

INTOLERANCE OF AMBIGUITY: A COPING MECHANISM OR MODE OF EVALUATION?

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As a result of Frenkel-Brunswik's (1949) conceptualization of the personality variable "intolerance of ambiguity" many studies have attempted to define its relationship to other psychological variables, e.g. superstition (Levitt, 1953); perceptual behavior (Martin, 1954); psychological stress (Smock, 1955a, 1955b, 1957); cautiousness (Messick & Hills, 1960); and age, sex, and ethnicity (Hampton, 1967). However, the variable has been operationally defined in many ways; for example, by Frenkel-Brunswik (1949) and Jenkins (1963) in relation to a perceptual problem; Block and Block (1951) in terms of an autokinetic effect, Kutner (1958) with an ambiguous-item test; Budner (1962) by a pencil-and-paper test; Siegel (1954) in terms of responses to an ambiguous task; and McCandless and Holloway (1955) with a two-weight decision task. These varied definitions suggest different basic assumptions underlying the concept "intolerance of ambiguity." In fact, Kenny and Ginsberg (1958) evaluated the construct validity of twelve measures of ambiguity tolerance and their relationships to authoritarianism. They reported "only seven of the 66 correlations among measures of intolerance of ambiguity were significant at the .05 level, two of these having a relationship opposite to that predicted."

The present study was an attempt to establish a criterion for intolerance of ambiguity theoretically and to clarify empirically the relationships of two approaches to its measurement. The classic definition of intolerance of ambiguity (English and English, 1958) implies a behavior syndrome characterized by discomfort when faced with complex or uncertain situations that do not easily yield to understanding and/or control, and by a tendency to retreat (if possible) rather than attempt to understand or cope with the situations. Frenkel-Brunswik (Adorno et al., 1950) defined intolerance of ambiguity in terms of: the tendency to arrive at premature closure; a need to structure the environment; a tendency to precipitate early judgment in perception, and a propensity to think in rigid categories. For the present study, ambiguity was defined as a function of the object or situation (English and English, 1958) and tolerance/intolerance as a function of the perceiver (Frenkel-Brunswik, 1949).

Intolerance of ambiguity was measured both as a coping mech-

anism, i.e., the individual coping with an ambiguous task; and as a mode of evaluation, i.e., an evaluation of a threatening situation in the form of responding to selected statements.

The coping measure, a modification of Siegel's (1954) Tolerance-Intolerance of Cognitive Ambiguity Test (TICA), was designed to probe what has been conceptualized as "the need to structure." The rationale underlying the TICA test is that subjects with a "high" degree of intolerance of ambiguity would try to structure the ambiguous matching task prematurely; that is, to a greater degree than those subjects with a "low" level of intolerance of ambiguity. The measure of evaluation, Budner's (1962) Scale of Tolerance-Intolerance of Ambiguity Test (Ti-of-A) was selected to investigate underlying attitudes and values. Its basic rationale was focused on covert evaluative behaviors. These evaluations are viewed as responses to perceiving ambiguous situations as "sources of threat," or as "desirable."

METHOD

Two measures of intolerance of ambiguity (TICA and TI-of-A) and a modified F-scale (defined under criterion tests) were administered to 322 students of both sexes in three age groups consisting of three ethnic classifications.

SUBJECTS

100 fifth-grade students (ages 10-12) in an ethnically-integrated elementary school were administered the test battery by six trained test-administrators and the author in seven separate classes. 113 high-school students (ages 15-17) in the same school system were administered the test at one testing-period with the test-administrators acting as monitors. 109 students in two central Texas colleges (ages 20-22) were administered the test battery in seven classes by the author. The F-scale and TI-of-A items were read to the fifth-grade students by test-administrators to insure clarity.

TEST BATTERY¹

Criterion Test—TICA:

The TICA test consisted of 16 pictures of adult males and females taken at random from various popular magazines that were more than five years old and 16 statements taken at random from other popular magazines. The pictures were printed on one sheet and the statements on another. Subjects were requested to match those pictures they felt represented people who had made specific statements. Instructions were ambiguous, no hint or suggestion was given that any person pictured had made any of the statements.

