CATASTROPHE AND CRISIS IN A FLOODED BORDER COMMUNITY AN ANALYTICAL APPROACH TO DISASTER EMERGENCE

> Thesis for the Degree of Ph. D. MICHIGAN STATE UNIVERSITY Ellwyn R. Stoddard

### This is to certify that the

#### thesis entitled

Satastrophe and Srisis in a Flooled Porder Compunity: An Analytical Approach to Disaster Energence

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has been accepted towards fulfillment of the requirements for

Ph.D. degree in Sociology

Major professor

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### ABSTRACT

### CATASTROPHE AND CRISIS IN A FLOODED BORDER COMMUNITY AN ANALYTICAL APPROACH TO DISASTER EMERGENCE

by Ellwyn R. Stoddard

A crisis situation involving a flooded United States-Mexican border community in an Anglo-dominant region provided a setting for the empirical study of behavior under stress and the processes involved in the distribution of emergency relief across socio-cultural boundaries. A scientific contribution is attempted in three areas: to provide a comprehensive analytical device for focusing disaster research and synthesizing discrete findings; to delineate the points of stress in Anglo-Latino relationships; and to question the assumption of "panic" theorists who advocate that emergency behavior is irresponsible, unpredictable behavior. Behavior during stress is seen as a predictable phenomenon in which normal social relationships change to <u>emergency</u> roleexpectations in the different time stages and different pattern of crisis dimensions. Current terms and concepts of disaster studies are defined in a more restricted sense. An extensive discussion of time and space models in disaster research is included also.

The theoretical model delineates various elements. In natural holocausts, a catastrophic agent creates a catastrophe producing a crisis in the social system(s) involves. In the process of adapting from pre-emergency norms and roles of emergency role expectations, various choices of action create a situation of role ambivalence involving three role dilemmas. To the degree these role dilemmas are reciprocally resolved with the complementary social roles, to that degree coordinated reconstruction may occur. To that degree that role choices are

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non-reciprocal, to that degree disaster exists. The role dilemmas (Multiple-role dilemma, role-set dilemma and situational dilemma) occur at various levels of social action; in inter-personal, interorganizational and inter-systemic relationships. The problems of readjustment to pre-emergency norms differ, depending upon the pattern of crisis dimensions extant. Six major crisis dimensions have been outlined as follows:

FOCUS. . . . . . . . . (Material vs Non-material emphasis) DIRECTNESS . . . (Direct vs Indirect consequences) CONTROLABILITY . (Sensate vs Idealtional approach) PERIODICITY . . . (Unexpected vs Recurrent regularity) TRANSIENCY . . . (Progressive vs Instantaneous occurrence) SCOPE. . . . . . . . (Diffused vs Focalized circumscription)

In the present study the data show that the pattern of crisis dimensions operating in Villa, Texas, the research site, increased the predictability of where disaster would most likely occur within the various levels of social action. Cleavages between the Red Cross professionals and local volunteers, or between the Red Cross and the Latino community were found to correspond with the distinct pattern of crisis dimensions which each system or organization reflected. A few of the salient differences can be briefly noted.

Within the Latino system it was found that the acceptability of relief assistance was dependent upon the <u>social relationship with the</u> <u>giver rather than on the quality</u> of the services or facilities offered (as was assumed by the external aid organizations). Due to the progressive nature of the catastrophe, aiding organizations and victims arbitrarily defined the situation differently. Thus, when the aiding organizations defined the situation as an emergency and the victims did not, a state of disaster emerged in which the aiding organizations were unable to fulfill their function. In addition, the recurrent-- Abstract "near miss effectivenes experience dangers inv tic disdain t The ir in intercultu nating volur. tions underl light of thes

### Abstract

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"near miss" history of floods in that particular region reduced the effectiveness of early warning notices to evacuate. In Villa, prior experience with the river rather than increasing the recognition of the dangers involved, had produced the latent effect of creating an apathetic disdain to warnings of impending catastrophe.

