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THE DEVELOPMENT AND VALIDATION OF AN OBJECTIVE MEASURE OF NEED FOR SAFETY

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ABSTRACT

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By

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The need for safety has been addressed by psychologists since the time of Freud, yet previous attempts to objectively measure this construct have been unsatisfactory. The present study attempts to quantify safety-orientation as Maslow (1970) conceptualized it. A 64-item questionnaire was completed by 243 subjects; the data were factor analyzed, yielding 11 interpretable factors, three of which were chosen to comprise the Safety Scale: order, risk-taking, and moderation. The instrument's internal reliability was found to be satisfactory (alpha=.82). Scores on the scale were then compared to scores on four other criterion scales, measuring permissiveness, conservatism, threat-perception, and willingness to take risks. Significant correlations in the hypothesized direction were obtained for each scale. The author concludes that the scale is valid and discusses areas for further research.

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INTRODUCTION

Throughout the course of the history of psychology, a considerable number of personality theorists have addressed themselves to the individual's need for a safe environment in which to exist. Most notably, it was Abraham Maslow who gave the fullest and most direct treatment of this construct in his theory of human motivation (Maslow, 1970). He describes personality as being arranged as a hierarchy of motivational states. As each need is satisfied, a new need or set of needs emerges, beginning from the basic, physiological requirements and culminating in the drive for self-actualization. Of particular interest, however, is the fact that upon meeting one's biological demands, it is the need for safety that dominates the organism. From this, it may be inferred that the gratification of the safety motive is quite vital for effective human functioning. Furthermore, it is the safety-oriented individual who, at least implicitly, is the farthest from self-actualization, or human fullness. Because the safety-suited person is so undeveloped psychologically, this particular orientation warrants some concern. It is felt that by developing a

method whereby such safety-oriented individuals may be easily and objectively identified, a significant step would be made in the direction of understanding the dynamics of personality and motivation. Such is the purpose of this thesis.

PROFILE OF THE SAFETY-ORIENTED PERSONALITY

Perhaps the most concise description of the safety-oriented individual person is given by Maslow himself when he describes this type of person as "one who lives his life out as if he were a spy in enemy territory" (Maslow, 1970). He prefers an environment which is safe, predictable, and easily managed. Also, he prefers a rigidly organized society devoid of "threats to law, order, and the authority of society." In extreme cases, the organism may be dominated by this need, in which case safety is habitually kept first and foremost in mind. Characteristic behaviors include an attitude of extreme caution, fear of even remotely possible dangers and mishaps, defensiveness, and suspicion of others' behaviors and motives.

THEORETICAL BACKGROUND

Early Theorists

The first theorist to consider the need for a safe environment was probably Freud (1933), who discussed it in the context of anxiety. An unsafe situation consisted of any unmanageable attack on the ego, which in turn results in some kind of defense mechanism, such as repression. Among his contemporaries, it was Karen Horney who also posited a construct roughly parallel to the safety need, which she labelled "basic anxiety"--an inherent component of personality developing in childhood, which she describes as a feeling of helplessness and apprehension in a hostile world (Horney, 1950).

In their classic study of the authoritarian personality, Adorno and his colleagues (Adorno et al., 1950) put forth an extensive, in-depth description of what may very well be an extreme type of safety-oriented individual. Specifically, they depict the authoritarian as being submissive to authority and as viewing the world as a jungle. This bears a strong similarity to Maslow's conception of the safety-oriented individual as needing strength in the protector as well as laws and freedom from fear.

Factor Analytic Studies

A small number of constructs that are somewhat similar to Maslow's safety need have been identified by psychologists using the psychometric approach to personality study. For example, Cattell (1957), using a special type of grand-scale factor analysis, was able to reduce normative personality structure to sixteen traits, or factors. One of these he called "radicalism." This factor seems to tap an "experimenting/conservative" dimension of functioning, and is comprised in part of the following attitudes and beliefs: a preference for chess over croquet; the value of scientific knowledge over that of moral excellence; and that one learns more by reading books than by attending class. While this particular factor bears the closest resemblance to safety orientation, the two are quite dissimilar.

J.P. Guilford and his associates conducted a similar study to Cattell's, only in this case, they investigated via factor analysis, human interests or "sources of human satisfaction" (Guilford, et al., 1954). Among the 28 factors extracted, there was one that more closely resembled the Maslovian construct than any of the others. They termed this factor "adventure vs. security" and characterized it by such variables as a desire for exploration and risk-taking, and an aversion toward such things as monotony and harm ("harm-avoidance"). These findings once again suggest the existence of safety motivation, though still represent only a rough approximation.[1]

Numerous studies of political attitudes, Eysenck and others (e.g., Eysenck, 1954, 1975; Ferguson, 1946; Wilson, 1973) have consistently uncovered a dimension of conservatism. The political conservative is characterized by particular values such as patriotism, endorsement of capital punishment, concerns with law and order, and the like. Clearly, this constellation of beliefs bears at least some resemblance to safety-orientation; indeed, the latter is probably a component of the former. Later, a closer examination of the relationship between these two variables will be considered. Logic tells us they ought to be positively correlated.

