II. THE PUBLIC

1. The new villagers and the urban poor

This title is used to suggest the complex, contradictory and rapidly-changing nature of human society, and the problems of maintaining public information and education programmes to match this variety.

The decade 1963-73 produced spectacular improvements in communication in the developing world. According to UNESCO statistics, about 100 million of the 144 million radios in Africa, Asia and Latin America were added in this decade. The number of radio sets trebled in Africa, quadrupled in Asia and doubled in Latin America. In the same period, the numbers of television sets rose by five times in Africa and Latin America, and nine times in Asia.[12/]

Educational enrollment in all levels of school rose sharply during the nineteen-fifties and again in the nineteen-sixties: from 9 million to 37 million in Africa; from 53 million to 181 million in Asia and from 17 million to 56 million in Latin America. Perhaps as a combined result of this schooling and increased mass media use, the percentage of literate adults increased in all regions, although the population increase was so great that there were actually more illiterate adults at the end of this period than at the beginning.

Illiteracy in Thailand is 67 percent and in the Philippines 28 percent. According to a recent report to the East-West Center in Hawaii:

> "Many people, particularly those in the rural areas, still generally follow traditional folkways and subscribe to age-old values and aspirations which generally work against development. Some of these values held by rural folk in traditional villages are kinship orientation of

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12/ UNESCO, Statistical Yearbook for 1963, 1966 and 1973; also World Communication, 1973, UNESCO, Paris, France.

> traditional families, the patriarchal character of the family with rigid and demanding role prescriptions for members, and the subservience of individuals to group norms, supernatural and superstitious beliefs and a fatalistic attitude toward life." 13/

The problem for public information and education policy-makers and programmers is to ascertain where these various audiences are, how people normally receive and accept information and how this information can best be used for dissemination before or during a disaster situation.

2. Cultural attitudes and cross-cultural research

The way people communicate and seek information in disasters is of great interest to public information practitioners. Unfortunately, the greatest number of major disasters occur in developing countries, while the greatest amount of disaster-related research has taken place in Europe and North America. In disaster literature there is a dearth of the type of information required in field reports, but these are frequently confidential government documents which would only be made available in due course.

We need to know more about human experiences in disasters in many countries, and to be able to compare these experiences. This kind of information could lead to the development of more effective warning systems. It is probable that the significant difference among societies is not so much how people react to disasters but rather how they organise their response. A comparison of disasters in the United States and Japan has shown massive convergence of American officials in the impact area, while in Japan convergence was limited and selective. A study of two

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13/ Feliciano, Gloria D., "Communication and Development in Southeast Asia, 1964-1974," in Communication and Change: the Last Ten Years — and the Next, Wilbur Schramm and Daniel Lerner (eds.), University Press of Hawaii, Honolulu, 1976.

cities which face each other across the border between the United States and Mexico, both of which were simultaneously flooded, shows clear differences in value systems which affected decision-making and organisational structure. 14/

A disaster study on typhoons in the Caroline Islands outlines how communities and individuals prepare for such a 'supernatural' happening. A good deal of material is beginning to emerge from the Managua, Nicaragua earthquake, such as a recent cross-cultural study on the persistent effects of disasters on daily activities.15/ There have been a few other cross-cultural studies, for example, a comparison of the degree of government centralisation and the differences this made in organisational behaviour in Italy, Japan and the United States; cultural adaptation in various countries, including volcanic New Guinea; a project in the Bahamas and a review of the Sahelian experience.

These studies have led to various theoretical attempts to group countries along various dimensions, through anticipating institutional involvement in three broad socio-cultural areas designated 'Latin', 'Eastern' and 'Western', or ,for example, the postulation of a typology of societies and how each might respond to sudden disaster. 16/

14/ Clifford, Roy A., The Rio Grande Flood: a Comparative Study of Border Communication in Disaster, monograph, Michigan State University,E. Lansing, Michigan, USA, published by the Committee on Disaster Studies, National Academy of Sciences, National Research Council, Washington, D.C., USA, 1956.

15/ Trainer, Patricia and Bolin, Robert, "Persistent Effects of Disasters on Daily Activity: a Cross-cultural Comparison", Mass Emergencies, vol.1 no. 4, October 1976.