The implications of these findings to the total Red Cross operation in intercultural situations is discussed as are the problem of coordinating volunteer organizations in any given catastrophe. The assumptions underlying the present civil defense programs are questioned in light of these findings and other recent empirical studies. CATASTRO AN AN

## CATASTROPHE AND CRISIS IN A FLOODED BORDER COMMUNITY: AN ANALYTICAL APPROACH TO DISASTER EMERGENCE

By Ellwyn R<sup>ee</sup>Stoddard

A THESIS

Submitted to Michigan State University in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

Department of Sociology and Anthropology

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#### ACKNOWLEDGMENTS

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Appreciation is extended to the many who have provided an intellectual challenge during my professional training. Foremost among these is Dr. William H. Form, my major professor. He has not only given freely of his time and disaster experience but has offered frequent encouragement as a friend. Gratitude is expressed to the Department of Sociology and Anthropology faculty; the classroom experiences with these men have made lasting impressions. Drs. Loomis, Hoffer and Useem have been helpful and reassuring in their administrative capacities. To Dr. Glynn McBride and others in the Agricultural Economics faculty I owe the wealth of experience gained in field research with them.

For this thesis to be, it has required the cooperation and confidence of Dr. Charles P. Loomis who allocated the research funds for this project from grants under his direction. The sponsors are gratefully acknowledged: The United States Public Health Service grant to study Anglo-Latino health problems; the Carnegie Corporation of New York for their Border Project research; the Disaster Research Group of the National Research Council for their contribution; the Area Research Center, Michigan State University for the Research assistantship held while working with this project. Thanks go to my colleagues who participated in gathering the data and to the cooperative residents of Villa and the relief officials who took the time and effort to participate in confidential interviews.

To my parents I owe much. My children have endured much. My wife has been a major source of encouragement, strength and devotion and having shared the load, deserves to share the welcome rest.

E. R. Stoddard

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### CHAPTER I

### INTRODUCTION

### The Problem

Increased concern with natural and man-made disaster situations has erupted with the inauguration of the atomic and hydrogen weapons era. In present military and civil defense planning, wholesale destruction is a possibility which must be included in these concerns. But formulating plans to deal with such disasters is not without problems.<sup>1</sup> In order to describe the basic principles of human behavior in stress situations, funds have been provided for research into natural castastrophes which are assumed to be as closely related to mass atomic destruction as any known activity.<sup>2</sup> From this added interest in natural

<sup>2</sup>Some writers have been extremely critical of applying research principles gained from the study of natural disasters to atomic defense planning. Phillip Wylie, the novelist, caustically censures present researchers for not utilizing more of the concepts of Dynamic Psychology. In evaluating present progress of disaster studies research, he writes: ". . . what we have done is to accumulate a mass of costly official data to show that since we Americans do not panic when poisoned

<sup>&</sup>lt;sup>1</sup>In a Civil Defense report assessing the vunerability of the New York Metropolitan area to enemy attack, we read: "A good many of the problems of civil defense are those of predicting human behavior in time of emergency. . . Our predictions have to be made from two sorts of evidence. The first is that furnished by past situations which are in any way similar to what would prevail under a modern atomic attack upon our cities. The second is that of known principles of individual and group behavior which can be foreseen to apply," Dwight W. Chapman, "Some Psychological Problems in Civil Defense, "Bulletin of Atomic Scientists, Vol. 9 (September 1953), p. 280.

catastrophes one need not infer that such occurrences are increasing in number nor in intensity,<sup>3</sup> but possibly have been "masked"<sup>4</sup> in former times by preoccupation with disease epidemics, pestilence control and similar problems.

Two factors have undoubtedly increased our awareness of catastrophic occurrences throughout the country and the world. One factor is the increased scope and rapidity of the on-site mass media reporting of misery and destruction, while the other is the advertising accompanying the periodic fund drives of nationally organized relief agencies.<sup>5</sup>

by potatoe salad at a church social, we shall not panic if nuclear holocaust obliterates our city cores." "Panic, Psychology and the Bomb," Bulletin of Atomic Scientists, Vol. 10 (February 1954), p. 40. For a rejoinder and counter-rejoinder to Wylie's position, see Bulletin of Atomic Scientists, Vol. 13 (April 1957), in which leading natural disaster researchers defend their assumptions.