More Recent Approaches

In her development of a theory of political man, Knutson (1972) was strongly influenced by Maslow's views. She proposed that safety-oriented people possess certain political beliefs, behaviors and philosophies, and her research has supported this idea empirically. Furthermore, Knutson saw these people to be insecure, anxious, intolerant of ambiguity, dogmatic, and sensitive to threats from the environment. They view the world as unresponsive to their needs, yet they are passive in accepting their roles. They are alarmist and prone to prejudice. Throughout her book, she makes a persuasive argument for such people being unique political, philosophical and economic beings, and that therefore they ought to be studied in a particular context. However, "...the work was flawed in ways that shall be dealt

with shortly."

Martin Seligman (1975), in dealing with helplessness, has recognized people's shared need for safety, particularly the feeling of being in control of one's environment. According to his research, a feeling of anxiety results when an individual feels his behavior will have no effect on the predicament with which he or she is faced. Seligman calls this state of mind "learned helplessness." However, this feeling can be allayed during the presence of any stimulus that indicates the subject's behavior will in fact be effective in altering one's surroundings.

Finally, Aronoff and Wilson (1985) have extensively reviewed Maslow's theory. In summarizing the safety needs, the authors borrow some of Murray's (1938) terminology. Accordingly, in their view, the safety-seeking person is driven by the peripheral motives of abasement, dependency, approval and order, and has the additional needs for rejection, contrarience, acquisition, conservance, and retention. Although these assertions make a great deal of intuitive sense, they consider safety need in a broad, clinical, idiographic perspective, and present little empirical support for their position.

PRIOR ATTEMPTS TO MEASURE SAFETY NEED

At least two previous efforts have been made to quantify safety needs, as Maslow himself has defined it. One attempt is found in the study by Knutson, mentioned above. The administration of a large number of personality tests and inventories made it necessary for her to include only a few items in each one of her scales. Her measure of safety need included only four items, each of which seemed to tap a different type of insecurity. Thus, it is quite possible that the measure she developed is unreliable and internally inconsistent; no psychometric properties are given for it. Furthermore, a four-item scale is probably of questionable value by virtue of its brevity. It is unlikely that four questions can adequately measure such a broad category as safety- orientation.

The second attempt was made by Aronoff (1967), in devising a theory of culture and personality during a field study in the West Indies. Using Maslow's theory as a framework, he developed a sentence completion test designed to measure both esteem and safety-orientation. Later this projective test was revised for use on American college students. While it has been found useful in other studies

(e.g. Aronoff and Messe, 1971), "...its reliability is unknown..." In addition, the measures of the two orientations are partially ipsative, because the format of the instrument promotes the likelihood that observed scores will be negatively correlated; a high score on one dimension tends to produce a low score on the other. Since no empirical evidence exists to support the assumption that the two orientations conceptually are negatively correlated, the validity of the Aronoff Sentence Completion Test remains questionable. Another difficulty with the instrument lies in the scoring, since responses are often ambiguous and must be scored subjectively.

All this discussion points to the fact that while the development of a pure, objective measure of need for safety has been considered a worthwhile endeavor, there still remains some room for improvement. Such improvement is the purpose of the study.

PILOT WORK

The first step in the construction of the safety scale that was the focus of the present research consisted of generating a pool of as many items as possible that might tap a person's need for safety, or absence of such a need. Included in the pool was any item that seemed as though it might relate to some type of safety need. Also, every effort was made to word items in such a way as to reduce, as much as possible, to as great an extent as possible any possibility of ambiguity or response acquiescence. A few of the categories in which the items fell include: the actual writings of Maslow on the topic (e.g. "I have a desire for a predictable orderly world," and "It is necessary to have a savings account"); interpersonal style (e.g. "I'm not afraid to strike up a conversation with a stranger," and "I consider myself shy"); political beliefs (e.g. "Politically I consider myself conservative" and "The minimum age at which a person may drive should be reduced"); attitudes toward rules (e.g. "Rules are made for a reason and should therefore be followed to the letter"); general life style (e.g. "I act regardless of how others may feel" and "I run my daily affairs according to a set schedule"); attitudes

toward money (e.g. "Money is not one of my main concerns"); and items which deal with psychological growth and fulfillment (e.g. "I love the world as it is").

"From a pool of approximately 130 items, 100..." were selected for inclusion in an initial questionnaire: 50 items were positively scaled and 50 negatively scaled. A six-point Likert scale was used as the response format.

A sample of approximately 160 college students were administered the 100-item form. About 80 were from Saint Peter's College in Jersey City, whereas the remainder came from Fairfield University in Connecticut. One hundred and forty-nine of the forms were completed entirely or nearly entirely, and so were deemed suitable for statistical analysis.

A factor analysis with varimax rotation was performed on the data from the completed questionnaires. A careful inspection of the results revealed that the subjects-to-items ratio was too low for the results to be meaningful. It was therefore decided (a) to augment the sample, and (b) to reduce the number of items.

