



PERGAMON

Journal of Behavior Therapy  
and Experimental Psychiatry 30 (1999) 71–79

JOURNAL OF  
behavior  
therapy and  
experimental  
psychiatry

www.elsevier.com/locate/jbtep

# Paradoxical intention and recursive anxiety

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## Abstract

The present study was designed to investigate a possible relationship between “recursive anxiety” and paradoxical intention. Groups of subjects were chosen from among individuals with public speaking concerns, and for whom fear of fear or recursive anxiety clearly represented an important element, or was completely absent from the clinical profile. These subjects were offered a standard in vivo treatment program for public speaking phobia with inclusion or exclusion of paradoxical intention. A  $2 \times 2$  factorial design was employed. Those whose public speaking anxiety was complicated by recursive anxiety experienced greater improvement when paradoxical intention was included in the treatment program than when it was not employed. In contrast, individuals reporting simple public speaking phobia demonstrated greater success with a treatment program in which paradoxical intention was absent. Wegner’s hypothesis of “ironic” cognitive processing was used to explain the proposed relationship between paradoxical intention and fear of fear. © 1999 Elsevier Science Ltd. All rights reserved.

*Keywords:* Fear of fear; Ironic cognitive processes; Paradoxical intention; Recursive anxiety

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## 1. Paradoxical intention

Turner and Ascher (1979) found that paradoxical intention produced results that were not significantly different from those of conventional effective behavioral procedures for insomnia (stimulus control and progressive relaxation) but were superior to those obtained by subjects in control groups. Ascher and Turner (1979), in a partial replication of Turner and Ascher (1979), designed to focus on the efficacy of

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paradoxical intention, randomly assigned individuals who complained of clinically significant levels of sleep onset insomnia to a paradoxical intention treatment group, or to one of two control groups. Ascher and Turner (1979) did not support the results of Turner and Ascher (1979), finding no significant difference between the group receiving paradoxical intention and the control groups. Analysis of the data of individual subjects in the treatment group indicated that, relative to the baseline period, some quickly experienced significant reductions in sleep onset latency, while others actually exhibited a protracted sleep onset latency.

The basis for the difficulty was attributed to the random assignment of subjects to the treatment condition. In the clinical literature there is an indication that paradoxical intention is most suitable for those experiencing fear of fear or “recursive” anxiety (Ascher, 1989a) in association with their major anxiety-based concerns. For example, in the case of sleep onset insomnia, the machinations involved in paradoxical intention are assumed to subvert the impeding performance anxiety and thereby allow the sleep process to take its natural course. In contrast, for individuals with sleep onset insomnia who do not also experience performance anxiety, the typical paradoxical intention instruction to “remain awake for as long as possible” does not address a relevant clinical issue. Such individuals therefore, when cooperating with the directive, might very well remain awake for a considerable period of time, thus generating treatment results that are inferior to their baseline data – as illustrated in Ascher and Turner (1979). The present study was conducted in order to explore the proposed relationship between paradoxical intention and fear of fear by employing individuals exhibiting simple public speaking phobia or public speaking phobia complicated by a fear of fear or recursive anxiety and assessing the results of providing or withholding paradoxical intention within a standard treatment program.

Most individuals who experience phobias impute to external factors the cause of their complaint. Successful management of these external cues results in the abatement of discomfort. Thus, notwithstanding the fact that anxiety served as the impetus for their action, the external stimulus remains the primary focus of their attention.

In contrast, a small subgroup reports phobic apprehension complicated by fear of fear or recursive anxiety. These individuals, though initially concerned with external factors associated with their fear, shift their attention to the physical experience of anxiety, and to possible disastrous effects of these physiological processes on their behavior. It has been suggested that, in spite of the wide variety of anticipated calamities, the fear of fear or recursive anxiety phenomenon is probably a variation of social anxiety (American Psychiatric Association, 1994; Ascher, 1989b; Goldstein & Chambless, 1978; Heide & Borkovec, 1984). For example, Ascher (November, 1984), and Heide and Borkovec (1984) hypothesize that these individuals fear that at high levels of anxiety they will lose control, and exhibit embarrassing behavior resulting in their being negatively evaluated by observers. Their conception of this hypothetical disaster ends by associating the disapproving opinions of others with significant negative life changes. These concerns are the sort that are subsumed under Reiss’s (1991) “fundamental” fears and are in contrast with those that he labels “common” or simple fears. Also, Goldstein and Chambless (1978) – in their analysis of agoraphobia, a syndrome for which they emphasize the significance of fear of

fear – describe interpersonal conflict, low self-sufficiency, and social anxiety as integral parts of the disorder. The work of Ascher (1984, 1989a, b), Goldstein and Chambless (1978), and Heide and Borkovec (1984) converge on the suggestion of a possible association between fear of fear or recursive anxiety and social phobia.

