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ABSTRACT
              A study was conducted to determine why the
theoretical relationship between dogmatism and conformity had not
been verified in correlation studies. The study was designed to study
the effect of differing statistical treatments on the coefficient of
correlation. Data generated in an experimental framework included
conformity scores and dogmatism scores; conformity was determined by
use of Asch's Vertical Line Scale and dogmatism was determined by
Rokeach's Dogmatism Scale. The dogmatism data were treated in two
ways: (1) as a total score, and (2) as individual sub-test scores.
Using the total score, a zero order correlation technique was
employed to determine the coefficient of correlation between
dogmatism and conformity. Such a treatment yielded no significant
correlation. Employing the independent scores of 17 sub-test areas of
the Dogmatism Scale and a multiple correlation statistical treatment,
a significant coefficient of correlation resulted. (Author/DB)

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A DIFFERENT LOOK AT THE CORRELATION COEFFICIENT BETWEEN DOGMATISM AND CONFORMITY

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Previous studies by Crutchfield and Rokeach have provided
indirect evidence for assuming that dogmatism and conforming
judgment are related. However, studies by Long and Youniss
have failed to confirm such a relationship.

This study was designed to study the affect of differing
statistical treatments on the coefficient of correlation.
Data generated in an experimental framework included
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determined by use of Asch's Vertical Line Scale and
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A DIFFERENT LOOK AT THE CORRELATION COEFFICIENT

BETWEEN DOGMATISM AND CONFORMITY

Huey B. Long

INTRODUCTION

Several researchers including Rokeach (1960) and Crutch-
field (1963) have previously reported a relationship between
dogmatism and authoritarianism. Furthermore, data have been
provided that indirectly suggest a relationship between con-
formity and dogmatism. For example, Crutchfield's study cited
earlier generated data that revealed a significant relation-
ship between conforming judgment and authoritarianism while
Rokeach has reported a significant relationship between dogma-
tism and authoritarianism (Long, 1968). Others, however, have
failed to confirm a direct relationship (Long, 1966, Youniss,
1958).

A variety of explanations have been offered to clarify
the apparent contradictions. This writer (1968) suggested that
other variables may have influenced the results. Since that
time continuing efforts have been made to identify some of the
possible variables that may have so influenced the studies.

Problem Statement

The purpose of this study was to determine, if possible,
why the theoretical relationship between dogmatism and con-
formity has failed to be verified in correlation studies.
Since one variable that appears to have heretofore been over-
looked is the statistical treatment variable and since most

studies with which the E is acquainted have been based on a

zero order correlation technique, this study was specifically

designed to examine the effect of the statistical treatment.

More specifically, the study was specifically designed to

generate data to illuminate the possibility of a "masking

effect" caused by one or more suppressor variables within the

dogmatism scale.

Hypotheses

Two major hypotheses (stated in the null form) were tested

(at a .05 level of significance) and are reported in this paper.

They were:

1. There is no significant relationship between dogmatism
   and conformity (when a zero order correlation technique
   is used).

2. There is no significant multiple relationship between
   dogmatism and conformity.

Experimental Procedures

Briefly stated, the procedures used to collect the data

were similar to procedures previously reported by the writer

(Long, 1966). Thirty-nine Ss were selected from a maximum

security prison in Georgia. They completed Rokeach's Dogmatism

Scale and then participated in a two-step procedure to secure

conformity data. The two-step procedure includes (1) a pre-test

where the Ss made "private" responses to Asch's Vertical Line

Scale and other stimuli, and (2) a treatment situation where

the Ss made oral, public responses to Asch's Vertical Line

Scale following spurious responses made by three confederates

(also in-mates at the prison). The Asch Vertical Line Scale

the identification of the 17 sub-test areas included in

Rokeach's Logmatism Scale (Form E).