In order to increase the sample size, an additional 95 students were drawn from introductory Psychology classes at Michigan State University. As it was necessary to eliminate some of the items, the decision was made to strike any item which in any way did not contribute to the scale's direct, unambiguous, and pure measure of safety need. Questions excluded on this basis included those which dealt with

interpersonal style, neuroticism/anxiety (e.g. "I live in fear"), things not necessarily under one's control (e.g. "My life is different every day"), and any item that might be construed as measuring something other than safety-orientation (e.g. "I'm full of self-confidence"). Thirty-six such stimuli were omitted in this manner, leaving 64 for inclusion in the second form of the questionnaire.

This shorter form was given to the Michigan State University sample described above. These data, along with the Fairfield and Saint Peter's College data, were once again factor analyzed. This time, a much more satisfactory set of factors was obtained.

Of the 20 factors that accounted for more than one percent of the variance after rotation, 11 were interpretable. Appendix A lists these factors, along with those items that loaded .4 or above on one of them.

Of these 11 factors, at least three are probably artifactual: those dealing with hitchhiking, fire drills and misanthropy. In addition, three were reflected by mainly two items. Of the five remaining factors, three were selected for inclusion in the final measure on the a posteriori basis of consistency with the need hierarchy theory. These are factor 1 (order), factor 2 (risk), and factor 4 (moderation). Thus the twenty items in these factors were chosen to comprise the safety scale, with items 1-9 coming from the order factor, 10-16 from the risk factor, and 17-20 from the moderation factor.

A reliability analysis for the entire scale was performed. Its internal consistency was found to be quite satisfactory, $\alpha = .82$. Further analysis was carried out for each of the subscales. For factor 1, $\alpha = .77$; for factor 2, $\alpha = .80$, and for factor 3, $\alpha = .63$.

VALIDATING THE SCALE

Having established the internal consistency of the scale, the task remained of establishing empirically its actual validity. In order to carry this out, four other pencil and paper measures were selected to serve as validity criteria.

Permissiveness.

Since safety-oriented individuals value a tightly structured, orderly world, one might reasonably expect a negative correlation with a measure of permissiveness. In factor analyzing a list of statements dealing with a wide variety of social and political issues, Eysenck (1975) extracted a number of interesting factors, the first of which he dubbed permissiveness. Eleven of the highest-loading items from this factor were employed as one criterion.

Conservatism.

In a discussion of psychological conservatism, Wilson (1973) has conceptualized it as a preference for "playing safe and avoiding risks," as well as "the disposition towards being moderate and cautious." These ideas seem to bear a strong similarity to Maslow's safety-orientation, and

any valid measure of conservatism should logically correlate with the Safety Scale.

Threat-Perception.

Another salient characteristic of the safety-motivated person is the sensitivity to any potentially threatening stimuli. Indeed, Knutson (1972) has suggested that those high in need for safety feel more threatened than do those low in that dimension. Hammes (1961) has developed a measure of perception of environmental threat in order to assess its relation to anxiety. This scale, called the DAT, seemed a logical choice as another criterion.

Choice-Dilemma Questionnaire.

Both theoretically and factorially, safety-orientation involves, in part, an aversion to risk and precariousness, and a favorable attitude towards stability and predictability. It follows that a valid measure of safety-orientation would correlate with a risk-taking measure. The one developed by Kogan and Wallach (1964), the Choice-Dilemma Questionnaire, although originally intended for use in small groups research, was found to be the most realistic of all such scales that were available.

Hypotheses.

We would expect the Safety Scale to correlate positively with scores on the C scale (Conservatism), the DAT scale, and the Choice-Dilmenna Questionnaire (CDQ). We would expect a negative correlation, however, with permissiveness scores. In addition, it is projected that, on each

of the four criteria, the scores of the upper quartile of Safety Scale scorers be significantly greater (or in the case of permissiveness, smaller) than those of the lower quartile.

METHOD

Subjects

Seventy-eight students enrolled in upper-level Psychology courses at Michigan State University anonymously completed a packet of five questionnaires at home. Twenty-four identified themselves as male, forty-three as female, with the rest not indicating their sex. All subjects received course credit for their participation.

Instruments

Questionnaires were distributed prior to the beginning of the class session. The students were told to complete the forms for extra credit and to return them at the next class meeting.

The Safety Scale and Eysenck's permissiveness factor consists of 20 and 11 items, respectively, to which subjects responded along a six-point Likert scale. The C scale is comprised of 50 one or two-word items, half conservative, half liberal. The subject is simply asked to respond either "yes" or "no" to each item, according to his or her approval or disapproval. The DAT scale consists of 32 items, the responses to only 12 of which actually contribute to the scoring. The subject indicates on a seven-point Likert

scale how dangerous, aggressive, or threatening he or she perceives each item to be. Finally, the CDQ contains 12 brief stories involving a decision the main character must make. For each scenario, the alternatives include an unlikely but rewarding outcome, and a more certain, but much less satisfying result. The respondents are told to imagine they were advising the main character. They then indicate whether they would endorse taking the riskier of the two options presented, and if so, what the minimum chance of success must be for them to endorse it. (See appendices for reproductions of the actual questionnaires used).

