your eyes and nose completely relax. Let the relaxation spread over your entire face. Keep attending to the feeling of complete relaxation as you let your muscles become more deeply and totally relaxed. Keep your eyelids closed and go on relaxing....

Now with your mouth closed, pull back the corners of your mouth as tight as you can pull them. Feel the tension in the cheek and jaw muscles as you pull the corners back farther and farther. Now relax. Notice the sensation of warmth that flows into these muscles as they become relaxed.... As you practice the tensing and relaxing of each muscle group, be sure the rest of your body remains entirely comfortable and totally relaxed.

Now tense your jaw muscles by biting your teeth together. Bite hard. Notice the feeling of tightness in your jaw
muscles. Now relax. Let your jaws go completely limp.
Feel the surge of relief as relaxation flows in.... Again relax all the muscles in your forehead. Make sure there is no tension around your eyes or nose. Let your face become relaxed and expressionless as you relax all muscles in your cheeks and jaws. Let your whole face become totally relaxed as your arms and shoulders, thoroughly and deeply relaxed....

Now push your head back against the couch as far as it will go. Hold it. Observe the pressure in the back of your neck. Now relax. Let your head return to its normal position, and continue to relax.

Now bend your head forward, touching your chin to your chest. Feel the tightness in the back of your neck. Now relax. Return your head to its normal, comfortable position. Once again go on relaxing calmly and peacefully.

Now take a deep breath. Fill your lungs and hold your breath. Hold it. Notice how the muscles pull across the chest. Now exhale. Relax. Breathe out and feel the pleasureable relief throughout your chest. Continue breathing normally now, in and out, regularly and easily.... Allow the rest of your body to be as relaxed as possible, but fill your lungs once again. Take a deep breath and hold it. Hold it. Again notice the increased tension. Now relax.
Just breathe right out, relaxing and enjoying the soothing relief. Notice how all the muscles of your body tend to become more relaxed when you exhale. Go on breathing normally, easily, freely, completely relaxed, both hands, both arms, both shoulders, your face, your neck, your chest are all completely relaxed now....

Now, making sure that your muscles remain relaxed, tighten your stomach muscles. Make them hard as if someone is about to hit you in the stomach and you're preparing for the blow. Hold it, tight. Now relax. Focus on the surge of relief and the complete comfort of relaxation.... Once again, tighten your stomach muscles. Hold it. Hold it. Now relax. Let your muscles become completely relaxed. Notice the general sense of well-being that comes with relaxing your stomach muscles. Continue relaxing for a while, enjoying the calm, pleasant sensations of deep, total relaxation. Your hands and arms are limp. Your shoulders are resting naturally, your face muscles relaxed and serene. Your breathing should be easy and rhythmical, in and out, in and out. No effort should be required as you completely relax on the couch....

Finally, push your ankles and feet down firmly onto the couch. Hold it. Notice the tightness in the calves of
your legs and on up into your thighs. Now relax. Feel the surge of relief as relaxation flows back in. You may even have pleasant sensations of warmth as these muscles become more and more relaxed. Go on relaxing. Make quite sure there is no tightness anywhere in your body. Just let your body totally, completely relax. Enjoy the feeling of deep, complete, pleasant relaxation. Relax more and more....

In a few moments I'm going to ask you to return to a normal state of waking tension. This doesn't mean that you'll be as tense as when you came in, but just alert enough to go about your regular activities without any trouble. We'll do this gradually, so you won't be startled at all. I'll count slowly from four to one. As I count, you can be thinking of the effort required to slowly turn and sit up on the edge of the couch. When I get to one, you can sit up and open your eyes. When you do this, you'll feel very refreshed and relaxed, much like you'd feel if you had just awakened from a nice afternoon nap.

Okay, four.... Three, you are beginning to think of the effort required to sit up. Two.... One, slowly sit up and open your eyes. Just stay as comfortable as possible.
APPENDIX B
1. Imagine that you are walking through a field where there is foot-high grass and a few trees scattered about with some large rocks lying here and there. There is a stream running through the middle of this field which is bordered by shrubs and trees of various kinds.

2. Now imagine that you are walking over a bridge that goes over a stream that is set in the scene that is described above. As you walk by you say to yourself that that place looks like a good place for a snake to hide, but you don't see any snakes.

