NEW VARIABLES FOR THE STUDY OF PUBLIC OPINION AND COMMUNICATION ABOUT SOCIAL PROBLEMS: TESTING THE RELIABILITY OF VARIABLES

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This paper proposes a theoretical and empirical context for observing public opinion and communication about social problems.

The theoretical context is suggested by the "new variables" and the empirical setting lies in transforming the "new variables," which were tested originally by means of an open-ended questionnaire, into closed-ended question items.

The "new variables" include:

1. *Problematic situations* as bases for constructing meanings for social problems;
2. *Orientations* to problematic situations as perceiving the *consequences*, *causes*, and *solutions* to situations;
3. Application of the concept of *congruence* to similarities in the orientations of individuals to the consequences, causes and/or solutions to problematic situations.

EXPLICATION OF THE VARIABLES

The individual may attend to any or all of the problems (nominally defined) and construct them as problematic situations. The individual prepares to communicate about the problematic situation in terms of what he/she considers to be the causes, consequences and/or solutions to the problem (s).

As an example, an individual attends to the nominally defined problem of the economy. He/she "thinks it is a mess and is an example of the breakdown of the system." He/she perceives that public opinion is oriented to, or he/she may discuss with others the causes, consequences and/or solutions to this problematic situation. From observing the perceptions of self and other orientations we derive a measure of similarity of orientations. This answers the question: Does an individual perceive that he/she and others are talking about the same or different aspects of a problem?

We are able to observe that individuals do not so much address *economics*, *politics*, *foreign relations*, *crime*, *pollution*, *housing*, etc., as *topics* — although this occurs as a first step — but rather cognize these problems and transform them into *problematic* situations. The significance of this

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approach—from a communication point of view—lies in the propostion that different problematic situations and orientations to them will have a variety of implications for communication research.

New Variable # 1: Problematic Situations:

We derived from our several preliminary studies six ways in which individuals constructed problematic situations:

(1) *Loss of value*: The individual possessed a value that was diminished or lost. A problem such as inflation is an example of a diminished value; a loss of a job, or status, or of some material thing are outright losses. There could be losses of social or psychological values as well as of economic values.

(2) *Institutional breakdown*: Institutions such as the family, the church, education, and the mass media, among others, might not function adequately. All breakdowns represented a loss of value but on an institutional scale.

(3) *Lack of value*: This is where the individual does not have something but wants to have it. It suggests a goal state.

(4) *Conflict*: This could reside within the individual as he/she attempts to make a choice among alternatives, or it could be the perception by the individual of social conflict. Trade and the nuclear arms race are examples of perceived social conflicts. (We conceptualized conflict in the individual and perceived social conflict as structurally equivalent in that in cognitive terms both represented two object situations.)

(5) *Creating alternatives*: This would be a situation in which the individual was inventing his / her own alternatives.

(6) *Indeterminacy*: The individual could not define goals or did not know of the existence of alternatives.

These constructions of problematic situations cut across topical categories. As one example, almost all problems relating to the activities of the press, education, and religion are classified behaviorally as instances of *institutional breakdowns or dysfunctions.*

New Variable # 2: Orientations to Problematic Situations:

Our theoretical approach suggested that individuals first "constructed" the meaning of problems as problematic situations and as a second step would prepare themselves to communicate about them. We call this process of "preparing to communicate" an "orientation situation."

Where other orientation research has focussed upon the *evalutions* that individuals place upon focal objects, we have defined orientation as *whether or not individuals are addressing the same aspect of a problem*. That is, are they communicating commonly about the *causes*, the *consequences* and/or the *solutions* to the problematic situations that they have constructed?

Orientations were determined by responses to four questions:

1. The individual's perception as to the existence and nature of general public opinion. (Did he/she perceive that the public was oriented to consequences, causes or solutions?);
2. The individual's statement as to the orientation of his/her opinion (to consequences, causes, solutions);
3. The individual's perception of the orientation of another individual in interpersonal communication about the problem;
4. The individual's perceptions of his/her orientation to that individual with respect to that problem.

New Variable # 3: Perceptions of Congruence:

We directed our observations to two sets of self-perceived relationships: (1) perceived congruency with publics and (2) perceived congruency with individuals. The focal objects were the *consequences*, *causes* and *solutions* to problematic situations.

FROM OPEN-ENDED TO LIKERT SCALES

One of our goals in this paper is to take the first steps toward translating our "open-ended"

questionnaire into closed-ended items. Specifically, we have tried to produce reliable scales for each of our major concepts. The availability of these scales should invite the broader use and refinement of our concepts.