Procedure

For the first four questionnaires, responses were scored in the direction of high safety need, high permissiveness, conservatism, and high threat perception respectively. For the CDQ, scores were based on the minimum probability that was deemed acceptable for each of the 12 items (e.g. 3 out of 10 would be scored as 3). If no options were deemed acceptable, and the subject advised against the risky option "no matter what," then that response was scored as 10 (out of 10).

RESULTS

Table 1 shows the intercorrelations among all five scales. The Safety Scale correlated significantly in the predicted direction in each of the four cases.

Table 2 presents the means of each scale, along with those of the upper and lower quartile of Safety Scale scorers. Once again, each hypothesis is supported.

While the Safety Scale correlated with each criterion, the CDQ was correlated only with the Safety Scale. This pattern perhaps is due in part to an especially strong correlation between the CDQ scores and factor 2 (risk-taking) of the Safety Scale, $r\ (76) = .225$, $p = .005$. The correlation coefficients with factor 1, order, $r\ (76) = .169$, $p = .07$, and factor 3, moderation, $r\ (76) = -.017$, $p = .455$, were nonsignificant. Therefore, it was largely on the strength of the sensitivity to risk-taking of the Safety Scale that the CDQ correlated with it.

Among those subjects who indicated their sex, no difference was found among the Safety Scale scores between males and females, $t\ (65) = 1.43$, $p = .153$.

DISCUSSION

The data present strong evidence that the Safety Scale is indeed valid. Of further interest, however, is the fact that while Permissiveness, Conservatism and threat-perception intercorrelated significantly, (as one might very well expect), CDQ scores were linearly independent of all but Safety scores. This suggests that apart from the "Conservative Syndrome" of attitudes, the Safety Scale also predicts the dimensions of risk-taking and decision-making, which themselves are unrelated to Conservatism and its correlates. This gives added strength to the validity of the newly-developed measure.

While other such scales have been found and/or developed in the past, it is felt that the present study has succeeded in putting together the most objective and comprehensive a measure of safety need to date that is consistent with the Maslovian hierarchy theory. In addition, it is hoped that the role of safety-motivation be studied in various other contexts of personality and social psychology. For example, do safety-oriented people base their attributions on different factors than do non-safety oriented people? In the context of locus of control, are

safety-oriented more external? Perhaps they are more anxious. Are they more susceptible to prejudice and the formation of stereotypes? How would their performance in a task setting compare to those who are not high in safety need? The findings of such research would promise to increase our knowledge of the dynamics of personality, the psychological basis of safety, and its role in dictating the social process.

APPENDICES

APPENDIX A:

THE SAFETY SCALE

INSTRUCTIONS: The following items deal with your attitudes about a number of things. Since we are all different, there is no such thing as a "right" or "wrong" answer. The idea is to read each item and fill out your response on the corresponding line. Your first impression is usually best. RESPOND TO EVERY ITEM, even if it does not apply to you very well. The possible responses for each item are as follows:

1: strongly agree
2: moderately agree
3: slightly agree
4: slightly disagree
5: moderately disagree
6: strongly disagree

_____ 1. I have a desire for a predictable, orderly world.
_____ 2. I always make sure I'm on time.
_____ 3. Establishing discipline is a teacher's primary duty.
_____ 4. One of the first things a child should be taught is obedience.
_____ 5. I always make sure I'm in control of a situation.
_____ 6. I always try to do what is considered proper.
_____ 7. "Be careful" is a good policy for living life.
_____ 8. Rules are made for a reason, and should therefore be followed to the letter.
_____ 9. I wish people were more like me.
_____10. I enjoy situations that are new or unfamiliar.
_____11. I usually enjoy taking chances.
_____12. In general, I don't like taking chances.
_____13. "Everything is sweetened by risk."
_____14. As far as my life is concerned, it's "anything goes."
_____15. I tend to avoid new or unfamiliar situations.
_____16. I try to make sure that no unmanageable, unexpected, or unfamiliar dangers will ever appear.
_____17. It's okay for people to use drugs occasionally for recreational purposes.
_____18. I tend to obey all speed limits.
_____19. I am very careful of how I spend my money.
_____20. I live by the rule "Everything in Moderation."

APPENDIX B:

PERMISSIVENESS SCALE

INSTRUCTIONS: Below are 11 statements about various topics. On the line before each statement, write the number which corresponds to your position, or opinion:

1 = Strongly agree

2 = Moderately agree

3 = Slightly agree

4 = Slightly disagree

5 = Moderately disagree

6 = Strongly disagree

_____ More severe punishment of criminals will reduce crime.

_____ There is no harm in travelling occasionally without a ticket, if you can get away with it.

_____ The laws against "soft" drugs like marijuana are too strict.

_____ Modern students show unrest because the old ways have failed.

_____ Men and women have the right to find out whether they are sexually suited before marriage (e.g. by trial marriage).