3. Now imagine that you are walking along side of the stream in the above scene. There are trees and tall grass and rocks. It is a very lovely and peaceful scene. You say to yourself that this looks like a good place for a snake to hide, but you don't see a snake.

4. Now imagine that you are walking over the bridge that goes over that lovely stream scene. As you walk by this place you are reminded of what a friend of yours told about this place; that is, that there are snakes down there near that stream because he saw one there not too long ago.
5. Now imagine that you are walking along the side of the stream that has been described. As you walk along you remember what a friend of yours told you about this place. He told you that there were snakes here because he had seen one not too long ago.

6. Now imagine that you are walking on a bridge and you look down and see a very pretty stream bordered by trees and tall grass and rocks. In the grass along this stream you see a small grass snake that you know to be harmless. This snake is only about eight inches long and it is about fifty yards away from you.

7. Now imagine that you are walking along the side of a stream that is bordered by trees and tall grass and shrubs and so forth. As you are walking along you look on the opposite side of that bank and see a small grass snake that you know to be harmless. This snake is about ten inches long and it is about thirty yards away from you.

8. Now imagine that you are walking over the bridge that we have spoken about in the other scenes. You look down to the stream and see a medium-sized grass snake in the grass. This snake is about twenty-four inches long and it is about twenty yards away.
9. Now imagine that you are walking along the bank of the stream and you see a medium-sized snake on the other side of the bank. This snake is about twenty-four inches long and you know that it is harmless. It is about fifteen yards away.

10. Now imagine that you are walking up the same bridge. You look down to see the stream and you see a good sized snake in the tree near the bridge. This snake is about three feet long and it is about five yards away from you. You know that it is a harmless snake, it is just a large one.

11. Now imagine that you are walking along the bank of the stream and you look down in the water and see a good-sized snake swimming toward the bank that you are on. This snake is about three feet long and it is about five yards away from you. You know that this snake is harmless, it is just a large one.

12. Now imagine that you are at home. You live in a house that has a back door and a front door. You go out the back door of the house and stand on the back porch. You look out in the back yard and see a medium-sized snake in the yard about thirty yards away from you.
13. Now imagine that you are going out to the back porch of your house and you look up in the tree and see a medium-sized snake in the tree about twenty yards away.

14. Now imagine that you are going to the back porch of your house. You go out there and look down and at your feet you see a snake that is about eighteen inches long. You know that it is harmless. It is three feet away.
PUBLIC SPEAKING ANXIETY HIERARCHY

1. Imagine that you are sitting in a biology class with a small group of six people, all of whom you know fairly well. This group is discussing very informally the topic of pollution. In a few minutes you will be called upon to give a short speech on one aspect of that topic. This speech does not mean anything with regard to getting a high grade; it is just an informal discussion among friends.

2. Now imagine that you are sitting in that same biology class. But this time you are with a large group of people (15) whom you know fairly well. In a few minutes you will be called upon to give a short speech. You will not be graded on this speech.

3. Now imagine that you are sitting in a political science course with a small group of six people, none of whom you know. This group is discussing the topic of the upcoming elections. In a few minutes you will be called upon to give a short speech about that topic. You will not be graded on this speech, it is just an informal discussion among the members of a class.
4. Now imagine that you are sitting in the same political science class with the same small group of people whom you do not know. In the process of discussion, the members of the group turn to you and say that you will be allowed three minutes in which you are to give your views on the discussion topic. You are not expecting to be called on, but you must give the speech. You will not be graded on this speech.

5. Now imagine that you are sitting in a political science course with a large group of people (15), none of whom you know. This group is discussing the topic of the upcoming elections. In a few minutes you will be called upon to give a speech on that topic. You will not be graded on this speech, it is just an informal discussion among the members of a class.

6. Now imagine that you are sitting in the same political science class with the same large group of people whom you do not know. In the process of the discussion the members turn to you and say that you will be allowed three minutes in which to give a speech on your views of the discussion topic. You were not expecting to be called upon, but you must give the speech. You will not be graded on this speech.
7. Imagine that you are sitting in a psychology course with a small group of six people, none of whom you know. This group is discussing the topic of motivation. In a few minutes you will be called upon to give a short speech about that topic. You will be graded on this speech and that grade will weigh heavily in determining your final course grade.

