Anxiety and Values: Anxiety as Caused by the Frustration of a Major Value: Religion

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Two theories of the cause of anxiety, the frustration of values theory and the cognitive assimilation theory, were empirically tested with positive results for both theories under a state anxiety model. Ninety-eight religious subjects were frustrated, via vignettes, according to the values expressed in the Intrinsic-Extrinsic Religious Orientation Scale and assessed in terms of cognitive assimilation based upon the values expressed in this scale as well. Values frustration did predict anxiety in this study, and a lack of cognitive assimilation predicated anxiety for "secondary values." Hence state anxiety can be influenced directly without the necessity of using trait anxiety. This is consistent with trait anxiety being a perceptual aggregate of states of anxiety.

A number of books and articles have been written on the subject of anxiety (e.g., Cattell & Scheier, 1961; Freud, 1936; Janis, 1958; McReynolds, 1968; Sarason & Spielberger, 1975; Zuckerman & Spielberger, 1976), yet there fails to be a consensus about the origin of anxiety that is demonstrable empirically. Levitt (1980), in his review of the research on anxiety, concludes his chapter on the theories of the basis of anxiety with, "Theories of the origin of anxiety in the human organism are in a relatively rudimentary state because the available core of definitely established facts is quite small." Cattell (1982) in a recent discussion of his theory of the cause of anxiety states that "no physical example of such action can yet be cited."

These major works are representative of the research on anxiety in general in that they contain very little empirical research on the cause of anxiety. This lack poses an interesting problem in that while the etiology of anxiety is widely written about theoretically, there is little empirical research in the literature to support these untested theories.

Determining the cause of anxiety can only proceed if the construct of anxiety, as defined with psychological scales, is understood. One distinction that is particulary important to researching this question is the state-trait distinction. Anxiety as a function of both states (points in time) and traits (more enduring personality characteristics) has been described (Cattell & Scheier, 1961; Gorsuch, 1969; Spielberger, 1975). Cattell (Cattell & Scheier, 1961) writes the following:

> Popular speech recognizes that one can have an anxious person — a person who all his life is characterologically operating at a higher anxiety level — and a typically non-anxious person who is temporarily in a highly anxious state.

Trait anxiety has been distinguished from state anxiety empirically (Cattell & Scheier, 1961; Spielberger, Gorsuch, Lushene, & Vaga, 1977), with trait anxiety describing a more enduring, long-term experience as opposed to state anxiety as a description of short-term episodes. There is some evidence to suggest that a summation process of one's experience of state anxiety occurs in the development of one's trait anxiety (Gorsuch, 1969). If this is the case, then trait anxiety is best seen as a combination of a number of processes, each contributing to, or resulting from, the experience of state anxiety. This study will concern itself with state anxiety in an attempt to investigate empirically the source of the experience of anxiety from the perspective that state anxiety is the basic phenomenon of concern, leaving to later research the question of exactly how states of anxiety become reflected in trait anxiety.

Analysis of the causes of anxiety are useful for conceptual development of the state-trait distinction. From the perspective that state anxiety is only a manifestation of trait anxiety, state anxiety

would be independent of situational variables. But if state anxiety produces trait anxiety, or if there is an interaction between causation of state and trait anxiety, then situational variables would clearly impact state anxiety.

The Causes of Anxiety

The frustration of drives (which includes values) theory of the causation of anxiety has many proponents, and can be found in Freud (1936). An example is found in the writing of Cattell (1966), who suggests that anxiety can best be thought of in terms of the summation of stimulated drive level, fear of deprivation of drives, degree of uncertainty, and personality traits which magnify these responses (Cattell & Child, 1975). The central element in this equation for anxiety is "stimulated drive level," which is made up of "sentiments" and biological "ergs" which combine to motivate persons to conduct their behavior. Cattell and Child (1975, p. 57) define these elements in the following manner:

> The basic operational distinction of ergs and sentiments is that ergs contain a set of attitudes utilizing different cultural features, but sharing a common emotion and ergic goal, whereas the sentiments, reciprocally, have quite diverse emotional, ergic components but center upon a single cultural purpose.