_____ Children today need more discipline.

_____ The "new look" in drama and TV plays is an improvement on the old-fashioned type of entertainment.

_____ Sexual immorality destroys the marriage relation, which is the basis of our civilization.

_____ The "free-and-easy" play-way of teaching youngsters results in poor reading and writing.

_____ Permissiveness in our society has gone much too far.

_____ The sight of young men with beards and long hair is unpleasant.

APPENDIX C:

THE CONSERVATISM SCALE

Which of the following do you favor or believe in? Circle "Yes" or "No." If absolutely uncertain, circle "?." There are no right or wrong answers; do not discuss; just give your first reaction. Answer all items.

1	death penalty	Yes ? No	26	computer music	Yes ? No
2	evolution theory	Yes ? No	27	chastity	Yes ? No
3	school uniforms	Yes ? No	28	fluoridation	Yes ? No
4	striptease shows	Yes ? No	29	royalty	Yes ? No
5	Sabbath observance	Yes ? No	30	women judges	Yes ? No
6	beatniks	Yes ? No	31	conventional clothing	Yes ? No
7	patriotism	Yes ? No	32	teenage drivers	Yes ? No
8	modern art	Yes ? No	33	apartheid	Yes ? No
9	self-denial	Yes ? No	34	nudist camps	Yes ? No
10	working mothers	Yes ? No	35	church authority	Yes ? No
11	horoscopes	Yes ? No	36	disarmament	Yes ? No
12	birth control	Yes ? No	37	censorship	Yes ? No
13	military drill	Yes ? No	38	white lies	Yes ? No
14	co-education	Yes ? No	39	birching	Yes ? No
15	Divine Law	Yes ? No	40	mixed marriage	Yes ? No
16	socialism	Yes ? No	41	strict rules	Yes ? No
17	white superiority	Yes ? No	42	jazz	Yes ? No
18	cousin marriage	Yes ? No	43	straitjackets	Yes ? No
19	moral training	Yes ? No	44	casual living	Yes ? No
20	suicide	Yes ? No	45	learning Latin	Yes ? No
21	chaperones	Yes ? No	46	divorce	Yes ? No
22	legalized abortion	Yes ? No	47	inborn conscience	Yes ? No
23	empire-building	Yes ? No	48	coloured immigration	Yes ? No
24	student pranks	Yes ? No	49	Bible truth	Yes ? No
25	licensing laws	Yes ? No	50	pajama parties	Yes ? No

APPENDIX D:

PERCEPTION OF ENVIRONMENTAL THREAT SCALE

INSTRUCTIONS: This is a study in the evaluation of common objects in your environment. You are to rate the objects on this list in terms of their dangerous, aggressive, or threatening aspects. For each object circle a number on the line. If you consider the object to be very dangerous, aggressive, or threatening, give it a 7; if least dangerous, aggressive, or threatening, give it a 1. You may mark any number between 1 and 7, with 4 denoting an average rating.

angel	1	2	3	4	5	6	7	jungle	1	2	3	4	5	6	7
balloon	1	2	3	4	5	6	7	kite	1	2	3	4	5	6	7
bank	1	2	3	4	5	6	7	knob	1	2	3	4	5	6	7
basket	1	2	3	4	5	6	7	lion	1	2	3	4	5	6	7
bird	1	2	3	4	5	6	7	mob	1	2	3	4	5	6	7
bracelet	1	2	3	4	5	6	7	octopus	1	2	3	4	5	6	7
button	1	2	3	4	5	6	7	paint	1	2	3	4	5	6	7
chicken	1	2	3	4	5	6	7	paper	1	2	3	4	5	6	7
claw	1	2	3	4	5	6	7	party	1	2	3	4	5	6	7
coin	1	2	3	4	5	6	7	phonograph	1	2	3	4	5	6	7
cow	1	2	3	4	5	6	7	pony	1	2	3	4	5	6	7
crocodile	1	2	3	4	5	6	7	razor	1	2	3	4	5	6	7
deer	1	2	3	4	5	6	7	scorpion	1	2	3	4	5	6	7
diamond	1	2	3	4	5	6	7	seaweed	1	2	3	4	5	6	7
door	1	2	3	4	5	6	7	shark	1	2	3	4	5	6	7
game	1	2	3	4	5	6	7	straw	1	2	3	4	5	6	7
hair	1	2	3	4	5	6	7	string	1	2	3	4	5	6	7
hatchet	1	2	3	4	5	6	7	screen	1	2	3	4	5	6	7
hearse	1	2	3	4	5	6	7	whip	1	2	3	4	5	6	7

APPENDIX E:

CHOICE-DILEMMA QUESTIONNAIRE

Appendix E

Choice Dilemmas Procedure

OPINION QUESTIONNAIRE II

Instructions. On the following pages, you will find a series of situations that are likely to occur in everyday life. The central person in each situation is faced with a choice between two alternative courses of action, which we might call *X* and *Y*. Alternative *X* is more desirable and attractive than alternative *Y*, but the probability of attaining or achieving *X* is less than that of attaining or achieving *Y*.