At the same time, we have maintained two major elements of our approach to data collection.

(1) We are dealing only with the problems that are salient to individuals, and.

(2) We ask about behavior in a bounded situation rather than across situations.

Our pretest data were obtained from an unique group of abults. They had been randomly selected from voter registration lists to serve as jurors in the Superior Court system of King County, the area that bounds the city of Seattle and its adjacent rural areas. The random selection processes assured a degree of representatvieness, but it fell somewhat short of this because nonvoters and those persons who were "excused" from duty were not included.

There was, however, an element of accessibility. Each morning the juror-respondents were gathered together in a large room and sat there until they were summoned for active jury duty. This meant that they had a good deal of time on their hands to complete the questionnaire. Our data-gatherers were described as members of the Faculty and graduate students in the School of Communications at the University of Washington. More importantly, perhaps, they were told by Court House officials that the School, out of its research funds, had purchased some service facilities for the personal use of jurors; in this way a 90 per cent rate of cooperation was achieved.

A total of three pre-tests was conducted, each consisting of from 85 to 148 interviews. As we have suggested, the items were derived from statements made originally by students in response to open-ended questions in the surveys. A set of four Likert statements, utilizing a five point scale, was constructed for each of the major concepts. These concepts included orientations to the six problematic situations, to cognitive aspects of problems, to sources of information, and described reasons for the usefulness of the most important sources.

As in the open-ended surveys, each respondent was permitted to suggest the three most important problems facing the country and the problem that was most important to them, personally. We computed Pearson product moment correlations between individual scales and each scale item against the correlation of the other three items. The second procedure told us the extent to which each item correlated with a cluster of items as well with individual items.

We set the minimum acceptable correlation coefficient as .24. Although this minimum value explained a limited amount of variance, it produced reliability coefficients at greater than the .001 level. Many of our scales demonstrated higher coefficients, as high as .62, explaining more than 36 per cent of the variance. Although several of the items that we dropped were correlated at .001 levels of significance, they did not meet our minimum requirements for explaining variance.

A. The Problematic Situation:

One of our major concepts was that of the problematic situation; it addressed the meanings that individuals attached to the problems that faced the country and what they themselves believed to be the most important problems.

The scales that we adopted for describing the six problematic situations emerged as follows:

1. Loss of value: Four items were designed to tap what students had reported in surveys as wastes of money, time, energy and resources. (Correlations are shown after each item).

ITEMS RETAINED:

1) It (the problem) is so costly;
(time = .28; energy = .38; resources = .33)

2) It has wasted so much time;
(costly = .28; energy = .54; resources = .37)

3) ... taken up so much energy;
(costly = .38; time = .54; resources = .60)

4) ... used so many resources;
(costly = .33; time = .37; energy = .60)

As shown above, all items correlated at a minimum of .28 and we were able to retain all four items in the scale.

2. Lack of Value: Our observations here were that needs incorporated a number of dimensions, from retaining what one has to expressing new needs, demands, and ultimately wishes or desires. As the correlations demonstrate, however, the concept of "desire" was not associated strongly with needs although there was a positive correlation. Apparently our respondents felt that "desires" was a more abstract concept than the need to maintain one's values, meet one's needs and make new demands.

ITEMS RETAINED:

1) Try to hold on to what they (people) have;
(Needs = .45; demands = .41; desires = .18)

2) Meet only their most immediate needs;
(Hold = .45; demands = .33; desires = .21)

3) Make new demands;
(Hold = .41; needs = .33; desires = .35)

ITEM DROPPED:

4) Indulge their wishes or desires.
(Hold = .18; needs = .21; demands = .35)

As can be seen, the dropped item failed to meet our test in two respects. Wishes and desires apparently represent a psychological dimension that is more abstract than maintenance, needs or demands.

3. Indeterminacy: We observed that students had defined indeterminacy in terms of uncertainty, ambiguity, questioning, and an inability to take action. This yielded four scale items and their correlations as follows:

ITEMS RETAINED:

2) It is difficult to know what to do;
(What is happening? = .37; do first? = .51; how? = .44)

3) ... to know what to do first;
(What is happening? = .23; to do? = .51; how ? = .52)

4) ... to know exactly how to do it?;
(What is happening? = .18; to do? = .44; do first? = .52)

ITEM DROPPED:

1) It is difficult to know what is happening;
(What to do? = .37; do first? = .23; how? = .18)

The item, "It is difficult to know what is happening," correlates weakly with the other four items. We are speculating that respondents may have interpreted "what's happening" in a more abstract "observor" context rather than in the "action" mode seemingly demanded by "doing" as proposed in the other items. In dropping "what's happening," we retained a three item scale that explained substantial variance.

