

## POST-DISASTER RUMOR CHAINS: A CASE STUDY

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In the small Atlantic-coast Canadian city of Sydney, Nova Scotia, during a devastating windstorm [1], debris from a rooftop flew across the street and shattered the front window of the home of Mr. and Mrs. Ronald Mill.\* The flying glass from the window struck the Mill's two-year-old daughter, Debbie, leaving her dazed and bleeding from the head though not badly hurt (she required two stitches in her forehead). But, within a matter of hours, rumors had spread in Sydney, both among those who knew her or her parents and among those who did not, that Debbie Mill was dead.

In the summer 1974 issue of the *Journal of Communication*, Ralph Rosnow summed up the current state of knowledge about rumors, then issued a challenge [2]. He said there are significant questions yet unanswered about rumors, among them questions about the personality co-ordinates of rumor-mongering and the attitudes and orientations of people who spread rumors. This brief study – of the spread of one rumor, the rumor about Debbie Mill's death – is a partial reply to Professor Rosnow's challenge. It is a first report of the anatomy of a particular rumor. It provides initial information about the social and economic characteristics of those who spread it.

\*The actual name has been altered for this article (Ed.).

The six-member research team that collected this data was not in Sydney by chance. The team was flown into the community 24 hours after the storm struck the community specifically to examine the patterns of communication [3]. The Sydney study is part of a continuing one financed by two Canadian government agencies: the Defence Research Board and Emergency Planning Canada. Three members of the team had been involved less than a year earlier in the successful tracing of news as far as ten stages across another community in crisis [4]. But the tracing of the Debbie Mill rumor – though rumor tracing is one of the team's long-term objectives [5] – was at least partly accidental and for that reason the data is not as clear as it might be otherwise.

The team is trying to examine the effectiveness of communications systems in crisis [6]. It is doing this by using a sample to acquire data about individual information sources, then tracing the flow of information from persons in the sample person-to-person to the original source. The technique involved is simply that of detective work: if a contact cannot be identified by name then the team members begin an exhaustive search for the contact. Usually this search is successful: in an earlier study 73 different interpersonal communication chains were traced to their

point of origin [7]. Over 100 chains were traced in a more recent study.

In some ways, the situation in Sydney was ideal for a crisis communications study. The power system had gone off, leaving the community with one surviving radio station. The police radio system had been damaged and knocked off the air. The phone system was partly knocked out, giving reduced service. An entirely new communications system involving citizens' band radio and some hand-held police radios had to be created to serve the city's needs.

In other ways, the situation was disappointing from a research point of view. There had been no warning of the storm from any source. There was no one focus of interest. The team found it hard to analyze interpersonal communications patterns because they were so diffuse. The only thing that did emerge in a small test sample was some evidence that the rumor about Debbie Mill had spread to some persons in the community but not to others. (Even this finding is a bit suspect: the question asked was, "thinking back, did anything you heard about the storm turn out to be wrong?" Some persons may have *believed* the story of Debbie's death and, therefore, answered "no".)

Because of its interest in rumors, the team decided to attempt to track down the source of the Mill rumor — a rumor which had appeared four times in a small sample of 60 persons. Three of those tracing attempts proved abortive although they were interesting:

- a person in the sample worked in the fire department. He said he had heard the rumor at work. Others where he worked said they had heard it too but no-one could recall who mentioned it first.
- a person in the sample had heard it from her son. He had got it from a hitch-hiker. He recalled that the hitch-hiker had come from "two blocks over the pass", a specific location. A door-to-door canvas in that area failed to reveal the hitch-hiker.

- a person in the sample had heard it from a neighbor's child. The child had heard it from a friend of his father. The father was a fireman as was the friend. This trail led to the fire station. (This was a different fire station than the one mentioned above.) Once again everyone there had heard the rumor. Once again no-one could recall where it came from first.

The fourth trace proved to be more productive. It led — as the step-by-step information below shows — to what appears to be the source of the rumor:

1. The person in the sample had heard the story from a friend, a girl who lived just a block or so away from her.
2. That friend had heard from another friend, a person who lived still another block away.
3. That friend had heard — this time by telephone — from a lady she knew. The lady lived just a few doors from Debbie Mill, (although she had phoned from the hotel to which she had been evacuated).

*In all three cases, the women had heard the child's name and that she was dead. They also heard that the child had been cut in the stomach by flying glass.*

4. The woman who made the telephone call, however, had not originally heard the Mill child mentioned. While at supper at the hotel, she had overheard people at the next table talking about a child being killed by flying glass. She, herself, had been at the hospital when the Mill child arrived. Further, she had been talking to her husband who had seen the child hit and had seen her carried by her father to the waiting police car. When the lady and her husband heard a child had died they immediately assumed it was Debbie Mill.