16/ One of the most interesting and useful contributions is Natural Hazards: Local, National, Global, by Gilbert F. White (ed.).Oxford University Press, United Kingdom 1974. A forthcoming companion volume, Environment and Hazard, looks at policy implications. The volume on natural hazards brings together experiences in dealing with hazards in selected areas around the world, following detailed studies in 23 countries under a programme of the International Geographical Union.

There is considerable material on cultural attitudes, particularly perception of the hazard. For instance, most of the persons in the sample drawn from coastal areas of Bangladesh believed that there would be further devastating tropical cyclones in the near future, but most said that they were going to continue living in the same area. Similarly, most of those in the sample drawn from the Ganga floodplains in India regarded annual flooding as a fact of life, and were prepared to accept the loss of life and property that it caused. Farmers in drought-ridden northwest Nigeria see themselves at the mercy of the elements and their chief response is to pray. Somewhat similar reactions were found in another study of residents of San Francisco, USA, who refused to talk about the possibility of an earthquake, and in the reluctance of individuals to take out hazard insurance in the United States.

The public information official, however, does not have a great deal to guide him in seeking information on cultural attitudes and behaviour under hazardous or disastrous conditions. It should be one of his tasks to use whatever national, regional or local resources he has to answer these questions to help him draw up his own information programme.

3. Human behaviour in disasters

An enormous amount of sociological, psychological and organisational research into human behaviour in disasters has been carried out during the past two decades. This kind of material is potentially very useful for public information people whose business it is to inform, and sometimes persuade, the mass audience.

Most of the material comes from five major sources: National Opinion Research Centre, University of Chicago (1950-54); Disaster Research Group (formerly the Committee on Disaster Studies 1952-57) of the National Academy of Sciences — National Research Council, Washington, D.C. (1957-63); Disaster Research Center, The Ohio State University (1963 onwards); Programme of Collaborative Research on Natural Hazards, University of Chicago, Clark University and the University of Toronto (1967-73); and Research Programme

on Technology, Environment and Man, Institute of Behavioural Science, University of Colorado, 1970 onwards.

For most readers this is largely North American experience. It seems very likely that there are parallels to human behaviour under stress in most countries, but there has not been sufficient cross-cultural research to tell definitively. However, there are a number of findings which are important for public information work, and it is worth pointing them out in the hope that they can be confirmed under field conditions in other countries.

An extremely useful and comprehensive summary of a good deal of this research is Human Systems in Extreme Environments: a Sociological Perspective, issued in 1975. [17] The literature in the nineteen-sixties was reviewed in somewhat different fashion. [18] Of course, social science literature is only one source of knowledge about human response to disasters. The question has been tackled by journalists, novelists, film-makers and historians for many decades, as well as in reports prepared by public and private organisations involved in such disasters.

The above-mentioned summary contains four sections of particular interest to public information policy-makers: levels of preparedness; perceptions; warnings; and responses to impact. (The section on warnings has been incorporated into chapters III and V of this volume.)

A very early finding, almost twenty-five years ago, is still one of the most important in the whole area of human behaviour in disasters. [19]

17/ Mileti, Dennis; Drabek, T.E.; and Haas, J. Eugene. Institute of Behavioural Scence, University of Colorado, Boulder, Colorado, USA, 1975.

18/ Barton, Allen H., Social Organisation under Stress, disaster study no. 17, Disaster Research Group, National Academy of Sciences, Washington, USA, 1963. Dynes, Russell R., The Comparative Study of Disaster: a Social Organisational Approach, preliminary paper no. 19, Disaster Research Center, The Ohio State University, Columbus, Ohio, USA.

19/ Rosow, Irving, Authority in Emergencies : Four Tornado Communities in 1953, Disaster Research Center, The Ohio State University, Columbus, Ohio, USA, 1977.

It is that emergencies intensify people's normal definitions and values, their established responses and the salience of familiar reference groups and institutions. These customary frames of reference guide our conceptions and behaviour in disasters. The normal authority system thereby becomes a foundation for crisis structure. Disaster needs are perceived essentially in terms of normal roles. Thus, there is some continuity from normal to crisis situations.

It is difficult to hold on to this finding during disasters for many myths are held about how people will behave in crises. Unfortunately, such pre-conceptions have influenced public policies and actions.[20/] How this process works has been clearly shown.