Sub-tests

The 17 sub-test areas in Rokeach's Dogmatism Scale with

the number of items in each sub-test area are described below:

1. Accentuation of differences between belief-disbelief systems - 1 item.

2. The coexistence of contridictions with the belief system - 2 items.

3. Relative degrees of differentiation of the belief-disbelief system - 1 item.

4. Beliefs regarding the aloneness; isolation and help-lessness of man - 4 items.

5. Fear of the future - 1 item.

6. A feeling of urgency - 1 item.

7. Compulsive repetition of ideas and arguments - 3 items.

8. Need for martydom - 1 item.

9. Self-aggrandizement as a defense against self-inadequacy - 3 items.

10. Beliefs in positive and negative authority - 2 items.

11. Beliefs in a cause - 7 items.

12. Intolerance toward a renegade - 3 items.

13. Intolerance toward the disbeliever - 4 items.

14. Tendency to make party-time changes - 2 items.

15. Narrowing - 1 item.

16. Attitude toward the past, present, and future - 1 item.

17. Knowing the future - 3 items.

After the Ss completed the dogmatism instrument, 18
scores were computed for each S; including the 17 sub-test
scores and a total score. The sub-test scores were obtained
by scoring each item in the usual manner, adding the individual
item scores within each sub-test and obtaining a mean score.
For example, sub-test area II, Belief in a Cause, contains
7 items, one S scored 1, 5, 5, 5, 6, 6, and 7 on these items
for a total sub-test score of 35 or a mean sub-test score of
5. The above S thus had 17 such scores plus a total dogmatism
score of 180.

Findings

Hypothesis 1 - There is no significant relationship
between dogmatism and conformity, (when a zero order correlation
technique is used).

Data generated by the study included a mean conformity
score of 14.538 and a mean dogmatism score of 161.589. Standard
deviations were 8.999 and 46.022 respectively.

Data analysis produced a zero order coefficient of
correlation of 0.168. With 39 Ss the coefficient failed to
reach significance, hence the E failed to reject the null
hypothesis.

Hypothesis 2 - There is no significant multiple
relationship between dogmatism and conformity.

Using the mean score of the 17 sub-test areas to determine

the coefficient of multiple correlation the data analysis pro-

duced a multiple correlation of 0.835. Due to small sample

size, a correction, as suggested by Garrett (1965), was applied

to the coefficient in case of inflation. The correction factor

reduced the coefficient to 0.42, which however is significant.

Thus, based on the above statistical treatment the E

rejected the null hypothesis.

Discussion

Based on the data reported above, there appears to be an

important difference between results generated by the two

correlation treatments. The importance of the difference

is clearly reflected by the results that appear to be contradictory.

In the first instance, when a zero order correlation technique

was used, no significant correlation was found. In contrast

the multiple correlation treatment generates a significant

correlation.

Table 1 here.

Data in Table 1 illustrates the contributions of each

sub-test area. Figure 2 illustrates how the sub-tests interact
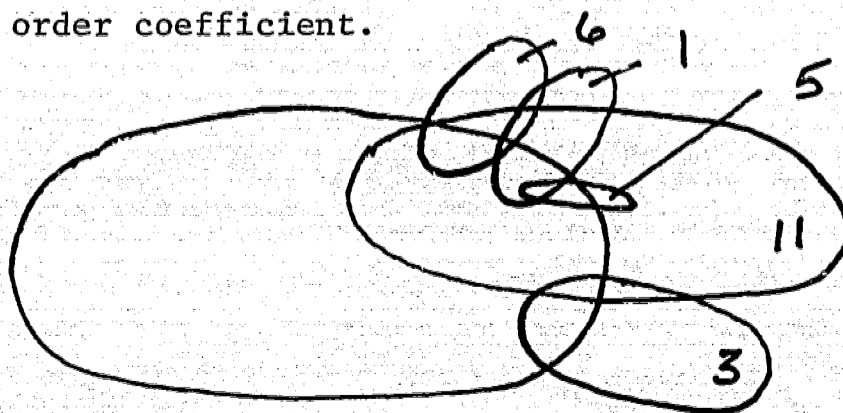
to reduce the zero order coefficient.

Figure 2

In Figure 2 the sub-tests are 1, 3, 5, 6, 11. Of these 1, 6, 11 directly contribute to the zero order correlation in differing amounts with 3 and 5 acting as suppressors on the total correlation and also negatively correlated with sub-test 11. Sub-test 1 and 6 are positively correlated with sub-test 11 and conformity while negatively correlated with each other; sub-tests 1 and 5 are also negatively related while 3 and 5 are positively related. The two dimensional nature of Figure 2 prevents an accurate representation of the suppressor concept at work. But the above appears to illustrate the basic idea.