¹The entire test battery is reported in the Hampton (1967) reference.

INTOLERANCE OF AMBIGUITY: MECHANISM OR EVALUATION?

Subjects were informed that they could make as many picture-statement matches as they wished, or none if they so wished. On a separate sheet, after completing the matches, subjects were requested to indicate their degree of certainty for each match on a seven-point Likert-type scale. High scores were accepted as indicative of ambiguity intolerance.

Criterion Test—TI-of-A:

The TI-of-A test is a 16-item scale with eight positively and eight negatively worded statements. Responses were made on a seven-point scale ranging from "strong agreement" to "strong disagreement." High scores were accepted as indicative of intolerance of ambiguity. The sixteen statements were developed as indicators of the perception of threat as phenomenological submission (dislike), phenomenological denial (repression), operative submission (avoidance behavior), and operative denial (destructive or reconstructive behavior).

Criterion Test—Modified F-scale:

Sanford's eight-term "Authoritarian-Equalitarian Scale" (Sanford & Older, 1950) was modified by this author by the addition of eight additional items selected from the original F-scale on the basis of their face validity for intolerance of ambiguity.

Intelligence levels for each subject were obtained by inspecting school records and transforming those scores recorded into a stanine score with a mean of five and a standard deviation of two. The original IQ scores resulted from both group and individual intelligence tests.

RESULTS

Anticipated relationships between criterion tests TICA and TI-of-A with respect to each other and to the F-scale were not borne out by the results of the statistical analysis. Table 1 shows that the TI-of-A test correlated significantly but quite low with the F-scale only at the middle age level, while the TICA test did not correlate at any age level. The two criterion tests did not significantly correlate with each other. Table 2 shows that the reliabilities for the TICA test across age groups were acceptably high; however, the reliabilities for the TI-of-A and F-scale were low.

DISCUSSION

An "isolated discovery" of the 1950 study of "The Authoritarian Personality" (Adorno et al., 1950) suggested that authoritarian individual manifests intolerance of ambiguity both in perception and thought. The present study did not support this contention; at least,

TABLE 1
Correlations between IQ, TICA, TI-of-A, and F-Scale
for the Three Age Groups

Age Group N		TI-of-A	F-Scale	Intelligence
Age 10-12 N = 100	TICA	.03	-.07	.10
	TI-of-A		-.06	.14
	F-Scale			-.12
Age 15-17 N = 113	TICA	.12	.03	-.13
	TI-of-A		.21*	-.50*
	F-Scale			-.29*
Age 20-22 N = 109	TICA	-.06	.01	.03
	TI-of-A		.10	-.32*
	F-Scale			-.34*

*p < .05

TABLE 2
Reliabilities (Cronbach Alphas) for the TICA, TI-of-A,
and F-Scale by Age Groups

	10-12 yrs*	15-17 yrs	20-22 yrs
TICA	.84	.90	.92
TI-of-A	.19	.41	.43
F-Scales	.32	.66	.66

"The 10-12 year-old groups responded to the TI-of-A and F-Scale on a dichotomous scale while the other two groups responded on a seven-point scale."

not in the correlations between the two measures. The TI-of-A test was designed as an evaluative measure (in relation to threat) of thought processes; i.e. agree, disagree, etc.; and the TICA test operationally defined ambiguity as a measure of coping with an ambiguous task, surely a function of phenomenological perception. Therefore, as this study did not reveal significant relationships at any age level between the two measures of ambiguity tolerance, one might infer that two separate and distinct personality variables were being measured.

In addition, the lack of significant correlations between the two measures and the modified F-Scale, the low but significant correlation at the middle age group notwithstanding, suggests that the construct

INTOLERANCE OF AMBIGUITY: MECHANISM OR EVALUATION?

validity (in relation to authoritarianism) of the tests was not substantiated. This author, in view of these findings, advances the hypothesis that the mode of responding to the F-Scale and the TI-of-A test was the variable in question. Both measures used a seven-point scale ranging from "strongly agree" to "strongly disagree" and it is conceivable that responding to the extremes of a scale might have been responsible for the one correlation received. In fact, Christie and Jahoda (1954) made the same point in their criticism of the F-Scale.