*(From then on, the couple and all the evacuees at the hotel with them assumed the Mill child was dead. When Mr. and Mrs. Mill arrived at the hotel the next day, they were greeted with condolences for the death of their daughter.)*

5. The people talking at the next table included a married couple. The woman was telling some friends she had heard that a child had been killed. She knew the street — MacDonald Crescent (the street where the child and the couple mentioned above lived) — but she did not know the child's name. She had heard the story from her husband when he arrived at a parish hall where she had been evacuated.
6. The woman's husband had heard the news from a neighbor as he and the neighbor chatted with police as they helped evacuate MacDonald Crescent (the street worst hit by the storm). The man had heard only that some child was killed but he said the story immediately took top priority in his mind. "I thought it was pretty terrible," he said. He told his wife as soon as he got to the parish centre.
7. The neighbor had not actually told him that a child had been killed but that he had heard that a child had been killed. He was not passing it on as confirmed news but as gossip. (Later he heard the story which included Debbie Mill's name: he passed that on, too.) The neighbor's source was another neighbor, a man who also helped evacuate the stricken area.
8. This final confirmed source was a man who had been driving people to safety during the storm. At one point as he made a detour he was told by a man — a person he could not identify — that a child had been hit by debris and killed. Another person later told him the child was not dead. He reported what he had heard anyway. (When he was interviewed one week later, he could recall mentioning the incident to half a dozen others, and he still believed it — he asked the interviewers if the story was true.)

The description of this rumor probably would stop there but for one coincidence: the place where the man (no.8) had stopped his truck and first heard the rumor was almost

exactly "two blocks over the pass" — the area where the hitch-hiker had picked up the same story. It was also one block from the place where the police car had been when it got the radio call to take the child to hospital. At the time of the radio message, one of the policemen had been in a house making a phone call. His partner had been outside, his radio on loud, his car door open. There were bystanders all round. Some of the bystanders heard the emergency call, heard the reports of flying glass, watched the policeman run in for his partner and speed off, and put together the story of the child's probable death. One of them told half a dozen others — and, presumably, one of these others told the man who told the truck driver (no.8 above).

These facts were not as easily discovered as it might appear. The presence of the police car was discovered only because of the area-wide study of storm problems. The fact that the car took the call and that its radio was on loud and its doors open was first deduced, then confirmed in separate interviews with the two police officers, the dispatcher, and (eventually) with some bystanders. The bystanders were located only after extensive door-to-door canvassing.

In short, the rumor about the death of Debbie Mill had an official origin: a call by her mother to the police and a subsequent police radio call (this was before the radio system failed) for a police car to take her to hospital.

(For a while the team thought it had even stronger confirmation that this was the source: one of the two policemen had talked to the fireman who had been the source for the boy mentioned earlier. But the policeman said he had not talked about the incident to the fireman; in fact, the fireman had already heard and had asked him about it when they first met and he had not provided any information.)

The exact connection between the police car, the bystanders and the truck driver has not been located. Even without it, however, it

would appear to be enough data to examine some of the earlier hypotheses about rumors, specifically the hypotheses by Allport and Postman that rumors are levelled, sharpened and assimilated as they move along [8]. There is apparently support for all three ideas:

1. There is clearly evidence of assimilation – of the adding of more detail. This was done by the woman who overheard others talking at the hotel.
2. There was evidence of sharpening – of the focus on the alleged fact the child was hit in the stomach by flying glass.
3. There is some evidence of levelling – of the elimination of some details. The passing of the story from no.8 to 7 to 6 to 5 clearly involves some elimination of detail. The story becomes simply one that a child is dead.

But the material available here goes beyond data about what was said: there is also data on who said it – the research team gathered socio-economic data on each person in the chain described above. This data shows that, on the whole, the information was passed between persons who knew each other and who were mainly of the same socio-economic status. The pattern of communications rarely even broke more than one of the barriers of age or sex or religion or education or occupation or marital status. The chain is outlined again with data about the “who” instead of the “what” [9]:

- 8: Male, Roman Catholic, 41–50, married, English-speaking, elementary education, truck-driver;
- 7: Male, Protestant, 31–40, married, English-speaking, elementary education, truck driver;
- 6: Male, Protestant, 31–40, married, English-speaking, some high school education, wholesaler;
- 5: Female (wife of no.6), Protestant, 31–40, married, English-speaking, some high school education, housewife;
- 4: Female, Roman Catholic, 31–40, married, English-speaking, high school education, teacher;

3: Female, Roman Catholic, 21–30, single, English-speaking, high school education, clerk;

2: Female, Roman Catholic, 19, single, English-speaking, high school education, clerk;

1: Female, Roman Catholic, 21–30, single, English-speaking, some high school education, unemployed.

The evidence seems clear that only in the case of no.5 to no.4 (where the overhearing was involved) was any significant amount of break in socio-economic patterns involved.