One author suggests six misconceptions about human behaviour under the impact of disaster: [21/]

(1) People will probably panic when faced with great threat or danger, often in the form of wild flight, with no consideration for others.

(2) If threatened individuals do not run they will become disorganised, hysterical and, at best, uncertain and erratic.

(3) Others are immobilised by major crises and the impact will leave large numbers of people dazed and traumatised;

(4) Because of these and other handicaps, local organisations will not be able to perform effectively in handling emergency tasks.

(5) This personal and social disorganisation provides the conditions for anti-social behaviour, such as looting;

(6) Community morale becomes very low in disaster-stricken areas and there is a reluctance to re-open businesses and industry. These misconceptions, if believed, have policy implications:

20/ See Volume II: Social and Sociological Aspects, Disaster Prevention and Mitigation, UNDRO. (in preparation).

21/ Quarantelli, E.L., "Human Behaviour in Disaster", Proceedings of the Conference to Survive Disaster, IIT Research Institute, Chicago, Ill., USA, 1973.

(1) The impression that people panic leads to considerable caution in the formulation and issuing of warning messages. Officials might feel that warnings should be withheld until the last possible moment, if indeed they are to be issued at all.

(2) The supposition that response will be unco-ordinated and disorganised leads to a belief in the need for strong leadership and centralised control. Attempts are made to impose an authoritarian structure on operational activities.

(3) The notion that people are shocked and dazed contributes to efforts to provide immediate emergency help from outside the area, and the feeling that this assistance is not only mandatory but that delays will compound misery and suffering.

(4) The feeling that individuals in organisations will be disorganised, or put their own personal or family needs first, suggests that local organisations will not be able to function effectively and that there should be back-up staffing, or that outside organisations will need to help.

(5) The presumed surfacing of anti-social behaviour suggests special attention to security measures over and above new tasks created by the disaster, with the forces so engaged being as large and conspicuous as possible in order to reinforce law and order.

(6) Since it is believed that morale is low, steps might be taken to assure residents that there is a future for them through visits of important public officials from outside the stricken area. There may be well-publicized symbolic gestures to reassure the inhabitants that all is well.

What do we find in reality about typical human behaviour in disasters, as compared to the above pre-conceptions?

(1) Most people do not panic. People often stay in a potentially-threatening area rather than move out of it. Research studies do not bear out media reports of thousands fleeing these areas. There is also a difference between panic and flight behaviour (which includes taking care of others). Panic episodes are usually

localised and of short duration. Mutual aid seems to be a characteristic of disaster situations.

(2) Individuals will usually take whatever protective measures they can for themselves and their families. Moving out of the danger zone is obviously a rational way to behave. In general, behaviour under threat is not hysterical, although it may be uncertain because there is no absence of information.

(3) Most people are not immobilised by disaster. A form of shock reaction called 'disaster syndrome' has sometimes been observed, but it does not appear in large numbers of people and is usually only of short duration. In general, victims react in a positive manner and do not wait around for assistance from outsiders or organisational aid. Even in the most massive disasters, formal agencies appear to contact only a small fraction of the victims. People tend to turn first to family and friends, then to the various groups they belong to, or individuals in the community. Only afterwards do they seek help from official agencies.

(4) Local organisations are not usually overwhelmed by disasters. The amount of destruction in relation to local resources may be quite low. Most emergency organisations are able to function reasonably well although the demand on them is much higher than normal. There are very few instances of someone becoming incapacitated by the conflict of family vs. work, and most are able to make personal assessments and adjust to them.

(5) Reports of looting have been much exaggerated. There are certainly isolated cases of looting and other exploitative behaviour, such as selling food at inflated prices, but these appear to be exceptions. Times when martial law has had to be exercised are few and far between. In fact, there is usually a temporary reduction in the awareness of class differences in society during the disaster period, and this produces a lessening of personal conflict.

(6) Morale is not usually low in these communities. In the short-term there is usually an increase in collective morale. Non-victims always outnumber the victims, and suffering is not an isolated

experience in the disaster situation. There is usually a feeling of community participation lacking under more normal circumstances.

Once again, one has to remember that this assessment is based on a majority of North American research studies. Various Japanese studies suggest that terror-ridden mobs are certainly not fictional, and that it is possible to analyse various stages of panic behaviour. 22/ With this reservation what are the implications of this somewhat simplified description for public information planners?