Cattell (Cattell & Scheier, 1961) acknowledges that it is not uncommon to find anxiety listed as one of the basic drive forces in life. Yet, he is one of many psychologists who believe that anxiety is not among the primary drives, but is a secondary phenomenon resulting from the deprivation or frustration of more primary drives. Thus, in Cattell's theory, it is the conflict between basic sentiments that leads to a frustration of ergic energy. This, in turn, is converted into the experience commonly known as anxiety.

The sentiments in Cattell's theory are those things we find within our culture which we hold dearly, or value. One example of a sentiment resulting from Cattell's research is religion (Cattell & Child, 1975, p.32). It would be the case that the more important one's religious sentiments are that are frustrated, the greater the "fear of deprivation" and hence the higher the anxiety. Thus, anxiety would result when religious sentiments (or the things which one values religiously) are frustrated among religious persons resulting in a converting of ergic energy into anxiety. In later developments of his theory, Cattell (1982) recognizes how these ideas fit the psychoanalytic values frustration theory of the origin of anxiety.

A second theory of anxiety causation to be explored here is from cognitive theorists, such as McReynolds (1976), who postulate an "assimilation theory" of anxiety. This theory considers the experience of anxiety to be the result of "cognitive backlog," or an overload of unassimilated conflicting thoughts or cognitions. These cognitive discrepancies are self-perceptions, such as a conflict between a value one might hold and a contradictory thought one might have about that value, which produce anxiety. One example would be in the case of persons who hold certain religious beliefs, yet were called upon to violate those beliefs in order to be successful in their personal occupations. Averill (1976) goes so far as to describe anxiety as the state of cognitive disintegration, the opposite state from having all of one's cognitions integrated, or "peace." What is central to this theory is the notion of cognitions in conflict. Unresolved conflicting cognitions predispose the individual to respond in an anxious manner.

The point of similarily between these two theories of causation is that what is active in the etiology of anxiety is a state of frustration or conflict in an area valued by the individual. This hypothesis, supported by these two theories of anxiety, has yet to be empirically tested. While Cattell goes to great lenghts to describe a theory of values frustration as the cause of anxiety, he cites no research specifically designed to test this hypothesis (Cattell, 1982; Cattell & Child, 1975). And McReynolds (1976) is quite clear that he is calling for empirical research to investigate cognitive assimilation notions about the etiology of anxiety.

Anxiety and a Major Value: Religion

Religion is a value system that offers great diversity, yet one that is well articulated and the focus of much research (Batson & Ventis, 1982). Because of the variety of socially acceptable directions religion has taken in our society, the possibility of finding subjects with a variation of this single value is maximized. Thus, religion as a value would appear to be useful for research on anxiety causation.

Anxiety and religion have been investigated in past non-causal research, but the relationship between the two is one that has been clarified only recently. One set of studies has found religion to be associated with anxiety (Argyle & Beit-Hallahmi, 1975; Dittes, 1969; Rokeach & Kemp, 1960), while another set of studies has found religion to be unrelated to anxiety (Fehr & Heintzelman, 1977; Heintzelman & Fehr, 1976). These discrepant results are clarified by a third group of studies which has utilized differential measures of religion. These studies find anxiety negatively related to certain types of religious persons while positively related to other types (Entner, 1977; Funk, 1956; Gibbs & Achterberg-Lawlis, 1978;

Hood, 1978, Tansey, 1976). The most important finding appears to be between religious persons who are Extrinsic (utilizing religion as a means to some other end) and Intrinsic (utilizing religion as an end in itself), with the former reporting more anxiety than the latter on measuress of overall, or trait, anxiety (Baker & Gorsuch, 1982).

While cognitive theorists have not investigated the relationship between anxiety and religion, some interesting research has been done in the area of prejudice and "relatively undifferentiated theological dogma" (Allen & Spilka, 1967; Gorsuch & Aleshire, 1972; Gorsuch & Malony, 1974). "Undifferentiated theological dogma" is defined as a lack of certainty about theological thinking and can be seen as unassimilated cognitions in a major value area for these persons. Thus, there is some precedent for the investigation of unassimilated cognitions, or cognitive backlog, among religious persons. It seems reasonable to assume that those religious persons least assimilated in their religious values would have the most cognitive backlog, and thus would respond with greater anxiety in situations that frustrated their religious values.

