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A THEORY OF RUMOR TRANSMISSION*

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Do rumors become more or less accurate as they are passed on? The author of this paper concludes, on the basis of experiment, that the answer depends on the structure of the situation in which the rumor spreads, and particularly on two variables that are discussed in detail.

A CAREFUL and assiduous student reading the major works in the field of rumor transmission will finish knowing neither whether rumors expand or contract, nor whether they become more or less accurate. The important studies come to apparently contradictory conclusions. For example, Allport and Postman wrote:

"It is often assumed that rumors become embroidered in the telling, or that they become enlarged like a rolling snowball. This is a misconception. Though we certainly find many insertions and circumstantial detail, they seem to occur only in the interest of sharpening. Elaboration which serves neither the purpose of coherency nor emphasis on the main point of the story seldom occurs —never in our experimental situations. (1)"

Later, Peterson and Gist wrote:

"Whether this rumor "snowballed" in the process of transmission depends on the perspective used in interpretation. "Snowballing" suggests increasing enlargement and implies that details are retained as new ideas are superimposed. Viewing the entire phenomenon as a Gestalt of interrelated rumors, probably derived from a common origin and differentiated into a profusion of details, the phenomenon does appear to have grown like a snowball. Certainly there was an accumulation of details; whether any were completely lost in the course of transmission and elaboration is not known. (2)"

And Caplow wrote:

"The effect of transmission was to increase rather than decrease the validity of the statement. (3)"

While Bauer found among refugees from the Soviet Union:

"The majority of each class cited rumor as more reliable [than the press] but there were vast class differences. Some 56 per cent of the peasantry regarded rumor as more reliable but fully 95 per cent of the urban intelligentsia said that rumor was more reliable than the press. (4)"

The purpose of this paper is to develop a theoretical framework that will demonstrate that the statements quoted above are not contradictory but complementary and that each is correct given the circumstances of its derivation.

There is general agreement in the field that a rumor is an unconfirmed message passed from one person to another in face-to-face interaction that refers to an object, person, or situation rather than an idea or theory. Thus the "gossip," "grapevine," and "scuttlebutt" phenomena are included. Whether a rumor is truthful or untruthful, though this has been a matter of debate, is unimportant in studying its transmission. The essential features of a rumor are that it is unconfirmed at the time of transmission, and that it is passed from one person

to another. (5)

ORIENTATIONS TO RUMORS

The individual may find himself in one of three orientations or situations in relation to a rumor. The rumor, or the situation, may cause the individual to take a critical set, an uncritical set, or a transmission set toward it. Briefly stated, if the individual takes a critical set it means that he is capable of using "critical ability" to separate the true from the false in rumors he hears. If an individual takes an uncritical set, it means that he is unable to use "critical ability" to test the truth of the rumors he hears. If he takes the transmission set, usually found in laboratory experiments, his critical ability is irrelevant.

The critical set. First, a person is able to take a critical set toward a rumor if he is knowledgeable about the subject matter of the rumor. He may have had direct personal experience with the subject. His background and experiences may have provided him with a frame-work of relevant information about the topic of the rumor, and, unless the rumor fits in with what he knew before, he will be skeptical of its truth. He will be able to separate the true from the false.

Second, many rumors arise in certain definite situations. If a person is familiar with the situation he will know what to expect on the basis of past experience. An example of this is election-eve slander. A few days before a national election in this country rumors often spring up to the effect that one of the candidates leads an immoral life. A person trained to be critical or habitually suspicious or critical may recognize the earmarks of a rumor and check with some factual source before spreading it or acting upon it. (6)

Third, another characteristic that helps the development of critical ability is a stable interaction system. If a person hears a rumor from a stranger he has no way to evaluate it. If he hears it from a friend, or from someone who has told him other rumors, he can think back and check on the reliability of the teller. (7) Sometimes a rumor circulating in a reasonably "close" group will have the name of the person who started it tagged on. The most common form I have noticed is, "According to Bill Smith . . .," which allows the person hearing the rumor to think back to other rumors told by Smith. Smith's position in the group, as well as his previous performance, may provide a basis for evaluating a rumor he has started. If Smith is the Company Clerk in an Army unit, and the rumor refers to something he is likely to come in contact with—assignments, illness, the Company Commander—a rumor with Smith's name attached will carry a great deal of weight, more than if he occupied some other position.