One is that human behaviour does not appear to be a major problem during the impact period and in the early stages of recovery. In fact, it may be that individuals bear the brunt better than the operating agencies. Persons in disaster areas are often willing to help but it is rare for an organisation to know what to do with volunteers.

It may be a useful exercise for public information officers to ask themselves what their pre-conceptions are: about the nature of the society in which they live; about the way they think people will behave under stress; about the kinds of information people really need as against the kinds of information they get; about policies which have been put into practice which may be based on distrust, paternalism, self-seeking opportunism, elitism or perhaps ethnic or linguistic bias.

Have warning messages been withheld, or censored or written ambiguously because it was felt that the general public could not stand the shock? Have public information programmes been more concerned with the image of the organisation or government departments, or the person of the chief executive, than the task that really needs to be done? Has it been easier to transmit the statements of others than to discover the real situation?

22/ Kitao, Abe, Panic No Shinri (psychological study of panic), Kodansha Co., Tokyo, Japan, 1974 (in Japanese) and Daijishin ni Kansuru Kitakumin no Inshiki-Chosa Tokyo-To Kita-Kuyakusho (a survey about a major earthquake among the citizens of Kita borough, Tokyo), Tokyo, Japan (in Japanese).

4. Information convergence

In most disasters there occurs convergence, a movement towards the stricken area, or even towards the impact point within the area. This movement usually far outweighs the outward flow of those wishing to leave.

This convergence is of three types: personal convergence, the physical movement of people on foot or in some form of conveyance; material convergence, the physical movement of supplies and equipment; and informational convergence, the quest for information through the transmission of messages by word-of-mouth or telephone.

A major factor which contributes to convergence following a disaster is dramatic coverage by mass media, whether or not it is accurate. Such reporting arouses interest, anxiety and urgency, often in people who have no direct concerns.

There is also convergence within the area of the disaster, of all three types. Radio stations, in particular, are deluged with follow-up inquiries to news bulletins as well as with offers of aid. Information convergence on the scene is not restricted to telephone inquiries. Before, during and after the disaster there is a substantial change in the way communication takes place in the community. Informal interpersonal chains of communication form extremely rapidly throughout the community, usually starting from the scene of the event itself and passed on by word-of-mouth, or from hearing a news announcement over the radio. The informal news passed along this "grapevine" will probably be heard by more people — and more quickly — than the official announcements over loudspeakers, loud-hailers or in the mass media.

The presence of these widespread and fast-moving communication chains has other convergence effects. It leads to a great deal more use of the telephone, usually to the point of overloading the system, if it has survived the disaster. It can lead to people physically moving around more, trying to confirm what they have heard, moving from the danger areas, or trying

to find out what has happened to their families.

In a major disaster, of course, all the communications systems (telephone, radio and transportation) will be totally disrupted and authorities will be unable to advise those outside what is happening. Darwin, Australia on Christmas Day, 1974 when Cyclone Tracy hit is a case in point: communication systems did not operate for long during the early hours of the storm, the devastation was total, and the city became isolated. In such cases convergence from the outside takes longer to start and continues for a longer period of time.

The post-disaster period produces more problems: attempts to re-establish communication and to assess what has happened; massive demands for information, both from those directly affected and from those outside trying to get specific answers to their questions.

All of these information problems should be faced in the disaster plan. For instance, emergency organisations should have unlisted telephone lines reserved for disaster-use, as well as the capacity to add new lines quickly if needed. Key personnel should be protected from constant interruptions by appointing public information spokesmen. There might be a well-publicised public information centre which could channel the flow of queries away from the emergency organisations. Disaster communication plans should be periodically reviewed. Training should emphasize the evaluation of previous disaster experiences.

High-speed word-of-mouth communication means that controlling agencies are usually receiving information and responding to it about the same time as the general public is receiving and reacting to it. This means that there should be no delay in officially informing the public of events about which they need to be aware, and of recommended guidelines. This information should be as accurate and as complete as is necessary. There should be a clear and detailed dissemination plan for these warning messages so that they reach as large a segment of the population as possible. Dependence on mass media alone is not enough.