4. Social Conflict: We have incorporated two paradigms of conflict in this scale, one conflict *within* the individual, and the other conflict *between* individuals, groups or nations. We assumed that conflict was the generic and therefore organizing concept.

ITEMS RETAINED:

1) The problem is creating conflict within many individuals;
(Friends = .50; groups = .24; nations = .08)

2) ... among many friends;
(Individuals = .50; groups = .41: nations = .15)

3) ... among many groups;
(Individuals = .24; friends = .41; nations = .20)

ITEM DROPPED:

4) The problem is creating conflict between many nations.
(Individuals = .08; friends = .15; groups = .20)

As can be seen, conflict between nations is not seen in the same contextual framework as more intimate forms of conflict — within individuals and between individuals and groups. We therefore dropped from the scale the item that incorporates international conflict. We plan to produce a new scale directed to arenas of international conflict; viz., trade, terrorism, nuclear power, and war.

5. Institutional Breakdown: We incorporated four kinds of breakdown or dysfunction: the fairness of the system to its users, the quickness with which the system respondsed to problem situations, its strength or endurance, and its efficiency in the use of resources.

ITEMS RETAINED:

1) The system is not fair;
(Quickness = .29; strength = .24; efficiency = .27)
2) ... is too slow to react;
(Fairness = .29; strength = .47: efficiency = .14)
3) ... breaks down too easily;
(Fairness = .24; quickness = .47; efficiency = .26)
4) ... wastes resources;
(Fairness = .27; quickness = .14; strength = .26)

We faced a dilemma here; two items failed to meet the minimum degree of correlation with the other three items. Each did, however, satisfy the criterion with respect to two items, although different in each case. We decided that we would, for the moment, retain these items and seek to improve them through examining their relationships to other concepts.

6. Creating Alternatives: We designed the scale so that it would incorporate different approaches to solving problems. The lack of substantial correlations seems to suggest, however, that our respondents preceived the statements more as a continuum along one scale than discrete alternatives. The continuum appeared to run from changing objectives, to revision of priorities, cancellation of old programs and experimenting with new programs. The correlations were positive, as we have suggested, but they failed to meet the criterion that we had established.

ITEMS REJECTED:

1) To solve this problem we should change our objectives;
(Revise = .54; cancel = .14; experiment = .21)
2) ... revise our priorities;
(Change = .54; cancel = .26: experiment = .20)
3) ... cancel existing programs;
(Change = .14; revise = .26; experiment = .02)
4) ... experiment with new programs;
(Change, .21; revise, .20; cancel, .02)

The least congruous of these items was experimentation; it did not correlate adequately with any other item. Each of the other three items correlated adequately with one item.

B. Cognitive Orientations to Aspects of Problems:

A second major concept that we developed was a variation upon communication research described as "co-orientation". As we have discussed, co-orientation is the degree to which two (or more) persons perceive that they are relating in the same way to a common object. Co-orientation research thus describes the evaluative dimension of objects; viz., do both parties perceive that they like it or dislike it? Do they (accurately) perceive that the other person likes it or dislikes it? Etc.

Our variation on the co-orientation approach was to shift the focus from evaluation to cognition. In the cognitive mode one person perceives (correctly or incorrectly) that he/she is focussing upon the same aspect of the problem as his/her co-orientation partner. No reference is made to evaluation. The question simply is, Does the person perceive that he/she and his/her partner are talking about the same aspect of the problem or a different aspect?

The aspects of a problem may be of four kinds, structurally speaking. These represent the focus of the individual upon either the nature of the problem, its effects, its causes or steps toward solutions. These attributes have the additional value of representing possible stages in the emergence of a problem. Let us imagine, for instance, that awareness of the nature of the problem represents the first stage in the recognition of a problem; the second stage might bring about an understanding of the consequences or effects of the problem; the third stage could be an orientation to the causes of a problem, and the fourth and final stage might be orientations to possible solutions to a problem.

A Likert scale does not, of course, test the "stages" element of the theory; this might better be accomplished by a Guttman scale. However, since our data collection procedures permit the respondent to talk about two or more stages of a problem, we lose some track of time. Also, our Likert procedure addresses only the correlational aspects of the orientation.

Our cognitive (and structural) perspective (s) thus produced four sets of items (scales) which were directed at (1) perceptions of public opinion; (2) self-perception on the part of the respondent; (3) a self-report by the respondent on the aspects of problems that he had communicated to a co-orientation partner, and (4) a perception of the aspect of the problem that the partner had communicated. We might call these latter two conditions "tell" and "hear."