If a person can and does exercise critical ability upon a rumor he hears, it will have consequences for the rumor. He will tend to: (a) pass on the most important parts of the rumor, dropping off the irrelevant; (8) (b) detect misinformation in the rumor and eliminate it; (9) (c) transmit the rumor without change if he can detect no irrelevant or false information. (10)

The uncritical set. Certain circumstances and emotions hamper or eliminate the possibility of exercising critical ability. First, if believing a rumor fills a need of the individual, he will be much less likely to reject the rumor. If he wants it to be true, it will rarely be false. Flying saucerians will believe almost any story relating to contacts between earth people and the "Space Brothers," because these contacts are seen as the beginning of the "New Age" when believers will be rewarded. (11) Shortly before the end of World War II, a rumor spread that the war was over. (12) It spread fast because so many people wanted it to be true. Many otherwise critical people believed it.

Second, an individual may find himself in a situation where he has no advance knowledge of the probable form of the rumor. A person awakened at night by the cry, "The dam has broken!" is in no position to consider the truth or falsity of the rumor: he has to act on it. Either the urgency of the situation or the lack of substantive information, or both, can render the individual's normal critical ability impotent.

Third, in crisis situations many people mill around, all interested and involved in the situation and seeking information, and the stable rumor channels are disrupted. The reliability of the rumor transmitter can seldom be evaluated. On occasion this confusion is taken advantage of by an agitator for his own ends. (13)

Fourth, an incident of general interest about which absolutely nothing is known often causes a temporary lowering of critical standards until reliable information becomes available. Peterson and Gist report the rumors of a rape slaying in a fairly small town. On one single topic, the evidence concerning the attack, on which no definitive information was available from the police or the newspapers, they report no less than seventeen different rumors. (14)

Fifth, some people have very meager standards of evidence, often because of low education or an insecure orientation to the world. (15) Klapper suggests on the basis of numerous studies that "persuasibility" is a characteristic of some people and it appears to be unrelated to specific topics. (16)

If a person is unable to exercise critical ability for one of the above reasons he may (a) tend to speculate on the meaning of the rumor to fit it into his framework of ideas, prejudices, and attitudes; (b) modify the rumor to give it a better Gestalt, to achieve a sense of closure; (17) (c) come up with an idiosyncratic version of the meaning of the rumor, which he then passes on; (d) distort the rumor in a rational or non-rational direction, depending at least in part on his own psychic needs; (e) come up with an original message that seems to describe the situation. Something he heard in the past may be connected with the current rumor and passed on as the truth. New rumors have been consistently reported in the literature, and their tendency to be bizarre and idiosyncratic has been commented upon. (18)

The transmission set. The final orientation a person may have toward a rumor is the transmission set. In this case, the content of the rumor is irrelevant to the person, his only interest lying in passing it on. A small child told to carry some gossip he does not understand may well have a transmission set. Lang and Lang call children "neutral" transmitters." (19) This relation to a rumor is most commonly found in experiments of the Allport and Postman variety. In the laboratory experiment, a number of details of a situation are given to the individual, who is then told to pass them on. His main goals are to pass the message on and to be accurate about it. This is primarily a "game in rote memory." (20)

An individual with a transmission set toward a rumor comes closest to the engineer's model of "information transmission" over a noisy telephone connection. The noise interferes with the message, and the message that finally gets through is distorted at random. In the engineer's model, words are not heard because noise drowns them out. In Allport and Postman's experiments, the words are leveled out because of the difficulty of remembering twenty or so new and discrete items of information—noise, with a different name. Rumor transmission of this type is probably rare outside the laboratory. (21)

If an individual has a transmission set toward a rumor he will probably (a) eliminate parts of the message until it makes some sense to him; (22) (b) assimilate it to his linguistic habits; (23) (c) forget some of the information, perhaps selectively; (24) (d) transmit the message as instructed; (25) (e) neither distort nor correct the message in a purposive manner. (26)

INTERACTION, REDUNDANCY, AND REPETITION

In the course of a normal conversation many points are made more than once. In addition, the language is itself redundant. Claude E. Shannon of the Bell Telephone Laboratories has estimated that ordinary written English is 75 or 80 per cent redundant. (27) The effect of this redundancy is usually to make the message more clear, and to eliminate some of the problems caused by noise.

Except for the natural redundancy of language, past experiments on rumor transmission do not have redundancies. Part of the experimental control is that A tells B the message and B at once has to tell it to C. B

cannot ask for a clarification of the message before he has to pass it on. The effect of this approach is to maximize the noise introduced at each repetition. This is very unlike a normal situation, where interacting individuals talk over a rumor. In a face-to-face conversation a person hears a rumor and asks for a clarification of message or source if he does not understand it. Individuals in interactive situations are seldom passive receivers. If a word or phrase is not clear from the context in which it is given, the speaker will often realize that his listener is not understanding, and will rephrase his statement. Even if the speaker does not realize that he is being misunderstood, the listener will frequently realize that he is misunderstanding and will ask for a clarification.