<sup>3</sup>Lemons states that floods are not increasing in magnitude nor frequency but because of encroachment on flood plain areas and increased developments on the land, the dollar loss has increased rather markedly. From 1902-24 to 1950-55 the mean loss jumped from \$31 million to \$500 million dollars per year from floods alone. Hoyt Lemons, "Physical Characteristics of Disasters: Historical and Statistical Review, " The Annals Vol. 309 (January 1957), pp. 1-14. For further statistical corroboration see the unauthored Report on Floods and Flood Damage prepared for the Insurance Executives Association (New York: Parsons, Brinkerhoff, Hall and McDonald, April 1952), p. 6. Also William G. Hoyt and Walter B. Langbein, Floods (Princeton, N. J.: Princeton University Press, 1955), pp. 82-83.

<sup>4</sup>This term was used in a similar sense by Jessie Bernard, <u>Social Problems at Midcentury:</u> Role, Status and Stress in a Context of Abundance (New York: Henry Holt and Company, 1957), p. 252 ff.

<sup>5</sup>It is evident that our conception of what constitutes a disaster, and what is newsworthy for mass media consumption, is in a period of constant redefinition and change. When present losses are compared to the 800,000 persons lost in the Yellow River of China before the turn of the century, or the 40,000 fatalities in the Martinique disaster of 1902, an airplane crash or sinking ship is dwarfed by comparison. However, with increased technology and secularization, our acceptance of social-telesis brings even the phenomena of natural disaster within

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The sensational character of natural catastrophes has apparently become a common item of conversation complete with the popular stereotype of the "irrationality of human activity under stress." Such beliefs are currently being submitted to investigation under scientific scrutiny. Disaster research affords the social scientist the opportunity to reject these normative beliefs by a progressive mapping of predictable human behavior within the defined limits of crisis and disaster.

### Statement of the Problem

A crisis situation involving a flooded United States-Mexican border community in an Anglo-dominated region provided a setting for the empirical study of two integrated facets of human behavior under stress.

One facet is an attempt to delineate the processes and factors causing disaster and to relate them to six selected dimensions of crisis. The working hypothesis is that the arrangement and combination of these six crisis dimensions directly determines whether or not a systemic linkage<sup>6</sup> exists. The other facet involves the socio-cultural setting in which the processes affecting stress behavior are observed through various time stages. In the attempts of an Anglo system to provide disaster relief to a Latino community, there appear to be certain principles underlying the acceptance or rejection of assistance

the catetory of solvable problems. See Kingsley Davis and Wilbert E. Moore, "Some Principles of Stratification," <u>American Sociological</u> Review, Vol. 10 (April 1954), pp. 242-49.

<sup>6</sup>This concept is from Charles P. Loomis, <u>Social Systems:</u> <u>Essays on Their Persistence and Change (New York: D. Van Nostrand Co., Inc., 1960). Although the focus of this study on disaster types precludes usage of a model such as Loomis' Social System, it is recognized by the author that the familiarity with that model as a student and Research Assistant provided the conceptual point of departure into this more specific aspect of disaster undertaken in the present study.</u>

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offered. The working hypothesis is that the social relationships between these groups has a greater effect on acceptance of aid than the quality of the goods and services offered.

### Formulation of the Problem

The two facets of the problem will be approached in the following manner. The total study will be cast in a comprehensive conceptual framework of disaster emergence. This framework is composed of the following elements: the initial catastrophe, the social crisis which results, the role dilemmas which must be resolved within the patterned crisis dimensions, and the final emergence of coordinated reconstruction or disaster.

