

INTRINSIC AND EXTRINSIC RELIGIOUSNESS: THE EMPIRICAL RESEARCH

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In the fifteen years since the *Journal for the Scientific Study of Religion* devoted an entire issue to intrinsic (*I*) and extrinsic (*E*) religiousness, more than seventy published research studies have used these measures to address the relations between religion, personality, and behavior. *I* and *E* have been used both as individual, unipolar measures, and jointly in the fourfold typology originally proposed by Allport and Ross (1967) and refined by Hood (1970). Recently, Donahue (1985) published a review of this body of literature. The purpose of this article is to summarize the major findings of that review and to raise some previously unaddressed empirical issues. It will be presumed that the reader has read Kahoe's preceding article, or is otherwise familiar with the conceptual underpinnings of the scales. In the present article, *I* and *E* refer to Allport's version of the scales, except as otherwise noted.

PSYCHOMETRIC CHARACTERISTICS

Reliability

Spilka, Stout, Minton, and Sizemore (1977) reported KR-20 reliabilities of .91 for *I* and .85 for *E*. Griffin and Thompson (1983-84) reported Cronbach alpha reliabilities for three denominational groups ranging from .93 to .81 for *I* and from .82 to .69 for *E*. Other researchers have reported reliabilities ranging from .67 to .76 for the two scales (Batson, 1976; Kahoe, 1974). But item-total correlations have not fared so well: .28 to .58 for *I*; .18 to .50 for *E* (Robinson & Shaver, 1973). Several authors have reported the relative ease with which the reliabilities of the scales can be improved by dropping some of the items (e.g., McConahay & Hough, 1973; Patrick, 1979). Feagin's (1964) shorter versions of the *I* and *E* scales have better item-total correlations (.54 to .71 for *I*; .48 to .68 for *E*; see also Hunt & King, 1971). Hood's (1971) article comparing the Allport and Feagin *I* and *E* scales concluded that Feagin's scales are at least as adequate as Allport's. Since Feagin's scale items are, with a single exception, simply a subset of Allport's (see Robinson & Shaver, 1973), researchers should strongly consider scoring the items both ways to determine which has higher reliability for their sample.

Validity

Donahue's (1985) review noted that *I* has had an average correlation of .76 with measures of religious commitment across four studies, while *E* correlated .03 with such measures. This is consistent with both the internalized-committed orientation that *I* is

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intended to address, and the *laissez-faire* approach of *E*, and offers evidence of concurrent validity for *I* and discriminant validity for *E*.

One criticism that has been raised concerning the validity of the *I* scale is that it is denomination-specific; that it embodies a "Southern Baptist" theology. This was first raised by Feagin (1964) to explain the low standard deviations and high *I* scale scores in his Southern Baptist sample. Strickland and Weddell (1972) studied Baptists and Unitarians and found that Baptists tended to be intrinsically oriented while Unitarians were extrinsic. They suggested that the scales "might have considerable drawbacks" (398) when used with nontraditional groups. Donahue (1985) found only four studies which reported means or medians on the Allport *I* and *E* scales, but found that high *I* and low *E* means were associated with conservative Protestant samples.

Griffin and Thompson (1983-84) replicated the denominational differences in scale means noted by Donahue (1985), and then went on to examine concurrent validity correlations by denomination. They found that church attendance correlated highly with *I*¹ for United Church of Canada (UCC) and Evangelical respondents, but less so for Catholics. They reported a similar pattern of correlations between *I* and a single-item measure of religiousness. They found that a three-item belief measure was strongly correlated with *I* for UCC and Catholic respondents, but less so for Evangelicals. They also reported differences by denomination in the correlations between *E* and church attendance and religiousness, while *E* was largely uncorrelated with belief for all three groups.

In contrast, there is also evidence of lack of interdenominational differences. In reanalyzing the data presented in Allport and Ross (1967), the present author found no significant differences between the six denominational groups they studied concerning whether they were more likely to endorse *I* items, *E* items, or both ($\chi^2(10) = 4.7$, n.s.). Digenan and Murray (1975) found that *I* scores increased as commitment to Catholicism increased from non-Catholic students at a secular college, to Catholic college students, to Catholic sisters and brothers, thus questioning Thompson's (1974) assertion that *I* might not be a valid measure of religious commitment for Catholics.