8. Now imagine that you are sitting in the same psychology class with the same group of people that you do not know. In the process of the discussion one of the members of the group turns to you and says that you will be allowed three minutes to give a speech concerned with your views on motivation. You were not expecting to be called upon to speak, but you must speak. You will be graded on this speech and that grade will weigh heavily in determining your final grade in the course.

9. Imagine that you are sitting with a large group of people (15) none of whom you know. This group is discussing the topic of motivation. In a few minutes you will be called upon to give a short speech on that topic. You will be graded on this speech and that grade will weigh heavily on your final grade in the course.
10. Now imagine that you are sitting in the same psychology class with a large group of people none of whom you know. In the process of the discussion the members of the group turn to you and say that you will be allowed three minutes in which to give your views on motivation. You were not expecting to be called upon to speak but you must speak. You will be graded on your speech and that grade will weigh heavily in determining your course grade.

11. Now imagine that you are going to a meeting in which a small group of people will be in attendance. About half of these people you know and about half of them you don't know. You are going specifically to this meeting to address this group. You speak to them for about five minutes on a paper that you wrote for one of your classes. You will not be graded on this, it is just a group of people who are interested in your paper.

12. Now imagine that same situation as above. But now imagine that you are to be graded on that speech and that this grade will be very important in determining your final class grade.

13. Now imagine that you are about to go into an amphitheater-type classroom and give a speech on a paper that you wrote for one of your classes. There are about twenty-five
to thirty people in this classroom. You will not be graded on this speech but it is just a group of people who are interested in your paper.

14. Now imagine the same scene as above, but this time imagine that you will be graded on this speech and that this grade will not only have a great effect on your course grade, but it will have an effect on whether you will graduate.
IRRELEVANT IMAGINARY ANXIETY HIERARCHY

1. Imagine that you are sitting in your home drinking coffee.

2. Imagine that it is a sunny day and you are walking to class.

3. Imagine that you are watching your favorite television program.

4. Imagine that you are eating at an informal restaurant.

5. Imagine that you are watching a football game.

6. Imagine that it is a cloudy day and you are sitting in the park.

7. Imagine that you and a friend are playing tennis.

8. Imagine that you are driving your car to school on a sunny day.

9. Imagine that you are reading a book in your house.

10. Imagine that you are going to the store to buy some groceries.

11. Imagine that you and a friend are riding bikes on a sunny day.
12. Imagine that you and a friend are throwing a frisbee in the park.

13. Imagine that you are preparing dinner for a friend.

14. Imagine that you and a friend are eating dinner together.
INSTRUCTIONS: The questions in this questionnaire are intended to indicate various emotional personality traits. It is not a test in any sense because there are no right or wrong answers to any of the questions.

After each question you will find a row of numbers whose meaning is given below. All you have to do is to draw a ring around the number that best describes you.

0 means "no", "never", "not at all", etc.
1 means "somewhat", "sometimes", "a little", etc.
2 means "about as often as not", "an average amount", etc.
3 means "usually", "a good deal", "rather often", etc.
4 means "practically always", "entirely", etc.

1. Do you get anxious if you have to speak or perform in any way in front of a group of strangers? ..... 0 1 2 3 4

2. Do you worry if you make a fool of yourself, or feel you have been made to look foolish? ..... 0 1 2 3 4

3. Are you afraid of falling when you are on a high place from which there is no real danger of falling—for example, looking down from a balcony on the tenth floor? ..... 0 1 2 3 4

4. Are you usually hurt by what people do or say to you? ..... 0 1 2 3 4

5. Do you keep in the background on social occasions? ..... 0 1 2 3 4

6. Do you have changes of mood that you cannot explain? ..... 0 1 2 3 4

7. Do you feel uncomfortable when you meet new people? ..... 0 1 2 3 4
8. Do you daydream frequently; that is, indulge in fantasies not involving concrete situations? ...... 0 1 2 3 4