This conceptual framework serves as an heuristic device to examine in a logical and consistent manner the Anglo-Latino relationships involved. Of special importance is the reaction of the Latino community residents toward external and internal sources of communication, toward aid, and toward definitions of the situation in the various time stages of the emergency period.

### Importance of the Problem

There exists a great need for a comprehensive framework to synthesize and relate presently available scientific knowledge of human behavior in crisis and stress situations. Irving Janis suggests that the single central notion of agreement in interdisciplinary discussions of "disaster studies" is a need for a General Theory of Disaster. In his words,

• . . We must begin orienting research toward working out a 'general theory of disaster' or developing a consistent "conceptual scheme,' or constructing 'comprehensive behavioral models.' What the point essentially boils down to is this: there is an obvious need for general theoretical

categories and constructs that will help to delineate central problems of disaster behavior that should be investigated.<sup>7</sup>

Williams, as the spokesman of the Committee on Disaster Studies<sup>8</sup> feels that this organization, in being a clearinghouse for "disaster research," should play a dominant role in theory development. They hope that in providing a centralized organization which will collate existing scientific knowledge, this would

lead eventually to the construction of models which will specify the major variables and their significant interrelationships, and indicate which variables are subject to intervention by planning, training and organization.<sup>9</sup>

However, reflecting the attitude of most scholars concerned with this problem, they do not see a grandiose scheme of disaster being formulated which is of a more advanced nature than the scientific disciplines concerned with disaster research. On the contrary,

The committee has not believed that a systematic theory must precede the initiation of all research, but rather that theory will develop in the interplay of research and interpretation.<sup>10</sup>

Thus, the potential opportunity for testing generalizations derived from other research areas, and using crisis situations as a matrix in which interdisciplinary theory can develop, demonstrates the correct relationship between the existing body of knowledge among various social science disciplines and the rapidly emerging field of "disaster studies." As Lazarsfeld so aptly stated:

<sup>7</sup>Irving L. Janis, "Problems of Theory in the Analysis of Stress Behavior," Journal of Social Issues, Vol. 10, No. 3 (1954), p. 8.

<sup>8</sup>This Committee was originally established within the organization of the National Research Council. Its name was subsequently changed to the Disaster Research Group.

<sup>9</sup>Harry B. Williams, "Fewer Disasters, Better Studied," Journal of Social Issues, Vol. 10, No. 3 (1954), p. 22.

<sup>10</sup>Ibid.

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Systematic analysis . . . of crisis situations . . . are most likely to produce the kinds of information on which the future development of the social sciences depend.<sup>11</sup>

An Anglo-Latino setting within a stress context provides a unique opportunity for scientific investigation of the processes of the persistance of traditional norms and boundary maintenance<sup>12</sup> in the face of crisis. Where such norms are allowed to lapse, the mechanics through which they are reinstituted or are permanently discarded can be delineated.

With mounting pressure for international and national programs to change minority group practices in health, housing, education and other specified areas, there is a corresponding need for basic principles upon which to initiate such programs.<sup>13</sup> This study attempts to identify and relate some of these basic principles to the Anglo-Latino relationships which are considered important and necessary to the

<sup>11</sup>Paul F. Lazarsfeld, Bernard Berelson, and Hazel Gaudet <u>The People's Choice: How a Voter Makes Up His Mind in A Presidential</u> <u>Campaign (New York: Columbia University Press, 1958), Preface to</u> the 2nd Edition, p. ix.

<sup>12</sup>This is a term from Loomis, op. cit. The concepts of systemic linkage and boundary maintenance from Loomis are used throughout this study, although sometimes identified by other terms at the different levels of social action (i.e., interpersonal and inter-organization as well as inter-systemic).

<sup>13</sup>A grant from the U.S. Public Health Service to Charles P. Loomis was designed to accomplish this very purpose. Through the cooperation of Dr. Loomis and the Michigan State University Area Research Center, the major portion of this study was financed from funds designated for Anglo-Latino research in health practices and changing value patterns. This study is but one link in a series of studies involving Anglo-Latino contact in various situations. For a limited number of these see footnote cited in C. P. Loomis, "Systemic Linkage of El Cerrito," Rural Sociology, Vol. 24 (March 1959), p. 55.