Furthermore, in this situation both individuals have the possibility of working out together, each using his specialized knowledge, a consensus on the meaning of the message or rumor. Except in situations where the speaker is seen by the listener to have a psychological investment in the rumor, and tact forbids the listener from raising an objection, this clarification probably takes place.

In a situation where a rumor is a topic of conversation and speculation, where nothing is known for sure about it, interaction will produce a modified Gestalt at every discussion of the rumor.

If one person is able to exercise critical ability with regard to a rumor, he will be able to correct the other, unless the other is so strongly convinced of the veracity of his tale, or has such a strong need to believe it, that no amount of proof will shake his belief. When I was told that "Jesus Christ is a flying saucer pilot," there was nothing I could say that would have changed the speaker's mind. He and I reached no consensus on the rumor.

There is another type of redundancy besides that brought about by the normal interplay of an interactive situation. This is the redundancy of repetition. In a laboratory experiment, the subject is told the rumor only once, by one person. In a normal community setting, he would probably hear the rumor more than once. He might hear it twice from the same person with some minor variation or clarification, or he might hear it from several people. This situation differs qualitatively from the single interaction, as the individual has already assumed one of the "sets" toward the rumor, and he has information of one kind or another. Whereas in a single interaction the individual has to rely on his "background" knowledge to exercise his critical ability, in repetitive interaction he has substantive knowledge. The substantive knowledge may be right or wrong, but it places him on a more equal footing with the next person to tell him a rumor. Instead of simply asking questions to draw out the meaning, he can give his own rumor. Instead of accepting he can raise objections, rightly or wrongly. At this point the truth or falsity of the rumor becomes important.

1. Critical set, true rumor. If the individual has critically accepted (assumed the truth of) a true rumor and achieved a consensus in his first interaction, in subsequent interactions he will be "informed." If more true rumors follow (perhaps containing other relevant facts), they will clarify his knowledge further and increase his critical ability. His original reaction will be confirmed. (28) He will also be able to inform the people he meets in his later interactions of things they might not know, or might have forgotten. If someone comes along with a false rumor (or a variant form), he will be in a position to reject it and convince its bearer of its falsity. Any rumors he passes on will benefit from his knowledge: they will be more accurate than those he received from any single source.

2. Critical set, false rumor. If the individual has rejected a false rumor through exercise of his critical ability in his first interaction, he will at least know that there are false rumors loose. If he hears the false rumor again, he will be in a position to reject it out of hand. If he hears a true version, he will be in a position to critically accept it. In the instance where he critically rejects a false rumor, though his knowledge of the situation grows no more accurate, neither does he pass on distorted information. In the instance where, after hearing a false rumor he hears and critically accepts a true version, his knowledge will be as accurate as that of any other person who critically accepted a true rumor. Furthermore, he will be able to refine and clarify and warn of false rumors when he passes on the true version.

3. Uncritical set. On the other hand, if the individual lacks critical ability, whether he received a true or a false rumor in the first interaction is irrelevant. In either case his knowledge has no sound basis for support. Every new rumor he hears is grist for the mill. In each interaction he not only hears a rumor but passes one or more on. He may speculate with the person with whom he is interacting, both of them providing information and misinformation indiscriminately, unless he interacts with someone who has a critical set and is corrected by him. (This has the effect of an "objective reality" test in McPhee's terminology.) (29) The rumor will pick up new details in a dialectical process synthesizing new rumors with new meanings, each of which may be modified to produce a better story or a better Gestalt. The more times the individual interacts, the greater the production of false, distorted, and bizarre rumors. In this situation the rumor will "snowball." (30)

4. Transmission set. Multiple interaction among individuals with a transmission set should simply overcome individual memory faults, and the rumor will come through unchanged.

RUMOR CHAINS AND NETS

Implicit in the discussion of single and multiple interactions is the idea of two different kinds of rumor patterns. In the first type, the chain, the rumor moves from person to person in a serial manner in a series of single interactions. At each point there is an interaction between one person who knows the rumor and one who does not. A serial chain looks like this:

A -->B--> C-->D -->E -->F

In the second type of rumor pattern, the network, many people hear the rumor from more than one source. A multiple interaction network might look like this: ([Graphic of feed-back network](#))

Both these patterns are ideal-typical constructs. In any community situation both types of pattern will occur. The same rumor may change patterns from chain to network and back to chain as it pros greases. The characteristics of the community through which the rumor is spreading cause structural predispositions toward the formation of either serial chains or multiple-interaction networks. This relation is explored in the following section.