The two major theories of the cause of anxiety discussed here find their point of overlap at the conflict within the individual. While each theory remains distinct, this overlap suggests that one psychological study could be designed to test both of these theories. The theory of anxiety exemplified by Cattell (Cattell & Scheier, 1961) would predict that frustrating religious persons from achieving their religious goals would produce anxiety. Thus, the first hypothesis for this study is: the frustration of religious values results in anxiety for religious persons.

The cognitive theory of anxiety held by McReynolds (1976) would predict that those religious persons with the greatest number of unassimilated cognitions in areas which they value should respond with greater anxiety when placed in situations causing them to be in conflict with these cognitions. For religious persons, "unassimilated cognitions" refers to the self-perceived uncertainty about the theological beliefs one might hold. The religious person with considerable unassimilated cognitions would respond in a more uncertain manner to self report questions about theological beliefs. Thus, the second hypothesis is: cognitive backlog in religious thinking is related to higher anxiety among religious persons when placed in conflictual religious situations. It is the intention of this study to test these two hypotheses empirically.

Method

The 98 participants for this study (29 males and 69 females) were members of six Episcopal, Presbyterian, and Congregational churches from the Mid-West and California. Church attenders were used to assure subjects who were high in religious values. They were assessed in terms of their religious orientation by the Intrinsic-Extrinsic Religous Orientation Scale of Allport and Ross (1967) in its Age-Universal form (Gorsuch & Venable, 1983).[1]

Participants were run under two levels of frustration — high and low — for two different religious values — intrinsic and extrinsic — for a total of four conditions. All subjects were adminstered the conditions in a random counterbalanced order.

The conditions were produced by vignettes. The use of vignettes to affect experimental manipulation was deemed most appropriate for a study of this nature for two reasons. First, the experimental manipulation in vivo of the human values researched here would be considered unethical unless prior research had progressed to the point that such research would be necessary to confirm conclusions in research such as this. Second, the State-Trait Anxiety Inventory (Spielberger, *et al.*, 1977) used for the dependent measure was itself developed through the use of vignettes, and has proven generalizable to real life settings.

For each level of frustration, two vignettes were designed, one representing an intrinsic religious motivation and one representing an extrinsic religious motivation. The vignettes themselves were carefully designed to represent values taken from either the Intrinsic or Extrinsic religious orientations of the Allport and Ross Scale (Allport & Ross, 1967). The vignettes were as follows:

1. Low Frustration of extrinsic religious values:

   A few years from now you are attending church where a surprising number of people similar to yourself also attend. Thinking of going to church each Sunday is quite pleasant because of the friendships you have developed there.

   Picture yourself walking up to the church building one Sunday and approaching that same familiar crowd you've come to know so well. As you get to the building itself, you look around and see virtually all of your good friends there. The pastor is there; the worship turns out to be the same good experience

[1]A scoring error should be noted in the published version of this scale (Gorsuch & Venable, 1983). The first item in the scale is listed as being an extrinsic item, when it is actually to be scored as an intrinsic item.

you've known; and you are surrounded by your home congregation.

2. High Frustration of extrinsic religious values:
   A few years from now you are attending church where a surprising number of people similar to yourself also attend. Thinking of going to church each Sunday is quite pleasant because of the friendships you have developed there.
   Picture yourself walking up to the church building one Sunday, and somewhat to your surprise, the faces in the crowd you are approaching are strangely unfamiliar. As you get to the building itself, you look around and see no one there you recognize. The pastor is the same; the worship turns out to be the same, but there is almost no one there you know.
3. Low Frustration of intrinsic religious values:
   In the future you find yourself able to set aside regular times for private prayer with God. You strongly desire to develop your relationship with God through these times, and you have been feeling very close to God. Because of the flexibility of your schedule, you are able to continue these regular times with God to the point where He today feels quite close and intimate. You are able to sense His presence this very moment just by merely thinking about it.
4. High Frustration of intrinsic religious values:
   In the future, you find yourself able to set aside regular times for private prayer with God. You strongly desire to develop your relationship with God through these times, and you have been feeling very close to God. But, as a result of demands placed upon you, your prayer times with God become fewer and fewer, and today God seems very distant. You pray just as you have before, but your prayers vanish into nothingness.