Public information answers the needs of the moment, but a good public education programme could do much to inform people in advance what is expected of them, and what they should do to avoid the usual pitfalls. Many frantic queries and appeals could be avoided by a well-integrated long-term community education programme dealing with disaster prevention and mitigation.

5. Need for information

Individuals in society need information at all times to make day-to-day decisions. In disasters this need is concentrated because of the pressure for survival. There is a need to know immediately what kind of a disaster is upon us, why it occurred, what the probabilities are of further crises of all kinds and what the alternatives are. There is great need for assistance because the way information is obtained in disasters is different and the content is usually incomplete. It has been suggested that the rise of emergent leaders in crisis communities and the role of outside agencies provides substitutes for the missing or weak links in this communication process.23/

Warnings themselves (dealt with later in this volume) have been the subject of much research. But, generally, there is a scepticism about warnings which leads directly to the quest for more information. It has been found that any warning message broadcasts, especially early ones, will be accepted at face value only by a minority of people — most will try to confirm the message in some other way. However, the more warning messages there are, particularly if they are transmitted in different ways, the more will they be believed and the more will the quest for confirmation decline. Warnings and answers to queries from official sources (police, fire, government departments) are more likely to be believed than those from other sources.

23/ Williams, Harry B., "Some Functions of Communication in Crisis Behaviour", Human Organisation 16:2, 1957.

What kinds of information do people want when they call radio, police or fire stations, when they telephone or crowd around community leaders or government officials?

They obviously want to know more about the disaster: has the fire spread? Will there be more snow? Where is the lava flow? Which areas are flooded and how deeply? They need to know more about the community itself: how many were killed, or injured? How many houses blown down and where? Are the trains still running? How seriously has community life been disrupted? They need assistance: how to stop the house collapsing? Which first-aid stations or hospitals are still open? Where are the doctors? Why doesn't the fire stations answer the telephone? Where is my pet dog, little boy, aunt, husband?

As the disaster continues, calls become angrier and government officials are abused. Why is the power still off? Why aren't police stopping looters? Who is going to pay for my ruined crops, my damaged house, my broken leg, my stolen bicycle, my commandeered vehicle?

One of the major processes during disasters is the collection and transmittal of information. What is a normal and leisurely procedure prior to the disaster becomes an urgent and difficult task during and after the impact. This process is of four main types: appraisal of dead or injured persons; appraisal of property damage and essential community services; appraisal of supplies of essential goods, i.e., food, clothing, bedding, fuel and medicine and the assessment of requirements; and the giving and taking of public information.

Dependence upon accurate and complete information is most needed in the immediate emergency period following the disaster, when emergency organisations are trying to assume control. These appraisals form the basis for this control and they also help to supply the need for public information.

Knowing what happens is one thing; doing something about it is quite another. What public information lessons can be learned from previous disasters? For example, public information was a difficult problem during the Alaska earthquake.[24/] Reports and stories of all kinds soon developed and were broadcast over mass media. Awareness of the need for better control of emergency public information arose after several conflicting accounts of events had been broadcast by competing mass media. A public information director was appointed. City authorities produced an official form to be used in public announcements, and it was agreed that every news release would be signed and dated, and the source indicated. Broadcast outlets were told to make clear that any announcements not using this official release were not official statements. They were asked to beware of reporting material which might cause undue anxiety, and told that no announcement was to be repeated unless read in its entirety.

Despite these precautions, problems continued and the information director installed a broadcast booth with direct links to mass media outlets so that he could himself broadcast urgent items. However, most items were not considered sufficiently important for this, and the system of mimeographed releases continued, as did the flow of inaccurate stories about missing persons, evacuation, or buildings that were about to collapse, or were condemned. The information section was kept busy reassuring citizens and checking these stories.

The US National Association of Broadcasters has issued a code for broadcasting stations which offers a responsible, informed and practical approach to disasters.

24/ Wenger, D. & Arnold R. Parr, Community Functions Under Disaster Conditions, report series no. 4, Disaster Research Center, The Ohio State University, Columbus, Ohio, USA, 1969.