If only those patterns which are clearly serial chains or multiple networks are taken and if the assumption, often unrealistic, is made that all members of that section of the pattern have the same "set" toward the rumor, it is possible to predict the effect of transmission on the rumor under these conditions. (31) In Table 1 the net effect of these joint conditions on the accuracy of the rumor is explored.

TABLE 1 RUMOR PATTERNS AND ORIENTATIONS AND THEIR EXPECTED EFFECTS ON TRANSMISSION OF RUMOR

Pattern	Critical Set	Uncritical Set	Transmission Set
Serial chain	Slight decline in accuracy through memory flaws. Truth/falsity ratio remains high*	Slight increase in distortion. Truth/falsity ratio drops at each interaction.	Rapid decline in information. Leveling, sharpening, assimilation.
Multiple-interaction network	Increasing accuracy as rumor moves through net. Truth/falsity ratio rises rapidly.	Great increase of distortion as accurate rumor is lost in false ones. Radical drop in	(Hypothetical). Very slow decline in information. Rumor stays intact.

truth/falsity ratio.

* Truth/falsity ratio is arrived at by dividing the number of true items by the number of false items in the message. As such it is useful only when there are true or false items in the message, not, that is to say, in past laboratory experiments, where the items are neither true nor false, since they are unrelated to an external reality.

RUMOR IN THE COMMUNITY

Whenever a rumor is passing through a community or a group, some individuals will have heard the rumor once, some will have heard it more than once, and others will not hear it at all. The amount of repetition a rumor gets will depend on the situation. Some rumors are more worth repeating than others, and some, even though they are interesting and valid rumors, are embarrassing to repeat. But, leaving aside the particular characteristics of the particular rumor, two group-level variables operate to promote or retard the spreading or repeating of rumors: the structure of the group or public through which the rumor is spreading, and the involvement or interest the group has in the topic.

Structure of the group. Roughly speaking, there are diffuse and close groups or publics. To a limited extent, this is a sociometric phenomenon. If there is close and continuous contact among the members of a group and any of the members can see any of the other members without great difficulty, it can be called a "close" group. It is not necessary that this be a stable close group – it may be brought together temporarily by a natural disaster, it may be a crowd. In these instances, the sociometric structure has not evolved to any degree. In close groups that have existed for some time, there is usually a fairly well defined sociometric structure. Examples of this would be the small town, the college fraternity or dormitory, the army unit, the mental hospital, and the clique. In any of these groups, there is likely to be a high degree of interaction anyway and the rumor spreading through the group will go from one person to another and often back again. In a crowd, a rumor might sweep through the crowd several times, and as a consequence be heard more than once by a large portion of the individuals. Thus in close groups multiple networks are to be expected. (32)

The diffuse group or public is characterized by the fact that lines of sociometric choice normally tend to be chains rather than cliques (though, of course, cliques and close groups often exist within diffuse groups). The diffuse group is much larger than the close group; it is more spread out geographically, with consequent limitations for face-to-face interaction. The nuclear family in the city is part of a diffuse group. Its members are not likely to interact so frequently with such a large number of mutually acquainted individuals as are members of a close group. The individual's pattern of friendship tends to be diffused among his segmented role relationships. Since many rumors will be in some way role-related, the individual member of a diffuse group is likely to hear a role-related rumor while engaging in that role activity. As a consequence, he is likely to hear the rumor only once, since he will probably not hear it in his other role activities. It is, of course, possible for a rumor to be of such general interest that it spreads through a diffuse group, but it would have to be a rumor affecting the entire group, such as the beginning or end of a war, the assassination of a president, or a natural disaster. A powerful rumor can change a diffuse group into a close group. In the Chicago race riots, rumors about the number of deaths brought many people out into the street to interact with others already there and to "even up the score." (33)

Involvement in the topic. The second group-level variable is the involvement or interest the group has in the topic of the rumor. If the rumor affects the entire group, as a group, the individual members are likely to be interested in it. If the rumor only affects some subgroup, interest is not likely to be so widespread. The higher the average level of interest and involvement throughout the group, the greater will be the motivation for spreading the rumor.

A close group with high involvement in the topic of the rumor will produce a high repetition rate as the

rumor goes from one member to another and back again. A diffuse group with high involvement is likely to experience both chains of rumor and pockets of intense rumor activity when enough people are together, or come together, to talk the rumor over. A close group with low involvement on a group level is likely to have only a chain of individuals who are involved and passing the rumor. Caplow found that rumors not related to "major group interests simply failed to move along the rumor channels, though much of it was available at all points." (34) A diffuse group with low involvement is almost certain not to have much rumor activity. The overwhelming majority of the members of such a group would not be expected to hear the rumor, and those who did would probably hear it from only one source. It is possible for a close group to be an intense center of rumor activity, while the diffuse group surrounding it may not hear a word of the rumor.