Goldstein and Chambless (1978) argued that the existence of fear of fear requires the use of *in vivo* procedures to permit exposure of the affected individual to both distressing external stimuli and associated somatic discomfort in a social context. Based upon the pioneering work of Frankl (e.g., 1975), these authors, along with Ascher (1980, 1989a, b), and Heide and Borkovec (1984), have proposed that the elements of paradoxical intention be employed as the *in vivo* component in treatment programs for social anxiety associated with fear of fear or recursive anxiety.

Finally, “fear of fear” refers to the discomfort that is experienced by individuals who are concerned about the effects of anxiety on themselves. The core dynamic of fear of fear is a pernicious circle involving focus on a salient aspect of sympathetic activity. As this pivotal symptom becomes increasingly more pronounced there is a general increase in anxiety. This in turn results in a further escalation of the focal component of anxiety leading to augmentation of the general level of sympathetic functioning. This self-maintaining process has been labeled “recursive anxiety” (Ascher, 1984, 1989a, b) since its essence seems to be adequately described in the definition of “recursion” (i.e., “the determination of a succession of elements . . . by operation on one or more preceding elements”, Merriam, 1977, p. 967), and of “recursive” (i.e., “constituting a procedure that can repeat itself indefinitely or until a specified condition is met”, Merriam, 1977, p. 967) The experience of this recursive dynamic is then associated by the affected individual with aversive physical consequences having disastrous social implications (Ascher, 1989b).

Data for the present study were taken from individuals who complained of discomfort associated with public speaking, and for whom fear of fear or recursive anxiety either clearly represented an important element, or was completely absent. A standard *in vivo* treatment program for public speaking phobia including or excluding paradoxical intention was employed in a  $2 \times 2$  factorial design.

## 2. Method

### 2.1. Subjects

Twenty subjects (13 men and 7 women) who presented with public speaking anxiety related to their employment were recruited from referrals to a behavior therapy clinic. Subjects ranged in age from 23 to 53 years, with a mean age of 42. All subjects were professionals, extending from middle to upper level managers in large service or manufacturing firms, and were required to engage in frequent formal or informal presentations as a part of their employment. In order to be included in the study, subjects had to exhibit the clear presence or absence of a recursive anxiety component and have professional responsibilities that included regular opportunities to engage in some form of public speaking. Six individuals who did not meet these requirements

were offered alternative treatment. One had infrequent opportunities to engage in public speaking, and five were not readily classifiable in terms of recursive anxiety.

## 2.2. *Classification of subjects*

Clinical interviews were used to classify subjects as exhibiting or failing to exhibit a recursive anxiety component – defined by the presence of self-reported fears of the catastrophic effects of physiological arousal on public speaking performance. Such hypothesized disastrous consequences included loss of bladder control, vomiting, passing out, “freezing-up”, losing control, running out of the room, stuttering or stammering, “going blank”, nonsensical babbling, and “going crazy”. Subjects who denied the presence of such concerns were classified as nonrecursive. In addition, all subjects completed the Anxiety Sensitivity Scale (Reiss, 1991).

Those selected for the recursive anxiety groups (R+) had scores that fell within the highest third of the test’s range. Those in the non-recursive-anxiety groups (R–) had test scores that fell within the bottom third of the test’s range.

## 2.3. *Dependent measure*

Subjects were asked to rate, after each episode of public speaking, the highest level of discomfort that they had experienced. Ratings were based on a subjective units of discomfort scale that ranged from “0” (no discomfort) to “100” (maximum discomfort). Subjects were requested to complete these ratings immediately following each public speaking experience. To equate for variability in the number of public speaking events across subjects, mean bi-weekly SUDS scores were used in the analyses.

## 2.4. *Procedure*

Half of the subjects in each clinical group were randomly assigned to one of two treatments. The first included paradoxical intention instructions (PI+), the second did not (PI–).

Following a two-week baseline phase, subjects in each group attended one 50 min, individual therapy session each week to criterion: Participation in public speaking activities without anxiety over two consecutive weeks (i.e., two mean weekly SUDS scores of 0). Therapy for both groups included techniques based on cognitive therapy (e.g., Beck, 1976), anxiety reduction procedures (e.g., Wolpe, 1990) and skills training (e.g., Heimberg, Dodge, & Becker, 1987). Increased in vivo exposure was neither encouraged nor discouraged.