As to interdenominational differences in mean scores, one would expect to find higher *I* and lower *E* scores among any group that reports high religious commitment — e.g., students at a conservative denominational college (e.g., Dodrill, Bean & Bostrom, 1973). Furthermore, smaller, more sect-like groups, would be expected to have higher *I* and lower *E* scores than larger denominations due to their more stringent membership requirements. Whether this indicates the denominational specificity of *I* or *E* would be most appropriately addressed by comparing mean *I* and *E* scores among respondents of various denominations, all of whom score high (or low) on some other measure of religious commitment. For example, if committed Catholics score lower on *I* than committed Baptists, then the scale is denominationally biased. There is presently no evidence of that.

1. For this analysis, the church attendance item of the *I* subscale was omitted

CORRELATES OF THE UNIPOLAR MEASURES

The I-E Correlation

Donahue (1985) reported that, across all studies using the Allport-Feagin item pool, the *I-E* correlation ranged from $-.58$ to $.24$, and averaged $-.06$. Concentrating on the studies using Allport's measures, the mean was $-.20$. More interesting, however, was the fact that the *I* and *E* correlation varied as a function of the theological orientation of the sample. With respondents who were reported by the researchers to be theologically conservative, the *I-E* correlation ranged from $-.58$ to $-.37$, with a mean of $-.44$. Donahue interpreted this in terms of the pressures in conservative denominational colleges toward endorsing an intrinsic approach and rejecting an extrinsic approach to religion.

But an additional question suggests itself: Are *I* and *E* curvilinearly related? The *prima facie* case for curvilinearity (inverted-U) seems strong. When consideration is restricted to respondents with high *I* scores, the *I-E* correlation is quite negative. When the sample is more broadly based, the correlation declines toward zero, as would be expected for curvilinearly related constructs, if the form of the relationship was that of an inverted U.

A third piece of evidence is more inferential. Religiousness tends to be curvilinearly related to prejudice (Gorsuch & Aleshire, 1974), and fear of death (Nelson & Cantrell, 1980). *E* is positively correlated with both of these measures while *I* is uncorrelated. If *I* can be considered a generic religious commitment measure, and *E* is positively correlated with things that are curvilinearly related to religious commitment, then one would expect *I* and *E* to be curvilinearly related.

This evidence is quite speculative, and the importance of it will be discussed below. Here it is included to suggest that researchers should be aware of this possibility in the future.

Other Correlates

Table 1 shows the mean correlation of *I* and *E* with five other variables, based on the presentation in Donahue (1985). In general, *E* correlates well and *I* correlates near zero. But it is interesting to note the *I* and *E* have generally *not* been used as religiousness measures for some of the variables that religiousness is most strongly related to: premarital intercourse (e.g., Davidson & Leslie, 1977) and initial drug abuse (Gorsuch & Butler, 1976). Also, *I* may be curvilinearly related (and therefore "uncorrelated") to some personality variables, as has been discussed above.

THE FOURFOLD TYPOLOGY

Previous Research

In addition to using *I* and *E* as individual, unipolar scales, a growing body of research has been examining the utility of combining the two scales in order to create a fourfold typology: those high on *I* and low on *E*, called *intrinsic*s; those low on *I* and high on *E*,

TABLE 1
MEAN *I* AND *E* CORRELATIONS WITH OTHER MEASURES¹

Measure	<i>I</i>	<i>E</i>	Number of Samples
Religious belief	39	16	6
Religious commitment	76	03	4
Prejudice			
All measures	– 05	34	8
Anti-Black	– 09	28	7
Fear of death	– 06	27	7
Dogmatism	06	36	5