The two variables, group involvement and the closeness-diffuseness of the group seem to form a natural ranking in their effects on the frequency of rumor transmission and repetition (see Table 2). This ranking could also be seen as a ranking of motivation and opportunity.

TABLE 2 GROUP INVOLVEMENT AND GROUP STRUCTURE AND THEIR EXPECTED EFFECTS ON RUMOR TRANSMISSION

Involvement	Group Structure	Tellings	Repetitions	Pattern
High	Close	Many	Many	Intense network
High	Diffuse	Many	Sporadic	Largely chains, a few small nets
Low	Close	A few	Almost none	A few small chains and nets
Low	Diffuse	Almost none	None	Very short chains

EMPIRICAL EVIDENCE

Where individuals have critical ability and interact with more than one person, the rumor will become more precise with each transmission, it will have its false elements stripped away, and it will become more accurate because of cross-checking with knowledgeable sources. The Allport and Postman processes would be present with the essential difference that false information was "leveled" out rather than just any information. Thus a succinct statement of the central idea should emerge. Caplow's study of rumors in war showed this to happen with rumors in a regiment. (35) In this study the topic of the rumors was military, and the intense socialization of the military establishment had given most soldiers a fair amount of critical ability on military matters. Most soldiers know there are certain things the Army will not do. Within a regiment there is a stable social situation and a close group structure, with people interacting continuously with the same other people and gaining an ability to judge the accuracy of the report by the accuracy of the person giving it. In addition, it is often possible to check a rumor with someone who is usually reliable. Caplow found (as mentioned before), "As a rumor moved through channels false information was perceived and eliminated—the rumor as a whole becoming more accurate." He also noted that the final form was usually more condensed, perhaps because of "re-circulation" (multiple interaction). The Allport and Postman processes were noticed, but "definite group devices" developed to diminish their effects.

A very interesting study is Schachter and Burdick's experimental study of rumor in a school. (36) It had multiple interaction in both a critical and an uncritical situation. There were two sources of rumor, the planted rumor that "some exams were missing," and rumors that arose from the experimental stimulus of the sudden removal of some girls from class. The two were not officially connected, and though a teacher had

planted the rumor that some exams were missing, no student had it on the teacher's authority that the girls had stolen the exams. Thus the situation could be characterized as "critical" with regard to the stolen exams and "uncritical" with regard to the removal of the girls from class. The fifty-two girls in the four classes of interest asked 200 questions of the teachers, clearly multiple interaction. The original rumor about the exams came through the day intact, while many new and bizarre rumors sprang up about the girls. The Schachter and Burdick study thus conforms to theoretical expectations in both the multiple-interaction-critical and the multiple-interaction-uncritical cells of Table I.

In another case of uncritical multiple interaction, Peterson and Gist's study, "Rumor and Public Opinion," (37) the effects of the uncritical multiple-interaction situation are spectacular. The popular conception of the unreliability of rumor is probably derived from situations such as this. The topic of the rumor activity was a rape-slaying, its villain, and its consequences. Very little reliable information had been published about the slaying, and the killer was still at large. According to Allen D. Grimshaw, who witnessed the situation, people went "shopping" for rumors and trading rumors in bars and other public meeting places. Some people would go from table to table in bars giving and receiving the latest rumors. (38) Peterson and Gist report seventy-one different rumors, not counting minor variations. (39)

I know of no experiments that include multiple interaction and a transmission set. Multiple interaction should keep the "noise" level down, and the information level should not decline so rapidly as it did in the Allport and Postman experiments. The second interaction should remind the individual of information he had forgotten, but unless he could "fund" it with background knowledge it could not become more accurate. This is an interesting possibility for research.

To examine the influence of being critical and being in a single- or multiple-interaction setting, I re-analyzed data from two studies. The first of these was a pretest of Project Revere directed by Stuart Carter Dodd at the Washington Public Opinion Laboratory in July of 1951. In this study, a message (Gold Shield Coffee—Good as Gold) was started with 17 per cent of the residents of Issaquah, Washington, on Monday, July 16. On Tuesday, July 17, an airplane passed over town and dropped 30,000 leaflets containing the first half of the slogan and informing the residents of the 305 occupied housing units that there was a slogan known to one person in five in the town. The leaflet also stated that if the slogan was known when the coffee company representative called, the respondent would receive a free pound of coffee. On Wednesday, July 18, an adult from almost every household in town was interviewed. Among the questions asked was, "Whom did you tell [the slogan]?" If any person was told the slogan by two or more of the respondents, or by one of the respondents and one coffee company representative, I took it to be multiple interaction. (40)