Anxiety induced by each vignette was measured by the state portion of the State-Trait Anxiety Inventory (Spielberger, *et al.,* 1977).[2] The second portion of the STAI, which was developed to measure trait anxiety, was not used for the reason discussed earlier.

The degree of cognitive assimilation in terms of the religious sentiment was measured by a series of theological statements followed by a 7 point scale, asking subjects to rate their ability to "fit together" these statements from "1. Fit Together Perfectly" to "7. Do Not Fit Together At All." These statements were designed to be contradictory based upon the Intrinsic or Extrinsic values expressed in the Allport and Ross Scale. Intrinsic religious cognitive backlog was measured by such groups of statements as:

God is everywhere.
There are times when we feel alone.
God answers prayer.
We do not always get what we pray for.
God desires to be present with us
At times, we do not sense the presence of God.

Extrinsic religious backlog was measured by such groups of statements as:

A good church is made up of like-minded people.
One can have faith without attending church.
Church is a good place to develop social relationships.
One need not be with others to appreciate God.
It is good to be known by friends at church.
One can go to church and feel quite alone.

Analyses and Results

The means scores on the Religious Orientation Scale identified the sample as highly intrinsic. The mean rating of the average intrinsic item was 4.2 on a 1 ("Strongly disagree") to 5 ("Strongly agree") rating scale, with a SD of .54. The sample also rejected the extrinsic items, with the mean rating of the average extrinsic item being 2.1 on the same scale, with a SD of .45. Hence the average person "agreed" with religion being intrinsic and "disagreed" with its being extrinsic. Since both means are about two standard deviations from the neutral point ("3"), the sample can be characterized as intrinsic and anti-extrinsic.

The first hypothesis suggested that the frustration of religious values should result in changes in state anxiety for the religious persons in this study as a function of frustration level. This was examined in a three-way ANOVA. The first factor was a between groups factor formed by identifying each subject as either intrinsic or extrinsic on the Religious Orientation Scale (with the 55 "intrinsics" being those with scores on the intrinsic scale above 4.2, and the 43 "extrinsics" being those with scores on the extrinsic scale above 2.1. The second factor was a within group factor formed by whether the vignette was designed as high or low frustration. The third factor, also a within group factor, was the type of religious value in the vignette: intrinsic or extrinsic. The results of that ANOVA are presented in Table 1.

[2]Following this, three scales from the 16PF were administered: Q3, Self-sentiment Strength; G, Superego Strength; and C, Ego Strength (Cattell, Eber, & Tatsuoka, 197). These personlity factors are theorized by Cattell to serve as moderator variables contributing to the occurrence of anxiety in a particular situation. Because these variables were controlled by the within subjects design of the ANOVA used here, these findings will be discussed elsewhere.

Table 1. *Analysis of Variance Results: Religion Orientation, Religious Values and Frustration Level Related to State Anxiety*

Source	df	Mean Squares	*F*
Religious Orientation	1	485.84	3.91*
Error	96	124.23	
Frustration Level	1	555159.25	488.88***
Frustration Level × Religious Orientation	1	10.07	.09
Error	96	112.37	
Religious Value	1	583.33	12.88***
Religious Values × Religious Orientation	1	123.84	2.73
Error	96	45.29	
Frustration Level × Religious Values	1	2580.24	54.94***
Frustration Level × Religious Values × Religious Orientation	1	15.64	.33
Error	96	46.96	

*p < .05 ***p < .001

Note: Religious Orientation was a between-groups factor comparing those with an Extrinsic orientation to those with an intrinsic orientation. Religious Values was a within-group factor indicating the type of religious value — intrinsic or extrinsic — that occured in the vignette.