For each situation on the following pages, you will be asked to indicate the minimum odds of success you would demand before recommending that the more attractive or desirable alternative, *X*, be chosen.

Read each situation carefully before giving your judgment. Try to place yourself in the position of the central person in each of the situations. There are twelve situations in all. Please do not omit any of them.

1. Mr. A, an electrical engineer, who is married and has one child, has been working for a large electronics corporation since graduating from college five years ago. He is assured of a lifetime job with a modest, though adequate, salary, and liberal pension benefits upon retirement. On the other hand, it is very unlikely that his salary will increase much before he retires. While attending a convention, Mr. A is offered a job with a small, newly founded company which has a highly uncertain future. The new job would pay more to start and would offer the possibility of a share in the ownership if the company survived the competition of the larger firms.

Imagine that you are advising Mr. A. Listed below are several probabilities or odds of the new company's proving financially sound.

Please check the lowest probability that you would consider acceptable to make it worthwhile for Mr. A to take the new job.

___ The chances are 1 in 10 that the company will prove financially sound.
___ The chances are 3 in 10 that the company will prove financially sound.
___ The chances are 5 in 10 that the company will prove financially sound.
___ The chances are 7 in 10 that the company will prove financially sound.
___ The chances are 9 in 10 that the company will prove financially sound.
___ Place a check here if you think Mr. A should *not* take the new job no matter what the probabilities.

2. Mr. B, a 45-year-old accountant, has recently been informed by his physician that he has developed a severe heart ailment. The disease would be sufficiently serious to force Mr. B to change many of his strongest life habits — reducing his work load, drastically changing his diet, giving up favorite leisure-time pursuits. The physician suggests that a delicate medical operation could be attempted which, if successful, would completely relieve the heart condition. But its success could not be assured, and in fact, the operation might prove fatal.

Imagine that you are advising Mr. B. Listed below are several probabilities or odds that the operation will prove successful.

Please check the lowest probability that you would consider acceptable for the operation to be performed.

___ Place a check here if you think Mr. B should *not* have the operation no matter what the probabilities.
___ The chances are 9 in 10 that the operation will be a success.
___ The chances are 7 in 10 that the operation will be a success.
___ The chances are 5 in 10 that the operation will be a success.
___ The chances are 3 in 10 that the operation will be a success.
___ The chances are 1 in 10 that the operation will be a success.

3. Mr. C, a married man with two children, has a steady job that pays him about $6000 per year. He can easily afford the necessities of life, but few of the luxuries. Mr. C's father, who died recently, carried a $4000 life insurance policy. Mr. C would like to invest this money in stocks. He is well aware of the secure "blue-chip" stocks and bonds that would pay approximately 6% on his investment. On the other hand, Mr. C has heard that the stocks of a relatively unknown Company X might double their present value if a new product currently in production is favorably received by the buying public. However, if the product is unfavorably received, the stocks would decline in value.

Imagine that you are advising Mr. C. Listed below are several probabilities or odds that Company X stocks will double their value.

Please check the lowest probability that you would consider acceptable for Mr. C to invest in Company X Stocks.

___ The chances are 1 in 10 that the stocks will double their value.
___ The chances are 3 in 10 that the stocks will double their value.
___ The chances are 5 in 10 that the stocks will double their value.
___ The chances are 7 in 10 that the stocks will double their value.
___ The chances are 9 in 10 that the stocks will double their value.
___ Place a check here if you think Mr. C should *not* invest in Company X stocks, no matter what the probabilities.

4. Mr. D is the captain of College X's football team. College X is playing its traditional rival, College Y, in the final game of the season. The game is in its final seconds, and Mr. D's team, College X, is behind in the score. College X has time to run one more play. Mr. D, the captain, must decide whether it would be best to settle for a tie score with a play which would be almost certain to work or, on the other hand, should he try a more complicated and risky play which could bring victory if it succeeded, but defeat if not.

Imagine that you are advising Mr. D. Listed below are several probabilities or odds that the risky play will work.

Please check the lowest probability that you would consider acceptable for the risky play to be attempted.

___ Place a check here if you think Mr. D should *not* attempt the risky play no matter what the probabilities.
___ The chances are 9 in 10 that the risky play will work.
___ The chances are 7 in 10 that the risky play will work.
___ The chances are 5 in 10 that the risky play will work.
___ The chances are 3 in 10 that the risky play will work.
___ The chances are 1 in 10 that the risky play will work.

5. Mr. E is president of a light metals corporation in the United States. The corporation is quite prosperous, and has strongly considered the possibilities of business expansion by building an additional plant in a new location. The choice is between building another plant in the U.S., where there would be a moderate return on the initial investment, or building a plant in a foreign country. Lower labor costs and easy access to raw materials in that country would mean a much higher return on the initial investment. On the other hand, there is a history of political instability and revolution in the foreign country under consideration. In fact, the leader of a small minority party is committed to nationalizing, that is, taking over, all foreign investments.