The public information problems during two disasters — a hurricane which struck the southern coast of the United States in 1961 and a major river flooding near a Canadian prairie city in 1950 — have been summarised, together with the lessons to be learned from these two experiences. 25/

The hurricane affected a very large territory. One area had an efficient information service with established lines to media outlets. Reports were factual, frequent and immediate, and they encountered few problems. The other areas were not organised to cope with the media and reported "emergency public information was a terrible problem...the whole thing was about as confused as it could possibly be".

During the Canadian flood, demands for information quickly accelerated and additional public information officers were brought in from private companies, government departments and the armed services. There was a daily conference with briefings from various experts. Extensive use was made of the radio with factual and frank summaries of the situation. These talks played an important part in encouraging some 100,000 people to evacuate before the situation became critical. Misinformation came from many sources and caused considerable problems. Reporters magnified the damage caused by the hurricane and suggested that towns had been totally destroyed, causing hundreds of anxious personal and telephone queries. A premature official report on the flooding suggested that the crest had been reached. This would have slowed, or stopped, the evacuation if it had had wider circulation and had not been stopped in time.

The following lessons can be drawn from the foregoing:

(1) Public information must be studied and provided for in disaster plans.

25/ Jack Donoghue, "Public Information Lessons", EMO National Digest, vol. 3, no. 4, Aug. 1963, Emergency Planning Canada, External Affairs Building, Ottawa, Canada.

(2) Qualified public information offices must be part of any co-ordinating organisation.

(3) Communications must be maintained so that public information staff can disseminate information and instructions to the mass media and media representatives can transmit this to their outlets.

(4) Public information communications must be separate from operational communications.

(5) Public information is a command responsibility and leaders must be sensitive to the needs of informing the public.

(6) All available methods must be used to inform the public.

(7) Officers other than public information staff must be prepared to contribute to the information process through briefings, etc.

(8) Public information staff must be able to authenticate or deny news stories or public queries without delay.

(9) Public information staff should be able to monitor mass media reports.

(10) There should be a method by which broadcasters and public information staff can authenticate telephone reports and requests from official sources.

(11) Care should be taken in setting up clearance points for stories so that they are checked and not held up by bureaucratic hesitation.

(12) Mass media people should be made aware of the serious consequences of their actions, and of the over-all situation of the community in a disaster.

(13) Public information media put out of service during the disaster should have high priority for re-establishment.

6. The public as an information resource

The public has information needs which it expresses in a variety of ways, answered by warning and information systems of various kinds. One kind is the range of official agencies; another is the range of mass and folk media outlets — radio, television, newspapers, wall-posters, and street leaflets. A further system is the public itself. Every individual's query can be answered by other individuals in the public audience, and very often that query is answered through this informal network — by asking friends, relatives and acquaintances, by stopping strangers in the street, by telephoning others who know.

The public is a vast depository of information on every aspect of a disaster, for they are in close and continuous contact with its progress through the community. This can be clearly seen by the fact that radio stations not only get enquiries, but also callers offering information about what is happening in the city, warning of dangers, such as fallen power-lines, and offering assistance. This information leads to news stories and, through such devices as 'hot-line' radio shows (or the equivalent in wall-posters), provides the public with new information and tangible aid from the public itself.

This human communications network assumes regular patterns and has a structure. There are interconnecting points in the webs that it forms through the community and numbers of interlocking communication groups. It has been described many times and everyone is aware of his part in it. In times of disaster it can truly be said that a 'people's network' exists — the challenge is to tap it and take advantage of its existence.

This does in fact happen in a comparatively formal manner through the vertical 'cell' apparatus of the commune, for instance; and in a less formal way through voluntary groups, and even official organisations, whose

members are part of many human groups. A good public information director will make considerable efforts to build up a community contact list with this in mind.

There are other, more complex ways in which the public can be regarded as a source of information. One way is through the proliferation of amateur radio operators in all communities, from the users of simple, low-performance limited-radius sets to those near-professionals who use high-performance global capacity receivers. These operators are being increasingly used in disasters, and the subject is dealt with later in this volume.

Some countries have organised nation-wide community information centres which could be used in times of disaster. The Citizen's Advice Bureaux were started in the United Kingdom in 1938 as centres of free information and advice. Other countries have followed this lead, often in the form of voluntary organisations like the neighbourhood information (referral) centres in Canada, partially funded by government.

Public information is not exclusively the concern of government or industry public information practitioners. Public information is also a commodity and can mean information emanating from the 'public'.