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LANGUAGE VARIABLES AFFECTING THE PERSUASIVENESS OF SIMPLE COMMUNICATIONS

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Simple communications in syllogistic style were presented to 48 Ss. 1 of 2 premises contained a "positive, manifest" verb, while the other contained a "negative, subjective" verb. 1 premise was established with concrete evidence, the other with abstract evidence. There was greater agreement with the communications when concrete evidence was used to support premises having positive verbs, and abstract evidence was used to support premises having negative verbs. This interaction effect was replicated over 4 different communication topics and 2 orders of presentation of arguments.

In the typical persuasive-communication situation, a communicator wishes to establish or strengthen for his audience the credibility of a particular set of assertions. Experimental research on the factors presumably critical to the effectiveness of persuasion has focused on such variables as the credibility of the communicator, the emotion-arousing qualities of the communication, the discrepancy between the positions of communicator and recipient, and motivational tension arising from imbalance, incongruity, or dissonance. Little attention, however, has been directed toward the problem area of subjective logic; namely, the nature of the cognitive-processing rules an individual applies to determine whether or not a communicator's arguments establish the validity of the communicator's position.

A series of recent studies reported elsewhere by Gilson and Abelson (1965) and by Abelson and Kanouse (1966) has furnished some suggestive leads in this area. Simple assertions containing a subject, verb, and object were presented to subjects, together with mixed evidence bearing on the truth of the assertion; that is, some of the evidence supported and some contradicted the truth of the assertion. Subjects were required to state whether they felt the assertions were true or false in the light of the given evidence. Of the various forms of evidence used in these studies, two types in particular will concern us here. In one type, evidence about the object of the assertion was specified in *concrete* terms as in the following example:

Altogether there are three kinds of bees: bumble bees, honey bees, and carpenter bees.
Committees need bumble bees.
Committees do not need honey bees.
Committees do not need carpenter bees.
Do committees need bees?

In the second type, evidence about the object of the assertion was specified in abstract terms, as in this example:

All bees are flying, stinging, furry insects.
Committees need flying insects.
Committees need stinging insects.
Committees do not need furry insects.
Do committees need bees?

Evidence of the first type requires the subject to induce the credibility of the assertion from the lower-level, concrete evidence, whereas the second type requires a deduction down to the assertion from higher-level abstract evidence.

In the Abelson and Kanouse studies, subjects were given a systematic collection of items such as those in the examples. They were instructed not to regard the items as a test of logic, but to respond on the basis of intuitive reaction using the given information. The major findings which emerged are that the particular sentence subjects and objects contained in an assertion make very little difference in the credibility of the assertion, at least for the relatively neutral content material employed. However, the nature of the particular verb contained in the assertion seems to be of critical imporance. Moreover, the Abelson and Kanouse studies found the effect of the verb to be markedly different for concrete versus abstract

evidence. The strongest effect in the data pitted verbs which might be called "positive manifest" verbs against others which might be classified "negative subjective" verbs, as follows:

Assertions containing verbs which express positive, manifest relationships appear to be established very readily by concrete evidence, but only with great difficulty by abstract evidence. Verbs of this type include have, buy, approach, recommend, and produce.

Assertions contining verbs which express negative, subjective relationships are readily established by means of abstract, deductive evidence, but are extremely difficult to establish with concrete, inductive evidence. Verbs belonging to this class include hate, fear, avoid, and ignore.

To put the matter another way, there is a preferred evidence form appropriate to particular verbs: concrete evidence for positive manifest verbs, and abstract evidence for negative subjective verbs.[1]

The reasons for this somewhat surprising finding are by no means clear as yet, and the foregoing categorization of verbs furnishes a convenient description of the results rather than an explanatory schema. Nevertheless, it seems apparent that the processes of subjective inference are quite sensitive to verb differences.

Inasmuch as these studies represent something of an innovation both in subject matter and in method, the question of their relevance to other problem areas in psychology, and to communications research in particular, is of some importance. The method in previous studies utilized assertions which are relatively lacking in meaningful content. Moreover, subjects were instructed to base their answers solely on the information provided in a single item. Thus it seems likely that subjects adopted a detached, problem-solving orientation toward the task of evaluating the assertions. This raises the question of whether similar results would obtain for the situation in which a subject is asked to indicate his agreement or disagreement with a concrete position on a meaningful issue. The present study is designed to provide some evidence on this question.

Directly applying the previous results concerning the preferred evidence form for different verb classes, the hypothesis is suggested that, other things being equal, the most persuasive communications are those in which assertions containing positive, manifest verbs are supported by concrete evidence, and sentences containing negative, subjective verbs are supported by abstract evidence. Conversely, the weakest (least persuasive) communications should be those in which all assertions are supported by the *nonpreferred* evidence form for the verb of the assertion; that is, concrete evidence for negative, subjective verbs and abstract evidence for positive, manifest verbs.