Imagine that you are advising Mr. E. Listed below are several probabilities or odds of continued political stability in the foreign country under consideration.

Please check the lowest probability that you would consider acceptable for Mr. E's corporation to build a plant in that country.

___ The chances are 1 in 10 that the foreign country will remain politically stable.
___ The chances are 3 in 10 that the foreign country will remain politically stable.
___ The chances are 5 in 10 that the foreign country will remain politically stable.
___ The chances are 7 in 10 that the foreign country will remain politically stable.
___ The chances are 9 in 10 that the foreign country will remain politically stable.
___ Place a check here if you think Mr. E's corporation should *not* build a plant in the foreign country, no matter what the probabilities.

6. Mr. F is currently a college senior who is very eager to pursue graduate study in chemistry leading to the Doctor of Philosophy degree. He has been accepted by both University X and University Y. University X has a world-wide reputation for excellence in chemistry. While a degree from University X would signify outstanding training in this field, the standards are so very rigorous that only a fraction of the degree candidates actually receive the degree. University Y, on the other hand, has much less of a reputation in chemistry, but almost everyone admitted is awarded the Doctor of Philosophy degree, though the degree has much less prestige than the corresponding degree from University X.

Imagine that you are advising Mr. F. Listed below are several probabilities or odds that Mr. F would be awarded a degree at University X, the one with the greater prestige.

Please check the lowest probability that you would consider acceptable to make it worthwhile for Mr. F to enroll in University X rather than University Y.

___ Place a check here if you think Mr. F should *not* enroll in University X, no matter what the probabilities.
___ The chances are 9 in 10 that Mr. F would receive a degree from University X.
___ The chances are 7 in 10 that Mr. F would receive a degree from University X.
___ The chances are 5 in 10 that Mr. F would receive a degree from University X.
___ The chances are 3 in 10 that Mr. F would receive a degree from University X.
___ The chances are 1 in 10 that Mr. F would receive a degree from University X.

7. Mr. G, a competent chess player, is participating in a national chess tournament. In an early match he draws the top-favored player in the tournament as his opponent. Mr. G has been given a relatively low ranking in view of his performance in previous tournaments. During the course of his play with the top-favored man, Mr. G notes the possibility of a deceptive though risky maneuver which might bring him a quick victory. At the same time, if the attempted maneuver should fail, Mr. G would be left in an exposed position and defeat would almost certainly follow.

Imagine that you are advising Mr. G. Listed below are several probabilities or odds that Mr. G's deceptive play would succeed.

Please check the lowest probability that you would consider acceptable for the risky play in question to be attempted.

___ The chances are 1 in 10 that the play would succeed.
___ The chances are 3 in 10 that the play would succeed.
___ The chances are 5 in 10 that the play would succeed.
___ The chances are 7 in 10 that the play would succeed.
___ The chances are 9 in 10 that the play would succeed.
___ Place a check here if you think Mr. G should *not* attempt the risky play, no matter what the probabilities.

8. Mr. H, a college senior, has studied the piano since childhood. He has won amateur prizes and given small recitals, suggesting that Mr. H has considerable musical talent. As graduation approaches, Mr. H has the choice of going to medical school to become a physician, a profession which would bring certain prestige and financial rewards; or entering a conservatory of music for advanced training with a well-known pianist. Mr. H realizes that even upon completion of his piano studies, which would take many more years and a lot of money, success as a concert pianist would not be assured.

Imagine that you are advising Mr. H. Listed below are several probabilities or odds that Mr. H would succeed as a concert pianist.

Please check the lowest probability that you would consider acceptable for Mr. H to continue with his musical training.

___ Place a check here if you think Mr. H should *not* pursue his musical training, no matter what the probabilities.
___ The chances are 9 in 10 that Mr. H would succeed as a concert pianist.
___ The chances are 7 in 10 that Mr. H would succeed as a concert pianist.

____ The chances are 5 in 10 that Mr. H would succeed as a concert pianist.
____ The chances are 3 in 10 that Mr. H would succeed as a concert pianist.
____ The chances are 1 in 10 that Mr. H would succeed as a concert pianist.

9. Mr. J is an American captured by the enemy in World War II and placed in a prisoner-of-war camp. Conditions in the camp are quite bad, with long hours of hard physical labor and a barely sufficient diet. After spending several months in this camp, Mr. J notes the possibility of escape by concealing himself in a supply truck that shuttles in and out of the camp. Of course, there is no guarantee that the escape would prove successful. Recapture by the enemy could well mean execution.

Imagine that you are advising Mr. J. Listed below are several probabilities or odds of a successful escape from the prisoner-of-war camp.

Please check the lowest probability that you would consider acceptable for an escape to be attempted.

____ The chances are 1 in 10 that the escape would succeed.
____ The chances are 3 in 10 that the escape would succeed.
____ The chances are 5 in 10 that the escape would succeed.
____ The chances are 7 in 10 that the escape would succeed.
____ The chances are 9 in 10 that the escape would succeed.
____ Place a check here if you think Mr. J should *not* try to escape no matter what the probabilities.