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initiation of any directed change across cultural boundaries.<sup>14</sup>

### Definition of Terms

The precision of concepts determines to a large degree the effectiveness of a scientific discipline to establish predictable generalizations involving human behavior. The area of so-called "disaster studies" is a prime example of the prevalence of ambiguous and emotional terminology in the current literature. Killian describes it thusly:

There is probably no area of human behavior about which so many untested stereotypes and so much word-magic exists as the area of human behavior in disaster. . . The term 'panic,' for example, is used by different writers, and sometimes the same writer, to mean a subjective feeling of fear of terror, bad judgment, inefficient behavior, acting too fast, not acting fast enough, blind flight, paralysis, or a vague, global concept of wild animal-like behavior. Scientific investigators . . . also use the term 'panic' to mean quite different things.<sup>15</sup>

It is advantageous to differentiate these more crucial concepts before one can delineate the scope of this study and the specific problems entailed within it. These concepts will be used subsequently in this restricted sense.

<sup>14</sup>The Useems, in their examination of education across cultural boundaries concluded: "Any social enterprise that embraces two or more cultures is bound to pose questions for decision among those directly concerned with the achievement of its aims. In a world of crises, it would be overly optimistic to expect perfection; in a world of change, it would be overly pessimistic to presume failure. Between these obvious extremes lies the potential of constructive action." John and Ruth H. Useem, The Western Educated Man in India (New York: Dryden Press, 1955). This study like the present study was partially <sup>sponsored</sup> by the Area Research Center at Michigan State University in the tradition of that Center to investigate change in various facets of life across cultural boundaries.

<sup>15</sup>Lewis M. Killian, <u>An Introduction to Methodological Problems</u> of Field Studies in Disaster; (Committee on Disaster Studies Report No. 8 (Washington, D.C.: National Academy of Sciences--National Research Council Publication No. 465, 1956), pp. 5-6 footnote 6.

- Catastrophe An extreme disruption of natural and cultural developments.
- <u>Crisis</u> That state existing when social relationships of a given social system are in a rapid state of structural change and reorientation.
- Disaster An extension of a crisis situation in which social activity is restricted because complementary roles are not mutually reciprocal.
- Emergency roles That learned pattern of behavior deemed socially appropriate to emergency situations wherein the rapidly changing social relationships cannot maintain effective social interaction through normal role expectations.
- Multiple-Role Dilemma That dilemma wherein the exigencies of the situation demand from an individual simultaneous performance from two or more mutually contradictory role expectations in time and space.
- Role-set Dilemma That dilemma involving the apportioning of social and material resources to any specific aspect or responsibility within the total constellation of role expectations in a given social position.
- Situational Dilemma That dilemma involving the uncertainty of the social appropriateness of either emergency or normal roles in a given situation.
- Internal System<sup>16</sup> That social system which has traditionally shared a common spatial and social in-group relationship through religious, kinship and ethnic ties, in this case the Latino community.
- External System The larger social milieu in which the internal system functions in normal or emergency situations, in this case the larger Anglo-oriented community including their sponsored organizations.

<sup>&</sup>lt;sup>16</sup>The concepts of external and internal systems are modifications of Homans' terms. George C. Homans, <u>The Human Group</u> (New York: Harcourt, Brace & Co., 1950). Homans used these terms to make a processual distinction between initial relationships between external <sup>environment</sup> and elements of the social system and the subsequent

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#### The Research Design

#### The Theoretical Framework

Homans has cogently stated the need for a framework to guide theory, integrate hypotheses and serve as a guide to areas needing research. He writes:

In Sociology we tend to wander all over our material. We never quite know what we are talking about at any particular moment. The reasons is not that we are incompetent, but that we have no device for fixing our attention. Any classification, no matter how crude, provided only it is used regularly, forces us to take up one thing at a time and consider systematically the relations of that thing to others. This is one of the roads that leads to generalization.<sup>17</sup>