Communications

Four brief communications were constructed on the following topics: the desirability of buying complicated dolls for children; the effects of hunting regulations on the numbers of predatory birds; the effect of United States agricultural assistance on Central American good will; and the need for industrial facilities in a town in northern Alaska. The topics were selected as representing issues with which the subject was likely to be relatively unfamiliar (since the issues were largely created for the purposes of the study), but which he was likely to perceive as relatively meaningful albeit not personally ego-involving. Any one of the topics might have been the subject of an article appearing in a popular magazine such as *Reader's Digest*. Each communication contained a core which was syllogistic in style; that is, it was made up of two one-sentence

[1] "Positive subjective" verbs (love, like, trust) and "negative manifest" verbs (destroy, fight, harm) fall in between these two extreme categories, exhibiting no strong tendency for either concrete or abstract evidence to be preferred. The reader may note that the distinction between *manifest* and *subjective* verbs is less obvious than that between *positive* and *negative* verbs. In general, *manifest* verbs express a relationship which is directly observable and relatively delimited in time; *subjective* verbs express an orientation of the subject toward the object which is relatively enduring and not directly observable. Not all of our verb examples fit this categorization in all respects, having been selected on empirical rather than theoretical grounds. Research currently under way is aimed at pinpointing which differences between these categories are most crucial.

premises and a conclusion. The two premises were designed in such a way that when considered in conjunction they posed a problem or dilemma; the conclusion then presented a value judgment on a particular course of action relevant to the problem. Acceptance of the two premises lent credence to the conclusion, although the conclusion was never completely dictated by the premises. Perhaps an example may clarify matters:

Figures released by U. S. Wildlife officials show that Nebraskan hunting regulations are producing a large increase in the number of Nebraskan crested hawks. This indicates that the regulations are producing a large increase in the number of legally protected birds.

A recent issue of the Farm Journal reports that Nebraskan farmers fear a large increase in the number of government-preserved wildlife, because of the danger of destruction of crops and livestock. From this it is apparent that Nebraskan farmers fear a large increase in the number of legally-protected birds.

Therefore, the laws against hunting legally-protected birds are too strict.

The core of this sample consists of the two premises stating, respectively, that the hunting regulations produce, and farmers fear, an increase in the number of legally protected birds, together with the conclusion recommending one particular corrective remedy. The verb of one premise was subjective and negative (fear), while the verb of the other premise was manifest and positive (produce). Other particular positive and negative verb pairs appeared with the other three communication topics.[2] In the example just presented, concrete evidence was used with the positive verb and abstract evidence with the negative verb. The regulations were said to produce an increase in hawks, the farmers to fear an increase in wildlife. Denoting positive verbs by the letter "p" and negative verbs by the letter "n," using upper case for abstract evidence and lower case for concrete evidence, the foregoing communication may be denoted the pN version.

Leaving the remainder of the communication exactly the same, the connections between verbs and evidence forms can be interchanged, using abstract evidence with the positive verb and concrete evidence with the negative verb. The regulations can be said to produce an increase in wildlife and the farmers to fear an increase in hawks. This is how the interchanged communication (the Pn version) reads:

Figures released by U. S. Wildlife officials show that Nebraskan hunting regulations are producing a large increase in the number of government-preserved wildlife. This indicates that the regulations are producing a large increase in the number of legally-protected birds.

A recent issue of the Farm Journal reports that Nebraskan farmers fear a large increase in the number of Nebraskan crested hawks, because of the danger of destruction of crops and livestock. From this it is apparent that Nebraskan farmers fear a large increase in the number of legally-protected birds.

Therefore, the laws against hunting legally-protected birds are too strict.

According to our hypothesis, the first (pN) version of this communication should be more persuasive than the second (Pn) version, even though the two are almost identical. The only difference is a simple interchange of "government-preserved wildlife" with "Nebraskan crested hawks."

For control purposes, two more versions of each communication were introduced by simple reversal of the order of presentation of the two premises, putting the assertion with the negative verb first. (These two versions may be denoted Np and nP.) In the Nebraskan communication, for example, the paragraph with the United States Wildlife figures can come after rather than before the paragraph with the Farm Journal's report. Four communication versions are thus defined by the Two Orders of Presentation × Two Verb-Evidence Form Combinations.