The three-way interaction was non-significant, but the two-way interaction involving both aspects of type of frustration (Level of Frustration and Religious Value) was significant (p <.001). The plot of the means for the significant interaction is in Figure 1. While the anxiety induced by both high frustrating conditions is higher than under the low frustration conditions, this is particularly so for the intrinsic value vignette as compared to the extrinsic value vignette. The main experimental effects are seen by the high frustrating conditions having higher anxiety than the low frustrating conditions, with the interaction reflected in the greater increase in anxiety for intrinsically valued vignettes than extrinsically valued vignettes (p <.001).

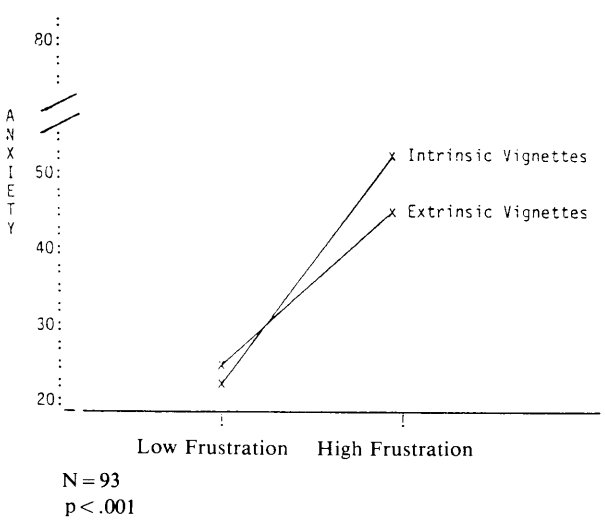

Figure 1: Anxiety scores on intrinsically and extrinsically valued vignettes from low frustration to high frustration conditions.

A significant main effect for religion, which was consistent with past research (Baker & Gorsuch, 1982), indicated that intrinsics tended to experience less anxiety than extrinsics, with overall means on the STAI of 35.3 and 37.5, respectively (p = .05). The main effect for Religious Value was also significant (p <.001) as was the main effect for low vs. high frustrating (p. <.001). Given the pattern of main effects and interactions, the results support the hypothesis that frustration of religious values in a group of intrinsic religious people produces an increase in state anxiety over a low religious frustration situation.

The second hypothesis suggested that cognitive backlog in religious thinking should correlate positively with anxiety among religious persons when placed in conflictual religious situations. This hypothesis was tested by Pearson product-moment correlation coefficients (see Table 2). A significant positive correlation was found between cognitive backlog on extrinsic theological beliefs and anxiety in the intrinsically valued experimental situation (r = .46, p <.01). The relationship between a lack of cognitive assimilation on intrinsic theological beliefs and the extrinsically valued experimental situation failed to reach statistical significance. This non-significant finding was partially due to the fact that subjects in this study did not appear to have any conflicts on the intrinsic theological beliefs (mean of 1.7 on a scale of 1 to 7), but did indicate a greater degree of cognitive conflict on the extrinsic theological beliefs (mean of 3.7 on a scale of 1 to 7).

Consistent with past research was the negative correlation between the intrinsic and extrinsic Religious Orientation Scales (r = −.28, p <.01, see Table 2). However, anxiety scores on the extrinsic low frustration vignette were correlated with anxiety scores on the intrinsic low frustration vignette (r = .61, p <.01) and anxiety scores on the extrinsic high frustration vignette were correlated with anxiety scores on the intrinsic high frustration vignette (r = .45, p <.01).