The diagram below represents one of forty-two different rumor networks found in Issaquah. In this network it is clear that there is both single and multiple interaction. Some of the nets were more simple and consisted of only two or three people, but the one illustrated was not the most complex. A number preceded by P indicates a person; a number preceded by N indicates a network. A box surrounds the other networks in which the person is also involved. An arrow indicates that the slogan was transmitted from and to the people it joins, with the consequence that it became available to the people in the other networks of which the recipient was a member. ([Graphic of an actual rumor network](#))

There are three reasons for thinking that the people of Issaquah in the main had a "critical set" toward the slogan. First, there was the information and authority of those who heard the slogan from the coffee company representative and could show their pound of coffee. Second, from the leaflet drop (nearly a hundred leaflets per home), the entire community knew the first half of the slogan. Third, with one-sixth of the community knowing the precise slogan and interacting in regular channels, it is unlikely that a deviant form would go far without being corrected by someone who had been in direct contact with the source of the slogan. According to my hypothesis, with critical set and multiple interaction, accuracy should increase as the rumor is transmitted, and, indeed, as Table 3 demonstrates, no matter what indicator is chosen, those who had interacted with more than one person were more accurate.

TABLE 3 EFFECT OF MULTIPLE INTERACTION ON ACCURACY OF RUMOR TRANSMISSION IN A CRITICAL SET SITUATION (in per cent)

Degree of Accuracy	Single Interaction (N=99)	Multiple Interaction (N=18)
Slogan totally correct	66%	83%
Linguistic assimilation*	18%**	6%
"Noise" in slogan***	19%	11%

* These and other indicators were coded directly from the original questionnaires. Linguistic assimilation usually consisted of inserting the words "is," "is as," "as," or "it's" in the center of the slogan.

** Three cases could not be coded for their assimilation to the respondents' linguistic habits because they contained no words from the original slogan. Therefore, the base for the single-interaction linguistic assimilation cell is 96.

*** Noise consists of words not in the original that were added to the slogan by the respondents. Some linguistic assimilation is also noise.

The other study, a public opinion survey about the Eichmann trial, offers further confirmation of the theory. (41) It also suggests that the variables isolated are relevant for the sociology of mass communications. In this study the information came in the first instance from the mass media rather than from interpersonal contact. Thus it was possible to be knowledgeable about the trial without having talked to anyone. One of the questions asked in the survey determined the number of people the respondent talked to about the trial, which yields a measure of multiple interaction. The indicator of criticalness or uncriticalness was response given to two questions about two nonexistent news events. (42) If the respondent said he had heard about neither of them, this was taken as a critical attitude toward news events. If he claimed to have heard of both nonexistent events, this was taken as an uncritical attitude toward news events. The measure of accuracy is knowledge about the facts of the trial demonstrated on four information test questions. (43) False knowledge was penalized, as was a lack of knowledge, but there was little false information about; if people did not know the answers to the questions they either guessed or said they did not know. This being the case, the uncritical person was not in a position to add untrue items to his collection and multiple interaction produced no significant variation. (The cell with six cases is too small to take into consideration.) The important finding of Table 4 is that the more people a critical person talked to, the higher was the accuracy of his knowledge. If previous research is correct, critical people probably talk to critical people. (44) Although it must be noted that Table 4 is not an exact test of the theory detailed in Table I, it has many close analogies. The two variables, criticalness and interactions, cause exactly the same variation in accuracy of remembering a mass media factual communication as they cause in remembering rumors. This, I feel, makes this theory more a theory of verbal communication than just one of rumor transmission.

TABLE 4 INTERACTION AND ORIENTATION AND THEIR EFFECT ON LEVEL OF KNOWLEDGE ABOUT THE EICHMANN TRIAL

Number of People Talked to about Trial	Critical Set	Uncritical Set

No one – media only: Percent with high knowledge	45%	52%
Percent with low knowledge	55%	48%
Total	100% (97)	100% (27)
One person (single interaction): Percent with high knowledge	66%	56%
Percent with low knowledge	34%	44%
Total	100% (38)	100% (16)
Two or more persons (multiple interaction): Percent with high knowledge	82%	33%
Percent with low knowledge	18%	67%
Total	100% (33)	100% (6)

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(1) G. W. Allport and L. Postman, *The Psychology of Rumor*, New York, Holt, 1947, p. 153.

(2) W. A. Peterson and N. P. Gist, "Rumor and Public Opinion," *American Journal of Sociology*, Vol. 57, 1951, p. 165.