[2] The verb pairs for the other topics were as indicated in the following "cores." Toys topic: Many families *buy* complicated dolls for their children; most children *ignore* complicated dolls; therefore, a lot of money is being wasted on complicated dolls. Alaska topic: The town of Atanik, Alaska, *needs* industrial facilities; the people of Atanik *hate* industrial facilities; therefore, it would be desirable if the Alaskan government would launch an information campaign designed to dispel Atanik's hatred of industrial facilities. Central America topic: Johnson's advisers are *recommending* more agricultural aid to Central America; Central America would *resent* more U. S. agricultural assistance; therefore, the potential United States policy . . . would not be helpful in winning Central American good will.

TABLE 1

SUMMARY OF EXPERIMENTAL DESIGN[a]

Communication version	Topic			
	Toys	Hunting	Central America	Alaska
pN	I	II	III	IV
Np	IV	III	II	I
Pn	III	I	IV	II
nP	II	IV	I	III

[a] Roman numerals refer to the group which received a particular combination of condition and topic.

METHOD

Subjects and Design

The subjects were 48 Yale undergraduates who received course credit for their participation. They were assigned randomly to four groups of 12 each. Each group received all four communication topics, each communication in a different version. The order in which the versions occurred was balanced over the four groups according to the 4 × 4 Latin square shown in Table 1. The order of presentation of communication *topics* was the same for all four groups.

Procedure

Each subject received a test booklet containing instructions and four communications. The instructions indicated that the subject was to read four brief essays on a variety of topics, and that each essay would present evidence in support of a conclusion. The subject was to read each essay carefully and critically, and to indicate his agreement or disagreement with the conclusion on a scale located beneath the essay. On a separate scale (located on the page following the essay) he was then to indicate how convincing he found the evidence. Beneath this scale the subject was encouraged to make additional comments on the reasons for his answers. Additional oral instructions illustrated the use of the scales (which are 31-point scales with verbally labeled end points), emphasizing that the subject should use the extremes of the scale only when he felt truly extreme in his opinion.

RESULTS

Table 2 displays the agreement data, by topics and versions. The means represent responses on a 31-point scale, with the maximum value defined as "I agree completely" and the minimum defined as "I disagree completely."

A number of things are noteworthy about these data. First, the overall level of agreement with the conclusions is quite low. In only 3 of the 16 cells does agreement rise about the midpoint (16.00) of the agreement scale. In the other cells agreement ranges from slightly to considerably below this theoretical point of neutrality. The general low level of agreement can perhaps best be attributed to the fact that the communications were extremely cryptic and sketchy in presenting arguments, consequently appearing excessively doctrinnaire. Such an explanation finds some informal support in the written comments of subjects. One of the most frequently recurring themes was that the evidence was insufficient in quantity and strength. Many subjects may, therefore, have reacted negatively to the gratuitously authoritative style of the arguments.

Turning now to the relative effects of the conditions on agreement, we find in Table 2 that the array of means at the bottom of the table (strong versus weak conditions) appears to support the hypothesis; that is,

TABLE 2

MEAN AGREEMENT WITH CONCLUSIONS BY TOPIC AND VERSION

Communication version	Topic				
	Toys	Hunting	Central America	Alaska	*M*
pN	18.92	9.25	12.83	13.75	13.69
Np	12.50	10.25	16.75	17.25	14.19
Pn	12.67	6.58	8.33	9.75	9.33
nP	15.25	8.42	9.17	13.00	11.46
Strong (pN + Np)	15.71	9.75	14.79	15.50	13.94
Weak (Pn + nP)	13.96	7.50	8.75	11.38	10.40

TABLE 3

ANALYSIS OF VARIANCE OF AGREEMENT SCORES

Source	*df*	*MS*	*F*
Between *Ss*			
Groups	3	48.13	<1.00
Ss within groups	44	61.03	
Within *Ss*			
Topic	3	342.82	7.51*
Version:			
Verb order	1	82.69	1.81
Evidence order	1	31.69	<1.00
Verb Order × Evidence Order (Strength)	1	602.08	13.19*
Topic × Version Residual	6	70.87	1.55
Error (within)	132	45.64	

* $p < .001$.

TABLE 4

MEAN RATINGS OF CONVINCINGNESS OF THE EVIDENCE BY TOPIC AND VERSION

Communication version	Topic				
	Toys	Hunting	Central America	Alaska	*M*
pN	17.00	7.75	12.50	11.58	12.21
Np	13.42	8.42	18.33	15.00	13.79
Pn	10.00	6.42	9.00	7.75	8.29
nP	9.67	6.83	9.33	9.42	8.81
Strong (pN + Np)	15.21	8.08	15.42	13.29	13.00
Weak (Pn + nP)	9.83	6.62	9.17	8.59	8.55

conditions Pn and nP produce greater mean agreement with the conclusions than conditions Pn and nP. The effect was in the predicted direction for all four topics. The size of the effect was approximately 2 rating-scale points for the toys and hunting topics, 6 points for the Central America topic, and 4 points for the Alaska topic.