The research team, incidentally, is trying to establish a means of measuring compatibility between persons in chains. Such a measure is necessary for detailed analysis of the more complicated news chains. One method is to score each variant – different age bracket, different religion, different sex, different marital status, different educational level – as a value of one. Given random distribution of such relationships, the chance of all characteristics being the same is almost one in 500; the probability of only one or two being different is also low. In this case, however, the average deviation is about 2.1 and five of the relationships have two or less differences between those who talked to each other. The person-to-person transmission of this rumor was carried by persons very like each other and far more alike than randomness would allow.

There is one other question that might be asked: what makes a person tell others about a rumor? Is it because the matter is important to him or her? The Sydney data provides little help in answering this question. Each of the persons in the chain was asked how they appraised the storm information (extremely important, pretty important, some importance, no importance) and how many persons they told who had not already heard. The answers cover the entire range:

- 8: Extremely important, told 8 others;
- 7: Some importance, told 6 others;

- 6: Extremely important, told at least 9 others;
- 5: Some importance, told no one (she was, in fact, overheard talking about it);
- 4: Extremely important, told 1 other;
- 3: Some importance, told 9 others;
- 2: Some importance, told 6 others;
- 1: No importance, told no one.

It might appear that people are, if anything, more inclined to spread rumors they do not consider important to them.

It would be presumptuous to draw major conclusions from the study of one rumor. However, the actual tracing of a rumor is so rare an occurrence it does seem useful to state a number of hypotheses, some of which suggest findings of previous researchers:

1. Rumors are normally passed between those of the same socio-economic status [10];
2. Rumor-passers are not concerned about the importance of the information to them [11];
3. Rumors are – as Allport and Postman postulated – levelled, sharpened and assimilated [12];
4. Rumors do sometimes have a specific source: they are not merely created to fill a vacuum;
5. Rumors rarely break sex lines except where persons in the same families are involved;
6. Rumors are normally not carried across language barriers.

Finally, it should be noted – as some research suggests [13] – that the story passing through the rumor-chain was essentially accurate: while Debbie Mill was not dead, it was she who was injured, and she had been struck by flying glass.

## NOTES

- 1 The storm and its effects are described in two places: Jim Jefferson and T. Joseph Scanlon, *The Sydney/Big Storm Study*, (Ottawa, 1974); T. Joseph Scanlon, "Sydney - Something to Blow About", *Emergency Planning Digest*, December, 1970, pp. 10–13.
- 2 Rosnow, Ralph C., "On Rumor", *Journal of Communication*, 24, 1974, pp. 26–38.
- 3 There are a number of background studies concerning disaster research. The model is drawn from Alfred D. Biderman, "Anticipatory Studies and Stand-By Research",

- in Raymond A. Bauer, ed., *Social Indicators* (Cambridge, 1966). Thee team format at Carleton is described in T. Joseph Scanlon, *An E.C.R.U. Manual*, (Ottawa, 1975), 73 pp.
- 4 T. Joseph Scanlon, *The North Bay/Slater Study*, (Ottawa, 1974).
- 5 There are a great many studies of rumor:
  - Allport, F.W. and M. Lepkin, "Wartime Rumor of Waste and Special Privilege: Why Some People Believe Them", *Journal of Behavioral and Social Psychology*, 40, 1945, pp. 3–36.
  - Caplow, T., "Rumors in War", *Social Forces*, 25, 1947, pp. 298–302.
  - Danzig, E.R., P.W. Thayer and L.R. Gallenter, "The Effects of a Threatening Rumor on a Disaster-Stricken Community", Publication 517, National Academy of Sciences - National Research Council (Washington, 1958).
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  - Prasad, J., "A Comparative Study of Rumors and Reports of Earthquakes", *British Journal of Psychology*, 47, 1950, pp. 129–144.
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  - Sinha, D., "Behaviour in a Catastrophic Situation: A Psychological Study of Reports and Rumours", *British Journal of Psychology*, 43, 1952, pp. 200–209.
- 6 The team's design is described in T. Joseph Scanlon, Brian Taylor and Jack Graham, "The Development of a Standby Research Capacity at Carleton University". Paper presented to the World Congress of Sociology, Toronto, 1974.
- 7 *The North Bay/Slater Study*, op. cit.
- 8 Allport, F.W. and L.J. Postman, *The Psychology of Rumor*, (New York, 1940). Another study suggests reliability is higher if the message is more important to those passing it on. See T.M. Higham, "The Experimental Study of The Transmission of Rumor", *Interpersonal Communication: Survey and Studies*, New York, 1968, pp. 273–291.
- 9 Other persons have tried to look at similar rumors. See O.M. Larsen, "Rumors in a Disaster", *Journal of Communication*, 4, 1954, pp. 111–123.
- 10 *The North Bay/Slater Study*, op. cit.
- 11 Rosnow, op. cit., p. 35.
- 12 Allport and Postman, op. cit.
- 13 See T. Caplow and T.M. Higham, op. cit.

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