¹Based on data presented in Donahue (1985)

called *extrinsics*; those high on both scales, the *indiscriminate*, and those low on both scales, the *nonreligious*. The research using this procedure is somewhat sparse, and analytical approaches have been inconsistent. Hood (1970) and Kahoe (1974) report the expected 2×2 between-group analysis of variance; virtually no one else has. This leads to difficulty in detecting the $I \times E$ interactions which would best validate the use of the typology. Hood (1970) did report such an interaction using religious experience as a dependent measure, but Kahoe (1974) failed to observe interaction with a wide array of personality variables. Thompson's (1974) data on dogmatism, re-analyzed by Donahue (1985), showed an *I-E* interaction for the fathers in his sample, but not for the mothers or the adolescents. Joe, McGee, and Dazey (1977) reported data which may correspond to an interaction in the case of derogation of an innocent victim, but reported only *t*-tests between the four groups. Other researchers have reported results for subsets of the groups, such as the *intrinsic*, *extrinsic*, and *indiscriminate*s reported by Allport and Ross (1967), or the *intrinsic* and *nonreligious* reported by McClain (1978).

The pattern of findings when the groups have been used with dependent variables such as prejudice (Allport & Ross, 1967, omitting *nonreligious*) and dogmatism (Thompson, 1974) has been *indiscriminate* > *extrinsic* > *nonreligious* = *intrinsic*. This roughly corresponds to a curvilinear finding with a unidimensional measure: the most and least religious are similar to each other and the moderately religious are different from both. In the case of religious dependent variables, there tends simply to be a main effect for intrinsic, no effect for extrinsic, and no interaction (but see Hood, 1970, 1978).

But all of these generalizations concerning the fourfold typology are very tentative, since its use is still rather sporadic and the data have rarely been examined for interactions.

Future Research

As research concerning the fourfold typology proceeds, several concerns should be kept in mind. First, some standardized method of determining the four groups needs to

be established. Up to now, the four groups have been defined by median splits, but since medians vary considerably from sample to sample, some alternative method of standardizing the categories should be used: perhaps using the theoretical midpoints of the scale, as suggested in Donahue (1985).

A second issue would involve item analysis. Precisely *which I* and *E* items, for example, do the *indiscriminates* endorse? The possibility that a person could agree both that "I try to carry my religion over into all my other dealings in life" and "Although I am a religious person I refuse to let religious considerations influence my everyday affairs" seems remote. But two of the *E* items deal with the function of prayer, a topic not dealt with on the *I* scale, and another states that "one reason" for church membership is that it "helps establish a person in the community." These *E* items might be more likely to be endorsed by someone who had also scored high on the *I* scale. Determining whether a particular subset of *I* and *E* items are characteristic of *indiscriminates* would be helpful in exploring the nature of this religious orientation associated with prejudice and dogmatism, and might be a great aid in constructing a formal theory of religious orientation.

Lastly, consideration returns to a point raised earlier in this article. What is the relationship between *I* and *E*? Why are *indiscriminates* so similar to *intrinsic*s on religious variables, but so dissimilar in socio-personality variables? If, as was suggested above, *I* and *E* are curvilinearly related, then there would be basically three, rather than four, orientations: nonreligious, indiscriminate, and intrinsic. Researchers should consider analyzing for curvilinearity to determine whether the typologies being imposed on the data in fact reflect the best summary descriptions of it. The 2×2 approach fits a favorite analytical procedure, but it may not be the most appropriate method in all cases.

CONCLUSIONS

The *I* and *E* scales have received, and continue to receive, extensive use in the research literature, being perhaps the most frequently-used measures of religiousness aside from church attendance. Research indicates that *I* is a good, unidimensional, nondoctrinal indicant of religious commitment, while *E* seems to measure the sort of religion that gives religion a bad name: prejudiced, dogmatic, fearful.

Future researchers should consider using Feagin's shorter 6-item measures of *I* and *E*, as they may be more reliable. Use of the fourfold typology should be strongly encouraged, but only after the relationship between *I* and *E* is examined for possible curvilinearity.

The measures of intrinsic and extrinsic religiousness, after some refinement and more cautious analytic procedures, hold the potential for being among the most useful available in the empirical study of religion.

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