An analysis of variance was performed to test the significance of this and other effects. This analysis is summarized in Table 3. The design of the study permitted a systematic test of the main effects of order of presentation of verbs (i.e., whether the positive or negative verb occurred first), order of presentation of evidence (whether the abstract or concrete evidence was given first), and the interaction between these two effects, the latter representing a test of the hypothsized strength effect. The appropriate error term for these tests is the error (within).

TABLE 5

ANALYSIS OF VARIANCE OF CONVINCINGNESS RATINGS

Source	*df*	*MS*	*F*
Between *Ss*			
Groups	3	34.58	<1.00
Ss within groups	44	66.48	
Within *Ss*			
Topic	3	273.23	5.88*
Version:			
Verb order	1	53.13	1.14
Evidence order	1	13.55	<1.00
Verb Order × Evidence Order (strength)	1	949.63	20.47*
Topic × Conditions Residual	6	59.98	1.29
Error (within)	132	46.39	

* $p < .001$.

As indicated in the table, the anticipated interaction between order of presentation of verbs and of evidence was highly significant. The main effects themselves did not approach significance, and the only other significant effect in the study was that of topic. Since the communications on the several topics were quite disparate, and were not in any way designed to be equally persuasive, the finding of a significant topic main effect is of relatively little interest, particularly inasmuch as this effect does not interact significantly with the communication versions variable.

Thus the analysis confirms the general impression given by the means in Table 2: namely, that agreement with the conclusions is dependent to a large extent on the nature of the pairing of verb type and evidence form. This generalization seems to hold with consistency over four communications differing in content.

What now of the effect of the experimental conditions on the perceived "convincingness" of the evidence in the communications? Table 4 displays the mean perceived "convincingness" of the arguments in the communication, as a function of communication topic and version. It is readily apparent from inspection of the table that the same general pattern of results obtains as for the agreement data, except that the effect is still more striking. Again, the strong communications appear much more convincing to subjects than the weak communications; this effect appears strongly and consistently over all four communications.

The analysis of variance for these data is summarized in Table 5. It can be seen that, again, the highly significant interaction due to verb and evidence pairing appears, together with the significant but unexciting main effect of topic.

DISCUSSION

The results of the study lend strong support to the hypothesis that the persuasiveness of a communication is affected by the relationship between the type of verb in an assertion and the form of evidence used to bolster that assertion. The results show with great consistency that the more persuasive

communications are those which employ concrete evidence to establish assertions containing a positive, manifest verb, and abstract evidence when the verb in the assertion is negative and subjective. This confirms the results of previous studies by Gilson and Abelson (1965) and by Abelson and Kanouse (1966), extending the findings to situations involving content material which is more meaningful than that employed in previous studies, and to evidential arguments which, although still extremely simple, are more complex than those previously studied.

The results therefore lend some credence to the suggestion advanced elsewhere by Abelson and Kanouse (1966) that the study of fine details of language-processing behavior is an approach having general relevance to communications research. The present study, of course, did not involve a full-blown communications situation; the issues used, although meaningful, were relatively noninvolving for the subjects in a personal sense, and the persuasive arguments lacked the complexity and sophistication of typical real-life communications. It is anticipated that further research can profitably be pursued at two different levels. At one level, further clarification is needed of the underlying processes involved in subjective inference. At the other level, it will be necessary to determine what role these processes play in a wide variety of more complex situations, and how they interact with other variables in these situations.

REFERENCES

ABELSON, R. P., & KANOUSE, D. E. The subjective acceptance of verbal generalizations. In S. Feldman (Ed.), *Cognitive consistency: Motivational antecedents and behavioral consequents.* New York: Academic Press, 1966. Pp. 171–197.

GILSON, C., & ABELSON, R. P. The subjective use of inductive evidence. *Journal of Personality and Social Psychology,* 1965, 2, 301–310.

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Personality Factors in the Performance of a Perceptual Recognition Task under Competing Incentives: Edmond Marks*: Office of Evaluation Studies, Georgia Institute of Technology, Atlanta, Georgia 30332.

Internal versus External Control and the Value of Reinforcement: James W. Julian* and Stuart B. Katz: Department of Psychology, Townsend Hall, State University of New York at Buffalo, Administration Road, Buffalo, New York 14214.

Predicing the Conclusions of Negro-White Intelligence Research form Biographical Characteristics of the Investigator: John J. Sherwood* and Mark Nataupsky: Department of Administrative Sciences, Purdue University, Lafayette, Indiana 47907.

Conformity and Group Size: Harold B. Gerard,* Roland A. Wilhelmy, and Edward S. Conolley: Department of Psychology, University of California, Riverside, California 92502.

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