The paradoxical intention component (PI+) included: (1) a detailed description of the rationale for the procedure; (2) paradoxical directives to focus on and attempt to magnify the most salient aspects of sympathetic arousal, thereby courting disastrous consequences (often framed in a humorous vein); and (3) coaching and feedback on the use of paradoxical strategies during regular public speaking presentations. An extensive discussion of this approach appears elsewhere (e.g., Ascher, 1980, 1981, 1989b; Frankl, 1984, 1985).

### 3. Results

A  $2 (R+ \text{ vs. } R-) \times 2 (PI+ \text{ vs. } PI-)$  analysis of variance (ANOVA) with two-week mean baseline SUDS ratings as the dependent variable was conducted to test for pretreatment differences in public speaking anxiety. No significant main or interaction effects were obtained. The mean baseline SUDS ratings for the four groups were 83.4 (SD = 9.63), 86.0 (SD = 7.31), 82.6 (SD = 8.29), and 82.0 (SD = 7.96) for the R + PI+, R – PI+, R + PI–, and R – PI– groups, respectively.

A  $2 (R+ \text{ vs. } R-) \times 2 (PI+ \text{ vs. } PI-) \times 11$  (mean baseline to treatment week 10) repeated measures, multivariate analysis of variance (RMANOVA), was performed to evaluate the effects of subject classification and treatment group on changes in anxiety ratings. Mean baseline and weekly treatment SUDS scores served as the dependent variables. Although no significant main effects were observed for either paradoxical intention or recursiveness, a significant main effect for time was obtained [ $F(10, 190) = 204.5, p < 0.001$ ].

Thus, the mean weekly SUDS ratings of clients in all four groups declined with treatment. In addition, as can be seen in Fig. 1, significant subject classification (R+ vs. R–) by treatment [PI+ vs. PI–;  $F(1, 19) = 30.41, p < 0.001$ ] and subject classification by treatment by time [Wilks  $\lambda(7190) = 0.049, p < 0.001$ ] interactions support the proposal that both clients matched to appropriate treatment program had greater reductions in SUDS ratings during the course of the study, and that they experienced these improvements more rapidly than did subjects whose classification did not match the treatment modality.

### 4. Discussion

The results of the present study support two conclusions. First, when paradoxical intention is included in their in vivo behavioral treatment program, clients

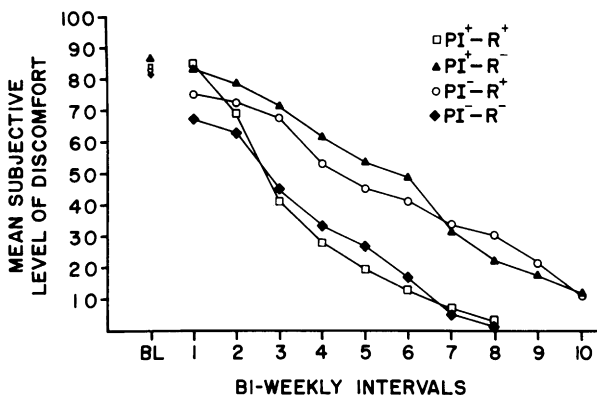


Fig. 1. Changes in level of comfort associated with public speaking during participation in weekly therapy sessions.

complaining of public speaking phobia complicated by a fear of fear or recursive anxiety component – which typically includes Reiss’s “fundamental” fears – achieve greater reductions in self-reported anxiety than do similar clients who do not receive paradoxical intention. Second, clients who report public speaking phobia without a recursive component – similar to Reiss’s “common” fears – experience better results when paradoxical intention is not included in their in vivo behavioral program than do comparable clients who receive paradoxical intention as a part of their treatment.

The enhancement of therapeutic effects with paradoxical intention for those with recursive anxiety is also congruent with the hypotheses of Ascher (1989b), Goldstein and Chambless (1978), and Heide and Borkovec (1984). These authors generally suggest that the fear of fear phenomenon is a form of social phobia and that in vivo exposure to the physiological component of anxiety in social contexts is an important part of treatment.

The results of previous empirical investigations and clinical reports regarding the efficacy of paradoxical intention utilizing a diverse group of disorders generally corresponds with the association supported in the present study between paradoxical intention and recursive anxiety. These data include: Agoraphobia (Ascher, 1981), sleep onset insomnia (Ascher & Efran, 1978; Ascher & Turner, 1979; Turner & Ascher, 1979), functional urinary retention (Ascher, 1979), functional encopresis (Bornstein, Stern, Retzlaff, Kirby, & Chong, 1981), and erythrophobia (LaMontagne, 1978) among others. As previously mentioned, these disorders are exhibited with a component that is characterized by clients’ expressed fears regarding the potential negative consequences of being unable to control sympathetic arousal (e.g., Ascher, 1989b; Frankl, 1975). Although initially associated almost exclusively with agoraphobia, it is clear that fear of fear can appear in any case of anxiety disorder or anxiety-based problem behavior (Ascher, 1989a, b; Chambless & Gracely, 1989; Reiss & McNally, 1985; Reiss, 1991). The present data support the conclusion that it is the presence of a recursive component, rather than of a specific diagnostic group that determines when paradoxical intention is appropriate.