To follow Homans suggestion in formulating any gross system of classification hazards the inevitable criticism demonstrating the inadequacies and weaknesses of such a classification or framework. However, with such criticism the instrument is refined, made more precise, and tested thoroughly, thus advancing science to that degree. Therefore, an attempt has been made in the present study to formulate such a classification because of the unavailability or inadequacy of existing sociological concepts to handle effectively the data and the <sup>spec</sup>ific problem contained herein.<sup>18</sup>

<sup>17</sup>Homans, <u>ibid.</u>, pp. 44-45.

<sup>18</sup>Existing theoretical models are inadequate only in the sense that they do not focus on the relationship of disaster types to human behavior in crisis. The originality of the present model lies only in the synthesis of concepts developed by other well-known scholars. For instance, a modification of Homans, <u>ibid.</u>, provides the

emergent internal relationships which developed. This contains a diachronic characteristic dysfunctional to the present study. The present study holds these two systems to be synchronically functional, and follows their systemic linkages through time for an analysis of the processes involved. Hence, for our consideration the inter-systemic relationships are the emergent product rather than either of the two systems per se.

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The present study will attempt to extend and amplify the Form-Nosow thesis regarding disaster while concurrently reducing certain broad generalizations to more precise analytical concepts. As a concluding summary, they wrote:

The Beecher experience indicates that while physical damage is significant, the social consequences of destruction actually define the extent to disaster. . . Disasters affect individuals and their social organizations in ways predictable from knowledge about the broader society, and from knowledge about the various cultural norms of the specific community affected.<sup>19</sup>

Within this crisis framework this study is concerned with the systemic linkages of Anglo-Latino cultures in an attempt to discover and validate underlying principles which govern successful inter-systemic relationships while accomplishing mutual goals.<sup>20</sup> Not only can

internal-external system. The processes of systemic linkage and boundary maintenance are derived from Loomis' Social System <u>op</u>. <u>cit</u>., from Carr comes the Transiency and Focus crisis dimensions, the role dilemmas are based upon Seemans concept of role ambivalence and Mertons Role-set, and the Sensate-Ideational dimension was taken from Sorokin. The central concept of disaster as a predictable system of emergency roles is from Form and Nosow. Thus, the models were not inadequate but their utility to handle the specific problem under discussion without some modification and rearrangement was extremely limited.

<sup>19</sup>William H. Form, and Sigmund Nosow, <u>Community in Disaster</u> (New York: Harper and Brothers, 1958), p. 237.

<sup>20</sup>Identical problems exist in delineating the processes involved in the acceptance of relief and emergency aid as in the acceptance of modern health practices. In some measure, they are somewhat overlapping since in giving relief aid, medical aid was offered also. Thus, the basis upon which acceptance of Anglo sources of communication, of Anglo definitions of the situation, of Anglo aid organizations and Anglos themselves is the crucial factor of initiating health practices among Latino communities. It is hoped that the findings of this study will be of some utility by those providing these research funds, whereby they might consider the basis of acceptance when planning their programs involving directed change of health standards. greater prediction come from knowledge about the broader society and these various local norms, but certain situational factors surrounding the crisis situation give predictability in anticipating points of social stress in interpersonal, interorganizational and intersystemic relations. In summary, the core of the Form-Nosow approach is that disaster is the subsequent non-reciprocity of role expectations, a function of the specific social milieu in which it occurs.