We could entertain a number of expectations from examining the reports and, particularly, the degree of fit between self and other in their perceived agreement on focus upon the various "aspects" of the problem.

To begin, we might expect our respondents to perceive that other people are talking about the same things they are. That is a reasonable expectation since their co-orientation partners are friends, family, and fellow workers.

However, where there were qualitative differences in aspects of a problem, we might expect that the respondent would place him-/herself more in the position of dominance; that is, in dealing with the more controlling aspects.

In examining our scale data, we found both circumstances to be the case; that is, there was more of a tendency for our respondents to perceive that cognitive co-orientation was occurring than non-occurring. This applied both to their perceptions of public opinion and their personal co-orientation.

And, as we had hypothesized, where there was deviation, our respondents portrayed themselves more than their partners as addressing the controlling aspects of a problem; that is, its causes or solutions rather than merely the nature of the problem or its consequences. Conceptualizing awareness of the nature of the problem, and the effects of problems, as less demanding orientations than to causes and solutions to problems, we learn that:

1. An individual who peoceived that public opinion was talking about the "nature" of the problem also was likely to report thinking about this aspect of the problem, was likely to mention it to someone else, and perceived that the other person had mentioned it to him/her.

If knowing about the nature of the problem is one of the least demanding aspects to master, then a balanced set of perceptions is to be expected and did occur.

2. The person who perceived that "effects" were the focus of attention also was likely to perceive similarities in the orientations of others.

Again, if learning about the consequences or effects of a problem is less demanding than dealing with causes or solutions, our expectations for behavior once more are confirmed.

3. As we had expected, substantial variation occurred with respect to the "causes" of problems, an orientation that demands more of the individual than the conditions we have already discussed.

There is a substantial discrepancy here between our respondent's claim that he/she has focussed upon the causes of problems and his/her perception of the focus on this aspect by a co-orientation partner. Our respondents perceives themselves much more as "telling" about the causes of problems than "hearing" about them. Thus, as we have hypothesized, the individual more often perceives him-/herself as dealing with more demanding or controlling aspects of a problem.

4. A similar phenomenon occurs with respect to the solution aspects of a problem. We constructed two sets of scale items for orientations to solutions. One set asked "if *anything* could be done" while the second asked "what *should* be done."

The phenomenon that we just observed repeated itself. The respondent perceived that he/she more often "told" than "heard" about the need for something to be done. But the respondents perceived a more balanced exchange with respect to "what exactly should be done." Apparently, once someone believes that *something* can be done, they are ready to tell exactly *what* should be done.

Our scales reproduce to a surprising extent the data that we obtained from our open-ended interviews with students. They might therefore be reliably used by communication researchers who wish to examine cognitive, rather than evaluative, co-orientation in a variety of social and political situations.

C. Interpersonal Communication Scales:

As was the case in our student surveys, almost everyone in the adult sample reported interpersonal communicataion. We were interested in the nature and extent of the linkages that existed among friends, family, neighbors and fellow workers. If someone talked to a friend *who else* was he most likely to speak to?

A person who discussed a problem with his/her family was most likely also to discuss it with a friend; then with a neighbor, and then with a fellow worker. We drew from this minimal variation the implication that the nature of a problem as well as the generic character of a relationship helped to predict the configuration of a communication network. Families shared kinship and some problem; neighbors and fellow workers shared roles and some interests, such as class and politics.

THE PROBLEMATIC SITUATION AND USES OF INFORMATION

When a person defines a problematic situation, does he/she look at it in several ways or in only one way? If problems are multidimensional, do they occur more or less randomly as a consequence of a situation, or is there a tendency for certain situations to cluster under given conditions?

And is it logical or productive to ask if there is a link between the problematic situation and sources of information about that situation (s)?

In answer to our first question, the suggestion is that in defining a problematic situation our juror respondents appeared to incorporate more than one dimension. There was a tendency, in fact, for respondents to see several dimensions of problematic situations in every problem. As examples: Persons who saw loss of value (or personal deprivation) in a situation also were likely to see lack of value, indeterminacy, and social conflict in the situation, these at the .001 level. What is more, they also saw institutional breakdowns and needs for solutions as a part of that situation, although these were significant only at the .05 level. If we were to accept these data we need to draw the inference that loss of value at the personal level is at the heart of the definition of any problematic situation.

At the other extreme, an orientation to solutions to problems correlated highly only with institutional breakdowns (.001); we might derive from that the suggestion that where broadly based social institutions are not functioning properly, demands for solutions will be made antecedent to the taking of other steps, despite any objectively defined circumstances to the contrary.