10. Mr. K is a successful businessman who has participated in a number of civic activities of considerable value to the community. Mr. K has been approached by the leaders of his political party as a possible congressional candidate in the next election. Mr. K's party is a minority party in the district, though the party has won occasional elections in the past. Mr. K would like to hold political office, but to do so would involve a serious financial sacrifice, since the party has insufficient campaign funds. He would also have to endure the attacks of his political opponents in a hot campaign.

Imagine that you are advising Mr. K. Listed below are several probabilities or odds of Mr. K's winning the election in his district.

Please check the lowest probability that you would consider acceptable to make it worthwhile for Mr. K to run for political office.

____ Place a check here if you think Mr. K should *not* run for political office no matter what the probabilities.
____ The chances are 9 in 10 that Mr. K would win the election.
____ The chances are 7 in 10 that Mr. K would win the election.
____ The chances are 5 in 10 that Mr. K would win the election.
____ The chances are 3 in 10 that Mr. K would win the election.
____ The chances are 1 in 10 that Mr. K would win the election.

11. Mr. L, a married 30-year-old research physicist, has been given a five-year

appointment by a major university laboratory. As he contemplates the next five years, he realizes that he might work on a difficult, long-term problem which, if a solution could be found, would resolve basic scientific issues in the field and bring high scientific honors. If no solution were found, however, Mr. L would have little to show for his five years in the laboratory, and this would make it hard for him to get a good job afterwards. On the other hand, he could, as most of his professional associates are doing, work on a series of short-term problems where solutions would be easier to find, but where the problems are of lesser scientific importance.

Imagine that you are advising Mr. L. Listed below are several probabilities or odds that a solution would be found to the difficult, long-term problem that Mr. L has in mind.

Please check the lowest probability that you would consider acceptable to make it worthwhile for Mr. L to work on the more difficult long-term problem.

____ The chances are 1 in 10 that Mr. L would solve the long-term problem.
____ The chances are 3 in 10 that Mr. L would solve the long-term problem.
____ The chances are 5 in 10 that Mr. L would solve the long-term problem.
____ The chances are 7 in 10 that Mr. L would solve the long-term problem.
____ The chances are 9 in 10 that Mr. L would solve the long-term problem.
____ Place a check here if you think Mr. L should *not* choose the long-term, difficult problem, no matter what the probabilities.

12. Mr. M is contemplating marriage to Miss T, a girl whom he has known for a little more than a year. Recently, however, a number of arguments have occurred between them, suggesting some sharp differences of opinion in the way each views certain matters. Indeed, they decide to seek professional advice from a marriage counselor as to whether it would be wise for them to marry. On the basis of these meetings with a marriage counselor, they realize that a happy marriage, while possible, would not be assured.

Imagine that you are advising Mr. M and Miss T. Listed below are several probabilities or odds that their marriage would prove to be a happy and successful one.

Please check the lowest probability that you would consider acceptable for Mr. M and Miss T to get married.

____ Place a check here if you think Mr. M and Miss T should *not* marry, no matter what the probabilities.
____ The chances are 9 in 10 that the marriage would be happy and successful.
____ The chances are 7 in 10 that the marriage would be happy and successful.
____ The chances are 5 in 10 that the marriage would be happy and successful.
____ The chances are 3 in 10 that the marriage would be happy and successful.
____ The chances are 1 in 10 that the marriage would be happy and successful.

END NOTE

END NOTE

[1]It is of interest that in a study of the dimension of "temperament," Guilford and Zimmerman (1956) discovered no fewer than 14 factors. Of them, not one could be thought of as being at all like safety-orientation.

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TABLES

TABLE 1

CORRELATION MATRIX OF PERSONALITY SCALES

	SAFETY SCALE	PERMISSIVENESS	CONSERVATISM	THREAT PERCEPTION
PERMISSIVENESS	-.51**			
CONSERVATISM	.52**	-.67**		
THREAT PERCEPTION	.26*	-.20*	.28*	
CHOICE-DILEMMA QUESTIONNAIRE	.23*	-.08	.06	-.01

Note. N = 78. Tests of significance are one-tailed.

*$p < .05$

**$p < .001$

TABLE 2

COMPARISON OF MEANS OF UPPER AND LOWER QUARTILE OF SAFETY SCALE SCORES FOR EACH CRITERION

		SAFETY SCALE	PERMISSIVENESS	CONSERVATISM	THREAT PERCEPTION	CHOICE-DILEMMA QUESTIONNAIRE
$\bar{X}_{Total}$	78	67.03	39.62	37.30	60.56	68.81
$\bar{X}_{Upper}$	19	84.58	34.74	45.16	68.00	75.84
$\bar{X}_{Lower}$	19	51.63	44.05	29.89	57.42	65.84
t	(df=38)	13.58	4.10	4.42	2.30	3.07
p		.001	.001	.001	.017	.004

Note. Tests of significance are one-tailed.