On the basis of these postulates, a thorough analysis of disaster emergence necessitates certain concepts within the theoretical framework which allow the social genesis of emergent disaster to be demonstrated. Moreover, such concepts must cut through existing meteorological typologies of catastrophe and further they should establish criteria which define the social dimensions of such occurrences. Such a framework must follow diachronically the social action from the initial warning of the impending holocaust to the final evolution of disaster or coordinated reconstruction. As shown in Figure 1, four elements have been distinguished to facilitate the step-by-step analysis. These are as follows:

- (1) The Catastrophe
- (2) The Crisis
- (3) The Dilemmas of Role Ambivalence

(4) The Emergence of Coordinated Reconstruction or Disaster These elements and their interrelationships may involve various levels of social action of which three are emphasized in the present study-inter-personal, inter-organizational and inter-systemic relationships. In addition, any generalization which might be made concerning the relationship of these elements or their smaller components are subject to spatial and temporal segmentation. Models to handle these latter aspects will be discussed in detail in Chapter II. These four elements will now be expanded and briefly explored in detail.



FIGURE 1. A Graphic Model of the Analytical Approach to Disaster Emergence The catastrophe. Much physical destruction occurs which does not involve social disequilibrium. Moreover, an imminent threat of catastrophe may well create social consequences without any subsequent catastrophe occurring.<sup>21</sup> Thus crisis and emergent disaster might occur from a situation involving imminent danger as well as from an actual catastrophic destruction. This demonstrates the utility and necessity of separating catastrophe from the crisis situation since they are not causally connected and might occur somewhat independently.<sup>22</sup>

<u>The crisis</u>. The focus of sociology on the social reaction to imminent or actual catastrophe creates the necessity for a social definition of this event. Distinguishing crises as floods, fires, earthquakes or tornados does little for sociological inquiry as behavior <u>within</u> these categories varies to such a degree as to nullify generalizations applied to the differences <u>between</u> these phenomena (i.e. A flash flood resulting from a broken dam might have more similarity to a tornado than to a recurrent Mississippi overflow when attempts to generalize the social consequences are undertaken). Hence it was considered necessary to synthesize the empirical findings of patterned dimensions which were found to exist from one calamity to another. From more than a dozen dimensions identified, at least six appeared to be major determinants of the social reactions found in varied types

<sup>21</sup>For a well documented scientific study of such a situation see Elliott R. Danzig, Paul W. Thayer and Lila R. Galanter, <u>The Effects</u> of a Threatening Rumor on a Disaster-Stricken Community (Washington, D. C.: Committee on Disaster Studies No. 10, National Academy of Sciences--National Research Council publication No. 517, 1958). See also, Hadley Cantril, <u>The Invasion from Mars: A Study in the Psy-</u> <u>chology of Panic</u> (Princeton, N.J.: Princeton University Press, 1952).

<sup>22</sup>As shown in Figure 1, page 12, catastrophes might occur in which no social consequences were involved. In such cases no crisis occurs. Likewise, an impending catastrophe which subsequently does not occur might trigger the development of a crisis situation (see footnote 21 this page).

of catastrophe. They are:

I-	FOCUS
II-	DIRECTNESS
III-	CONTROLABILITY
IV-	PERIODICITY
v-	TRANSIENCY
VI-	SCOPE

Material vs Non-material emphasis Direct vs Indirect consequences Sensate vs Ideational approach Unexpected vs Recurrent regularity Progressive vs Instantaneous occurrence Diffused vs Focalized circumscription

These dimensions<sup>23</sup> occur in varying combinations within a given situation and at a given temporal phase or stage. It is hypothesized that the manner or combination in which these six crisis dimensions occur adds a measure of predictability to stress areas at the various levels of social action. Hence, the existing combination of crisis dimensions directly affects the type of role ambivalence to be resolved.

<u>Resolution of role ambivalence</u>. Social activity occurs at various levels affected by the combination of crisis dimensions extant in time and space. This social activity is primarily concerned with meeting the abrupt changes in relationships made manifest by the presence of a crisis. Certain dilemmas are posed, the successful resolution of which allows continued social activity and the non-resolution of which revokes present reciprocal expectations. To the degree the latter occurs, disaster exists.

Merton has described at length two dilemmas emanating from role ambivalence, that of multiple-role conflict and of competing aspects of role-sets.<sup>24</sup> When simultaneous demands are made on an

<sup>23</sup>Because of the complexity of these six dimensions and the extensive literature review involved in their formulation they are discussed in detail in Chapter II, precluding needless repetition at this time.