Discussion

The value frustration hypothesis of this study was supported. High state anxiety did occur in situations where people saw one of their major values being frustrated rather than in a situation with low frustration. For this religious population, the results were found for both types of religious values, extrinsic and intrinsic. Indeed the

Table 2. *Correlations Among Continuous Variables*

	1	2	3	4	5	6	7	8
1. I-Backlog	1.00							
2. E-Backlog	.18	1.00						
3. Anxiety in E-Valued Low Frustration	.12	−.02	1.00					
4. Anxiety in I-Valued Low Frustration	−.03	−.01	.61**	1.00				
5. Anxiety in I-Valued High Frustration	−.07	.46**	.02	.11	1.00			
6. Anxiety in E-Valued High Frustration	.05	.10	.01	.14	.45**	1.00		
7. I Religious Orientation	−.09	.01	−.20	.01	.01	−.13	1.00	
8. E Religious Orientation	−.05	−.17**	−.28**	−.18	.08	.14	−.28**	1.00

N = 98

** = $p < .01$

sample was primarily intrinsic and anti-extrinsic, and so the frustration of the intrinsic value led to greater increases in anxiety than did the frustration of the extrinsic value.

What this finding suggests is that these data are a powerful statement in support of the position of psychologists such as Cattell (Cattell & Scheier, 1961), who advocate a theory of the frustration of one's values as the cause of anxiety. This reaction is seen immediately in levels of state anxiety. Past research (Gorsuch, 1966) suggests that changes in trait anxiety are associated with patterns of high state anxiety.

The finding here of more anxiety resulting from intrinsic value vignettes, in spite of the fact that those with an extrinsic religious orientation displayed greater overall anxiety, is only logical in light of the unexpectedly high number of intrinsic subjects in this sample. Mean scores indicated this sample to be more intrinsic than the original population used to develop the age universal scale (Gorsuch & Venable, 1983). Comparing these means to the original scales of Allport and Ross (1967) also suggests that the subjects in this study were more intrinsic than college student populations (Hood & Morris, 1981), Roman Catholics (Thompson, 1974), and other church populations (Bowers, 1978).

The second hypothesis of this study was also supported. Cognitive backlog on extrinsic theological beliefs was related to higher anxiety in the intrinsic frustration condition. However, it seems that a cognitive backlog of theological beliefs in areas not directly related to the particular religious orientation of these subjects did bear a significant relationship to the anxiety experienced in a situation that was directly related to their preferred values.

One possible explanation for this finding may be that the cognitive assimilation theory predicts best when considering "secondary" or non-central values. In this study, while extrinsic theological beliefs were of some importance to intrinsics, they were not of primary value and could be considered "secondary" or non-central. It is possible that values in this less central position have a greater chance of contributing to cognitive backlog as they have a lesser opportunity to be examined on a regular basis, and consequently resolved.

This suggests that while a distinction still exists between intrinsicness and extrinsicness, each religious orientation finds the values of the other orientation important, at least enough to cause the religious subjects here to respond similarly to both intrinsic and extrinsic vignettes situations. This "general religious factor" (Gorsuch, 1984) is reflected in the significant relationships between the intrinsic value and extrinsic value low frustration conditions as well as the intrinsic value and extrinsic value high frustration conditions. Whatever was frustrating in the intrinsic vignette had a strong relationship with whatever subjects found frustrating in the extrinsic vignette.

The effects were found for state anxiety, supporting the building of theory on causes of state anxiety without regard to levels of trait anxiety. Hence a complete theory needs to treat state anxiety as a basic phenomenon in its own right. Of course, research on trait anxiety may find that it too has causes in addition to past levels of state anxiety. While such additional theoretical tests were beyond the scope of this paper, the results here are consistent with what might be called a "self perception" theory of trait anxiety. This theory views trait anxiety as people's perceptions of themselves as anxious people, which is a function of remembered states of anxiety and an attribution system which attaches those past perceived states to one's self concept, or which defends against such attachment.

These findings are suggestive for further research in this area. For instance, later designs may be able to determine if the two theories used in combination would enhance the prediction of anxiety, or if there are actually two separate functions in operation. Further investigation is clearly needed to understand the relationship between cognitive assimilation and "secondary" values as suggested here. Additional research using more extrinsic populations should find a similar trend of intrinsic cognitive backlog being associated with anxiety in extrinsically valued situations, which was unable to be clearly tested here due to the intrinsic nature of this sample. Other value areas suggested by people such as Rokeach (1973) and Cattell (Cattell & Child, 1975) need to be examined in light of this theoretical approach as well.

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