9. Do you get discouraged easily, e.g. by failure or criticism? ...... 0 1 2 3 4

10. Do you say things in haste and then regret them? ...... 0 1 2 3 4

11. Are you disturbed by the mere presence of other people? ...... 0 1 2 3 4

12. Do you cry easily? ...... 0 1 2 3 4

13. Does it bother you to have people watch you work even when you do it well? ...... 0 1 2 3 4

14. Does criticism hurt you badly? ...... 0 1 2 3 4

15. Do you cross the street to avoid meeting someone? ...... 0 1 2 3 4

16. At a tea or reception do you go out of your way to avoid meeting the important person present? ...... 0 1 2 3 4

17. Do you often feel just miserable? ...... 0 1 2 3 4

18. Do you hesitate to volunteer in a discussion or debate with a group of people you know more or less? ...... 0 1 2 3 4

19. Do you have a sense of isolation, either when alone or among people? ...... 0 1 2 3 4

20. Are you self-conscious before "superiors" (teachers, employers, authorities, etc.)? ...... 0 1 2 3 4

21. Do you lack confidence in your general ability to do things and cope with situations? ...... 0 1 2 3 4

22. Are you self-conscious about your appearance even when you are well-dressed and groomed? ...... 0 1 2 3 4
23. Are you scared at the sight of blood, injuries, and destruction even though there is no danger to you? .... 0 1 2 3 4

24. Do you feel that other people are better than you? .... 0 1 2 3 4

25. Is it hard for you to make up your mind? .... 0 1 2 3 4
SPECIFIC FEAR SURVEY SCHEDULE--PUBLIC SPEAKING

Answer these questions on a scale of 0 to 7. A score of 0 indicates that this statement is completely false concerning you and your life. A score of 7 indicates that the statement is completely true concerning you and your life. You may answer the question anywhere from 0 to 7, depending on how true it is concerning your life. Remember, 0 is completely false, and 7 is completely true. Now answer these questions:

1. There seems to be a lump in my throat much of the time......................0 1 2 3 4 5 6 7

2. When I speak to a small group of people my hands tend to perspire heavily.....0 1 2 3 4 5 6 7

3. Most of the time I would rather sit and daydream than do anything else........0 1 2 3 4 5 6 7

4. I try to avoid any occasions in which I have to speak to a group.............0 1 2 3 4 5 6 7

5. I am liked by most people I know.....0 1 2 3 4 5 6 7

6. I am a good mixer.........................0 1 2 3 4 5 6 7

7. I am easily downed in an argument...0 1 2 3 4 5 6 7

8. I enjoy speaking to a group of people..................................................0 1 2 3 4 5 6 7

9. I do not mind being made fun of.....0 1 2 3 4 5 6 7

10. When I am speaking to a group I am fairly relaxed..............................0 1 2 3 4 5 6 7

11. I would feel more self-confident if I could speak in public....................0 1 2 3 4 5 6 7
12. I frequently find it necessary to stand up for what I think is right.

13. Criticism or scolding hurts me terribly.

14. What others think of me does not bother me.

15. I am an important person.

16. I frequently have to fight against showing that I am nervous when I am speaking to a group of people.

17. I find it hard to talk when I meet new people.

18. I frequently notice that my hand shakes when I try to do something.

19. I like to know some important people because it makes me feel important.

20. I would like to be a good speaker.

21. I would like to belong to several clubs and lodges.

22. I believe that I am more nervous than most people.

23. I am entirely self-confident.

24. I do not like everyone I know.

25. I seem to make friends about as quickly as others do.

26. I dislike having people about me.

27. I feel anxiety about something all the time when I am speaking to a group.
28. I like to let people know where I stand on things..........................0 1 2 3 4 5 6 7

29. People say insulting and vulgar things about me..........................0 1 2 3 4 5 6 7

30. I am not usually self-conscious when I speak to a group................0 1 2 3 4 5 6 7

31. I love to go to meetings in which I have to give a speech..................0 1 2 3 4 5 6 7

32. I enjoy social gathering just to be with people I don't know................0 1 2 3 4 5 6 7

33. My worries seem to disappear when I get in a crowd of lively people......0 1 2 3 4 5 6 7

34. I believe people would like me more if I could speak in public...........0 1 2 3 4 5 6 7

35. Whenever possible I avoid a crowd..........................................0 1 2 3 4 5 6 7

36. While in buses, trains, etc., I often speak to strangers....................0 1 2 3 4 5 6 7

37. I am often afraid that I am going to blush..................................0 1 2 3 4 5 6 7

38. I wish that I would never have to speak to a group..........................0 1 2 3 4 5 6 7
REFERENCES