(3) T. Caplow, "Rumors in War," *Social Forces*, Vol. 25, 1947, p. 302.

(4) R. A. Bauer and D. B. Gleicher, "Word-of-mouth Communication in the Soviet Union," *Public Opinion Quarterly*, Vol. 17, 1953, p. 307.

(5) R. H. Turner and L. M. Killian, in *Collective Behavior* (Prentice-Hall, Englewood Cliffs, N.J., 1957, p. 60), state in their definition that rumor is "the building up of a collectively sanctioned version of what has happened in a situation which lacks cognitive clarity." This is a common idea in definitions of rumor, but I feel that it is unduly restrictive, confining rumor as it does to collective behavior situations.

(6) See Hadley Cantril, *The Invasion from Mars*, Princeton, N.J., Princeton University Press, 1952.

(7) Caplow, *op. cit.*, p. 300. Joseph T. Klapper, in *The Effects of Mass Communication* (New York, Free Press of Glencoe, 1960, p. 101), based on Carl I. Hovland's work, suggests that a favorable image of the source facilitates belief. Bauer points out, "Reliance on rumor as a supplement to and corrective for the official media implies a high degree of confidence in one's sources of rumor . . ." (*op. cit.*, p. 307).

(8) Although this could be seen as a part of the Allport and Postman (*op. cit.*, pp. 75-98) process of "leveling" and "sharpening," there is a salient difference. Leveling, in Allport and Postman's terminology, refers to the elimination of details, any details. Sharpening is an emphasis of some details. The two are reciprocal. If a rumor starts with twenty details and ends with five, they would say that fifteen were leveled and five were sharpened. This is clearly an artifact of the laboratory situation in which the original rumor had no "true" or "important" details—just a collection of observations.

(9) Caplow states, "As a rumor moved through channels false information was perceived and eliminated . . ." (*op. cit.*, p. 301). Bauer's study (*op. cit.*) implies this pattern for the Soviet intelligentsia, though it is not explicit.

(10) S. Schachter and H. Burdick, "A Field Experiment in Rumor Transmission and Distortion," *Journal of Abnormal and Social Psychology*, Vol. 50, 1955, p. 370.

(11) H. Taylor Buckner, "Deviant-Group Organizations," Berkeley, University of California, 1964, pp. 53-103, Master's thesis, mimeographed.

(12) Allport and Postman, *op. cit.*, pp. 1-2.

(13) Francisco Valdes Deluis, in "Psico-sociologia del Rumor," *Revista Mexicana de Sociologia* ["Psycho-sociology of Rumor," *Mexican Review of Sociology*], Vol. 22, No. 1, January-April, 1960, p. 79, says: ". . . remember the psychotensional state that prevailed in the Republic, particularly in the Federal District, in the last months of the ruizcortinista regime, made use of tremendously by unscrupulous agitators."

(14) Peterson and Gist, *op. cit.*, p. 163.

(15) Cantril, *op. cit.*, p. 192.

(16) Klapper, *op. cit.*, p. 95.

(17) This is to a certain extent comparable to Allport and Postman's concept of "assimilation." Their formulation, however, did not contain the possibility of creating a new rumor. Allport and Postman, *op. cit.*, pp. 99-115.

(18) A number of bizarre new rumors somewhat linked to the main topic of rumor have been reported by Schachter and Burdick, *op. cit.*, and Peterson and Gist, *op. cit.* The number and variety of these rumors clearly indicate that people were making up rumors to fit the situation, not distorting a single rumor. (They also distorted the original rumors in Peterson and Gist's study.) At this point, the theoretical formulations for the generation of rumor developed by Festinger and Cartwright et al. may be appropriate. Their three principles are: "The principle of external control: rumors will tend to arise in situations where developments especially relevant to people's existence lie largely outside their own control" (p. 483). "The principle of cognitive unclarity: rumors will tend to arise in situations where cognitive regions especially relevant to immediate behavior are largely unstructured" (p. 484). (The two points seem to be derived from Malinowski's theory of magic.) "The principle of integrative explanation: once the central theme of a rumor is accepted there will be a tendency to reorganize and to distort items so as to be consistent with the central theme" (p. 485). (Emphasis removed throughout.) L. Festinger, D. Cartwright et al. "A Study of Rumor: Its Origin and Spread," *Human Relations*, 1948, pp. 464-485.

(19) Kurt Lang and Gladys Engel Lang, *Collective Dynamics*, New York, Crowell, 1961, p. 67.

(20) *Ibid.*, p. 58.