Instrument design theory indicates that the suppressor concept can be instrumentally employed in two different ways to improve the validity of a test battery. The ways are:

1) By taking out some of the yet as unmeasured part of the criterion. Such a test will show a high correlation with the criterion but relatively low correlation with other tests in the battery. Figure 3 illustrates the idea.
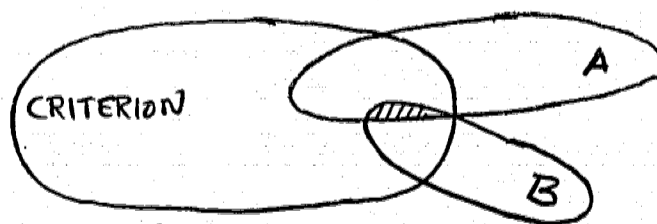

Figure 3

2) A test may also add to the validity of a battery by acting as a suppressor variable on another test.
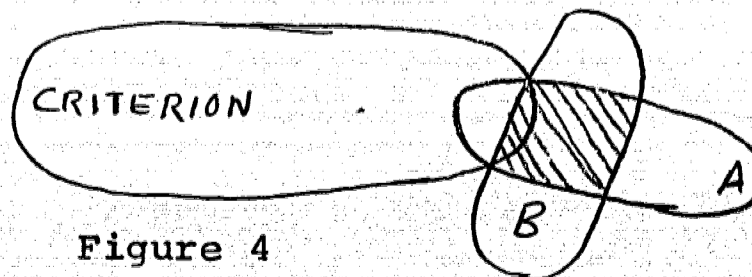

Figure 4

Use of, and interpretation of, results generated by studies using such batteries may subsequently be affected by knowledge of how the tests within a battery correlate with each other as well as the criterion. Knowledge of such relation- ships would appear to be especially valuable when the criterion has been modified from the original. For example, the sub- tests making up Rokeach's Dogmatism Scale were carefully selected to identify dogmatism, not conformity. Thus, tests used to develop an instrument that measures dogmatism appear to serve as suppressors when the instrument is viewed as an index to conformity. Thus, the lack of significant correlation between zero order coefficients of correlation reported in previous studies may be explained. Furthermore, the significant cor- relation between conformity and the F scale reported by Crutch- field (1963, p. 403) may be influenced by sub-test batteries that are also related to Dogmatism sub-test batteries. Further study of the sub-test of the two instruments would appear to be instructive.

Conclusions and Summary

The results of this study appear to explain how dogmatism and authoritarianism may be related and how authoritarianism and conformity may be related and yet how dogmatism and con- formity may not be related. However, the explanation of the difference in methodological terms does not close the door to further inquiry. Actually, the findings reported in this study sem to open the door to additional inquiry into such concerns as (1) the relationship of the seven sub-tests (11,

3, 6, 1, 7, 2, 12) to the Authoritarianism F Scale and (2)
can conformity be predicted by the seven dogmatism sub-test
scores that are related to dogmatism when a multiple correlation
is used?

In summary, this study was designed to determine, if
possible, why the theoretical relationship between dogmatism
and conformity has failed to be verified in correlation
studies. A sample of 39 in-mates in a correctional institution
was used to collect dogmatism and conformity data. The data
were subsequently examined by two correlation techniques, the
zero order correlation and a multiple correlation.

As a result of the statistical analysis it appears that
seven sub-test areas, in the 17 sub-tests that constitute
Rokeach's Dogmatism Scale, have a multiple correlation of
.81 with conformity and account for .65 of the variance.
When a zero order correlation based on the total Dogmatism
Score was obtained the coefficient failed to reach significance
at the .05 level.

Table 1

Correlation Coefficients, Dogmatism Sub-tests and Conformity

STEP NUMBER	VARIABLE ENTERED	VARIABLE REMOVED	MULTIPLE R	RSQ	INCREASE IN RSQ
1	11		0.5636	0.3176	0.3176
2	3		0.6252	0.3909	0.0733
3	6		0.7037	0.4952	0.1043
4	1		0.7520	0.5656	0.0703
5	7		0.7795	0.6076	0.0420
6	2		0.7961	0.6337	0.0261
7	12		0.8086	0.6538	0.0201
8	5		0.8139	0.6624	0.0086
9	16		0.8198	0.6721	0.0097
10	4		0.8261	0.6825	0.0104
11	15		0.8301	0.6890	0.0065
12	10		0.8316	0.6916	0.0026
13	13		0.8340	0.6956	0.0040
14	8		0.8348	0.6969	0.0014
15	17		0.8355	0.6981	0.0011
16	9		0.8357	0.6984	0.0003

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