Wegner, in a series of studies concerning cognitive control (Ansfield, Wegner, & Bowser, 1996; Wegner, 1994; Wegner, Broome, & Blumberg, 1997; Wegner & Erber, 1992; Wegner, Schneider, Carter, & White, 1987; Wegner, Shortt, Blake, & Page, 1990), provides the basis for one possible explanation for the effectiveness of paradoxical intention with problems complicated by recursive anxiety. He describes the process of cognitive control by postulating a bi-modal system. When individuals wish to exercise cognitive control (e.g., when there is a wish to inhibit specific classes of disconcerting thoughts in order to fall asleep, or similarly when students want to prevent thoughts that might distract them from their studies), activity on the part of the “operating” system (OS), the active, effortful cognitive regulator, is initiated in order to ensure this control. A complementary “monitoring” system (MS) is an effortless, component that is constantly searching for cognitions in opposition to the desired state of control. When the MS detects an errant thought it acts to bring this thought into the focus of attention of the OS and initiates this system to control the incompatible cognition. In the normal individual, under ordinary circumstances, control of the thought by the OS generally occurs smoothly and effectively. But, when

the person is under cognitive stress, the OS can become overloaded and increasingly less effective. And, if sufficiently bereft of resources, the OS will be able to do nothing with the incompatible thought that has now been released into the individual's focus of attention. In this way, a thought that is in opposition to the specific goal of cognitive control is very likely to be expressed.

In explaining the results of the present study, it could be hypothesized that the difference between individuals experiencing public speaking phobia with and without a recursive anxiety component is that the former attempt to control their cognitive state (e.g., "There is nothing to worry about, I must remain calm"), while the latter are more concerned with the characteristics of their presentation and the external situation. This is compatible with the observation that those experiencing a simple phobia generally focus on control of external stimuli while those whose phobia is complicated by recursive anxiety shift their focus of attention and control from the external circumstances to internal stimuli. Finally, the addition of recursive anxiety to public speaking phobia – resulting in the development of a "fundamental" fear of a significant negative life change – would seem to add a considerable degree of stress and, therefore, cognitive load, relative to those exhibiting a simple or "common" public speaking phobia.

Thus, individuals with a simple public speaking phobia would be absorbed in monitoring and enhancing their performance while observing audience response to measure their success. In contrast, those with recursive anxiety complicating their public speaking phobia, would be engaged in controlling their cognitive environment by attempting to regulate their thoughts and related emotional experiences in an effort to minimize stimuli incompatible with their objective of remaining calm. The more significant they deem this goal of calmness to be – this depends on the details of the hypothesized disastrous consequence – the more cognitive load is generated, and the weaker becomes the OS. The result is an increasing frequency of incompatible thoughts brought by the MS to the attention of the powerless OS that are permitted to remain unmodified. Wegner's explanation is also compatible with the self-maintaining recursive component of the fear of fear process in that awareness of incompatible, anxiety provoking thoughts increases cognitive load and decreases the ability of the OS to control them, thus permitting further discomforting thoughts, additional cognitive load, and continuing deterioration of the OS.

The hypothesis of a pernicious spiral provides an explanation for the utility of paradoxical intention with recursive anxiety. The paradoxical intention procedure is based on instructions – to relinquish control and to accept whatever cognitive and physical experiences are present, but primarily – to try to protract the duration and the degree of discomfort of the unpleasant symptoms. In such cases, Wegner's MS would be engaged in seeking thoughts that are incompatible with the goal of attempting to generate more profound discomforting symptoms – that is, thoughts of calmness and control, and also neutral, distracting thoughts. These cognitions enter the OS and become the focus of attention and, as it turns out, are compatible with diminished stress and reduced cognitive load in situations that are uncomfortable for the public speaking phobic with recursive anxiety. The result is a more positive experience for these affected individuals.

Hypotheses based on the present data should be tempered by the methodological limitations of this preliminary investigation. In particular, the reliability of the classification system of recursiveness remains to be demonstrated. In addition, the nature of the therapy process makes it difficult, if not impossible, to blind the therapist to the clients' recursive status. Thus, the effects of therapist expectancies and demand characteristics are difficult to control in studies of this sort. Nevertheless, we believe that these findings can be of some use to the practicing clinician and may serve as the basis of hypotheses for future investigations.

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