Lack of value correlates most with personal loss and with perceptions of social conflict (.01). This makes sense, we might say, for situations of social conflict pose the alternatives (and the actors) that must be reconciled to resolve the conflict; after all, the basic idea of conflict is that steps must be taken to resolve it. Interestingly, however, the condition of need is not correlated significantly to demands for or steps toward solutions. Need is construed, apparently, as an early stage in the problem-solving process where the possibilities for solutions have yet to be defined.

The answer to our first question of dimensionality of scales, in any case, is resolved: Problematic situations tend to be multi-dimensional rather than unidimensional.

We are forced to entertain two explanations for this phenomenon. The one toward which we lean is that a multidimensionality of problems represents reality; that is, every problem has a number of problematics attached to it, and this accounts in part for its persistence as a problem.

The second explanation is that our closed-ended items might be suggestive to our respondents and in that sense "informing." However, we are less able to accept this as a full explanation because of the variability of responses to scales; the correlations are substantial and significant.

We might conclude, therefore, that while our open-ended questions may well have imposed some demands of memory upon respondents the closed-ended questions provided the respondent with some information. Nevertheless, problems appear more to be multidimensional than unidimensional.

The evidence with respect to the association of sources of information with the definitions of problematic situations is a little less susceptible to judgment. Again, we may accept largely one of two possible explanations; the first, that our respondents relied upon a meanigful pattern of sources of information to cope with different problematic situations, or two, that they did not do so in either a meaningful or systematic way.

Let us look at some of the relationships between problematic situations and uses of information.

Those respondents reporting losses of value seemed to rely primarily upon personal observation as a source of information; they also reported the use of qualitative, selective media to a significant extent.

By contrast, those who reported lacks of value approached statistical significance (.08 and .07) with respect to mass media and qualitative media, personal observation (.01), special media (.04) and personal observation (.02).

We originally had hypothesized that those who were expressing new needs as contrasted with "familiar" losses would require more sources of information to cope with that definition of the situation. That "expectation" appears to be confirmed. What also was implied was a broader sweep of the terrain, and that also seems to be validated by our data.

We also had hypothesized that pure indeterminacy was the most difficult situation in which an individual might find him-/herself, and that only those of superior cognitive capacities would be willing to cope directly with such a situation. That inference also is supported by our scaling data. We approach significance with respect to mass media (.08) and achieve significance only with respect to qualitative madia (.04). Since use of qualitative media is associated in these data with higher levels of education, status, and cognitive skills, we gain further support for our findings. We are unable to validate this with our student survey data, for they were too homogenous a population to permit differences attributed to these variables to emerge.

We find a somewhat surprising lack of association of sources of information with conditions of conflict; it is associated only with the mass media, which implies that the mass media are per-

ceived as portraying conflict but that audiences do not become involved in it in other cognitive terms. They appear to be more observers than participants; an alternative yet supportive explanation is that they are aversive to conflict once they learn of its presence.

Two other hypothese are strongly confirmed: The first is that if one views institutional breakdowns as losses of value on a societal level we should expect much more communications behavior in that condition than if the loss affected the individual in more limited ways. We find that hypothesis to be supported strongly. Use of mass media (.09) approaches significance, and qualitative media (.05), interpersonal communication, (.001) and special publications (.001) are significant.

The second is that the most demanding condition is in the realm of demands or steps toward solutions. The search for solutions, as an example, would be analogous to the search for alternatives defined in "lack of value;" there we saw extensive use of information sources. As expected, the context of solutions was associated with use of qualitative media (.02), interpersonal communication (.04), use of special sources (.01) and personal observation (.04).

We may conclude that there is a meaningful and systematic relationship between the definition of the problematic situation and patterns of use of sources of information.

SUMMARY

Our most basic questions addressed our degree of success in creating scales to test the validity and reliability of our concepts of the problematic situation.

We were able to produce scales made up of 3—4 items for five of our six kinds of problematic situations. These met statistical levels of acceptability as scales. We asked if these scales pointed to multidimensionality or singularity of meaning in a problematic situation. We concluded that the tendency was toward multidimensionality. Thus problematic situations were complex rather than simple in their structures.

We asked if these problematic situations were associated with the use of different patterns of information source. We tested several hypotheses, all of which drew support from the findings.

We are encouraged by these steps toward assuring the availability of validated and reliable measures of our concepts. Our findings are assuring in yet another sense. It is broadly understood that closed-ended items offer more advantages if they are based upon open-ended pretests. We appear to have met that condition — that is, of open-endedness. Obviously, however, we will continue to refine and apply the concepts to a variety of social groupings.