(21) If the experimental subject matter is emotionally charged for the individual, the experimental situation may not be exactly like a noisy telephone line. An experiment using the Allport and Postman model but with "ego involvement" as an experimental variable found that subjects are more accurate if they are ego-involved with the rumor. T. M. Higham, "The Experimental Study of the Transmission of Rumour," *British Journal of Psychology*, Vol. 42, 1951, pp. 42-55.

(22) Allport and Postman, *op. cit.*, pp. 75-115.

(23) *Ibid.*

(24) F. C. Bartlett, *Remembering*, London, Cambridge University Press, 1932, pp. 172-175.

(25) Allport and Postman, *op. cit.*, *passim*.

(26) *Ibid.*

(27) Quoted in W. Wesley Peterson, "Error-correcting Codes," *Scientific American*, Vol.206, No. 2, February 1962, p. 98.

(28) William N. McPhee (*Formal Theories of Mass Behavior*, New York, Free Press of Glencoe, 1963, p.82) suggests this happens with voters.

(29) *Ibid.*, p. 81

(30) Expanding on Higham's finding that more involved people remembered the rumor better in a laboratory situation, it is logical to assume that involvement will be mediated by the "set" an individual has to a rumor. If an individual is highly involved and has a critical set he will tend to be hyper-critical. An example of this we've mentioned by Caplow. The soldiers were so afraid of the false hopes which belief that the war had ended would arouse that, when the war actually did end, they refused to believe it. It was several days after authoritative sources had announced it before it was accepted.

If a person is highly involved and has an uncritical set the effect will be to produce more distortion faster. He will seize on any information that comes along and shape it to his needs.

In a multiple-interaction setting, high involvement of the individuals with the topic of the rumor will tend to have a multiplier effect on the effects caused by the interaction. In the extreme case, the individual will refuse to believe anything, or if he is uncritical, he will believe anything.

(31) Sometimes there are two groups, one critical and one uncritical, with regard to the same rumor in the same situation. So long as the groups do not interact, they will go their separate paths. When they do interact, the net result is probably closer to the critical group's result, as the members of the critical group should be able to bring their critical standards to the attention of the uncritical.

(32) As a consequence of their definition of rumor as "milling in its primarily verbal aspect," Turner and Killian (*op. cit.*, p. 64) have largely restricted themselves to analyzing rumor in close groups, where it is often spectacular.

(33) Graham R. Taylor and Charles S. Johnson, *The Negro in Chicago*, Chicago, University of Chicago Press, 1922.

(34) Caplow, *op. cit.*, p. 301.

(35) *Ibid.*, P. 302.

(36) Schachter and Burdick, *op. cit.*, p. 370.

(37) Peterson and Gist, *op. cit.*

(38) Personal communication from Allen D. Grimshaw.

(39) Peterson and Gist, *op. cit.*, pp. 163-164. Another study that fits this pattern is contained in Festinger and Cartwright, *op. cit.*, but since the data were collected six months after the rumor I consider it unreliable. It was, however, in a multiple-interaction uncritical context, and the rumor did grow and become distorted.

(40) I did not use the question "Who told you the slogan?" because many times this was a child. By using the criteria I did, I made sure that only adult-to-adult contact would be considered. I am indebted to S. C. Dodd for permission to use this study, as well as to Melvin De Fleur, with whom I first worked on this study.

(41) This was a survey on which I worked at the Survey Research Center, University of California at Berkeley.

(42) Buried in a list of nine news items, seven of which were true and widely recognized, were two nonexistent events, "The revolution in Uruguay," and "The Bradley kidnapping case." People who got other serious news events right tended to say they had heard of the revolution, and people who got nonserious events right tended to say they had heard of Bradley, so there was no cosmopolitan-local bias.

(43) The four questions were: (1) "Do you know whether Eichmann was a Communist, a Nazi, or a Jew?" (2) "Do you happen to remember in what country Eichmann was arrested?" (3) "And what country arrested him?" (4) "An official estimate has been made of the number of Jews killed by the Nazis before and during World War II. Would you please look at this card and tell me which number comes closest to this official estimate? a. Ten thousand or less, b. one hundred thousand, c. five hundred thousand, d. one million, e. two million, f. four million, g. six million, h. eight million, i. ten million." The scoring was 1 point for each correct answer, so the scores ranged from 0 to 4. "High knowledge" is a score of a, 3, or 4. The knowledge variable is used extensively in the forthcoming book by Charles Y. Glock, Gertrude Jaeger, and Joe L. Spaeth, tentatively entitled *The Eichmann Trial and Public Opinion*, scheduled for publication by Harper and Row.

(44) Klapper (*op. cit.*, p. 36) notes that most political discussion goes on among people who are like one another in political persuasion, friendship, age, occupation.

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