The findings of the present study, demonstrating significant relations between the F-Scale and TI-of-A test and Intelligence scores, also reported in studies using other measures of ambiguity tolerance, strongly support the contention that "... any investigation of the F-Scale must control for intelligence" (Jacobson & Rettig, 1959). However, these authors contend that "the F-Scale involves a specific factor which is independent of intelligence," and therefore imply that the F-Scale and measures of ambiguity tolerance cannot be validated against measures of intelligence.

Focusing specifically upon the demonstrated reliabilities of the TICA test at three age levels, this author suggests that ambiguity tolerance was more adequately evaluated in responses to an ambiguous task than to a pencil-and-paper test. Hamilton (1957) presents the rationale that "avoidance of ambiguity serves to avoid anxiety and conflict." Therefore, it is concluded from the findings reported in the present study that ambiguity tolerance is behaviorally manifested as a coping mechanism. This author avers that ambiguity tolerance is not a manifestation of authoritarianism, as suggested by the Adorno group, but that it is a coping mechanism driven by other needs or motives.

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ABSTRACT

In an effort to establish a criterion for Frenkel-Brunswik's postulated variable "Intolerance of Ambiguity," 322 students of both sexes in three age groups consisting of three ethnic classifications were administered two measures of intolerance of ambiguity and a modified F-Scale. Ambiguity tolerance was investigated both as a coping mechanism and as a mode of evaluation.

With one exception, neither test correlated with the F-Scale refuting the postulated construct validity of intolerance of ambiguity with authoritarianism. Neither tests of ambiguity tolerance correlated at any of the age levels. Reliabilities for the coping measure at all age levels were acceptably high; however, the reliabilities for the other measures were quite low. Results suggest that ambiguity tolerance is behaviorally manifested as a coping mechanism and is not a function of authoritarianism.

RESUMEN

A 322 estudiantes de ambos sexos de 3 diferentes edades y de tres antecedentes étnicos, se les administraron dos pruebas para medir la intolerancia a la ambigüedad y la Escala F modificada, en un esfuerzo por establecer un criterio para la variable "Intolerancia a la Ambigüedad" propuesta por Frenkel-Brunswik. Se estudió la intolerancia a la ambigüedad como un mecanismo de confrontación y como modo de evaluación.

Con una sola excepción, ninguna de las pruebas correlacionó con la Escala F, rechazando la validez de construcción de intolerancia a la ambigüedad con el autoritarismo. Tampoco las pruebas de tole-

INTOLERANCE OF AMBIGUITY: MECHANISM OR EVALUATION?

rancia a la ambigüedad correlacionaron a ninguno de los tres niveles de edad. La confiabilidad para la medida de confrontación resultó considerablemente alta en las edades estudiadas. Sin embargo, la confiabilidad para las otras medidas fué bastante baja. Los resultados sugieren que la tolerancia a la ambigüedad se manifiesta conductualmente como un mecanismo de confrontación y no es función del autoritarismo.

RESUMO

322 estudantes de ambos os sexos e em três grupos de idade e três classificações étnicas foram administrados dois testes de intolerância de ambigüidade, e uma escala-F modificada para estabelecer um critério para a variável "Intolerância de Ambigüidade" postulada por Frenkel-Brunswik. Tolerância de ambigüidade foi investigada como um estilo de confrontação (*coping mechanism*) bem como um modo de avaliação.

Com uma exceção, nenhum dos testes mostrou correlação com a escala-F, refutando a "construct validity" postulada de intolerância de ambigüidade com autoritarismo. Nenhum dos testes de tolerância de ambigüidade mostrou correlação em nenhum dos níveis de idade. Os níveis de confiança para a medida de confrontação (*coping*) em todas as idades mostraram-se aceitáveis; porém, os níveis de confiança para as outras medidas revelaram-se muito baixos. Os resultados sugerem que tolerância de ambigüidade é manifestada no comportamento como um estilo de confrontação e não é uma função de autoritarismo.