<sup>24</sup>Robert K. Merton, <u>Social Theory and Social Structure</u> (Revised and Enlarged edition. The Free Press: Glencoe, Illinois, 1957), pp. 368-84. His analysis further distinguishes changes through time with the concept of role-sequence. It is felt that the use of time models in the present study will not only handle the role changes through time, but will maintain a synchronic alignment between the shifts in the crisis dimensions and the corresponding role shifts at various levels of social action. individual because of multiple role obligations, a conflicting choice or dilemma develops. In a given social relationship, when a role presently being played is subordinated to another role of higher priority, there is a disruption of the relationship with the reciprocal role of the one subordinated. Disaster occurs if the person playing the complementary role attempts to maintain the previous interaction.<sup>25</sup> From Form and Nosow, one gathers that family, neighbor, occupation, class, age and sex roles appear to be the most crucial and most demanding of those being played during most crisis situations. Of these salient roles, Form and Nosow insist that the family role predominates in a situation involving a multiple-role dilemma.

Our study, alone with others, shows that even in the most disciplined cases the professional role suffered at the expense of the family role.<sup>26</sup>

They added:

When a fireman saw his house destroyed with his family in it, any expectation that he would behave as a fireman was lost.  $...^{27}$ 

Instead he appropriately mourned as a father-husband and disaster obtained in his relationship with his fireman associates. Only after the welfare of immediate family members was assured did the victims of the Beecher tornado function adequately in occupational or other roles. Family roles not only had primacy in importance but were the first to be fulfilled by Beecher victims.<sup>28</sup>

<sup>26</sup>Form and Nosow, <u>op. cit.</u>, p. 239.
<sup>27</sup><u>Ibid.</u>, p. 164.
<sup>28</sup><u>Ibid.</u>, pp. 65-67.

<sup>&</sup>lt;sup>25</sup>For a complete analysis of this dilemma with empirical accounts see Lewis M. Killian, "The Significance of Multiple-Group Membership in Disaster," <u>American Journal of Sociology</u>, Vol. 57 (January 1952), pp. 309-314.

When the multiple-role ambivalence has been resolved by a choice of role, the dilemma surrounding the role-set is encountered. The role-set ambivalence is concerned with the apportionment of effort, facilities and resources to that aspect of the role-set which has primacy over other competing functions. Therefore, an orderly execution of these functions would necessitate a previous hierarchical arrangement of role-sets from which to select those aspects most salient for an increased share of the available effort and resources. When such ordering is not done, a frantic, unsystematic shifting of effort and facilities from one role-set to another results in the ineffective dissipation of the total energy and resources of the person involved. To demonstrate this point, Red Cross workers trained in mass feeding of victims were called upon during the Kansas City flood of July 1951. For a trained Red Cross worker, the feeding of evacuees is the role-set of highest priority when playing a Red Cross volunteer role. But as the number of clean-up volunteers sharply increased

The Wyandotte County Chapter canteen workers were so busy making sandwiches and coffee [for other volunteers] that they could not take over the feeding of the evacuees.<sup>29</sup>

The task of feeding evacuees the 7,500 hot meals during 8 consecutive days of operation was left to untrained women who had never cooked for more than a dozen people in their entire lives.

The situational dilemma has to do with the definition of the situation as socially appropriate for normal or emergency role performance. A neighbor breaking into an adjoining smoldering house to rescue a small child would elicit positive sanctions if the house subsequently burned to the ground. He might well be the object of ridicule, however,

<sup>&</sup>lt;sup>29</sup>Jane Griswold, and Kathleen Kienstra, "Red Cross Fights Flood Disaster," Journal of Home Economics, Vol. 43 (November 1951), p. 704.

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if a malfunctioning toaster were found later to be the source of the smoke. In the child rescue performance, identical behavior of the hero or fool role elicits positive or negative sanctions depending upon how the situation is socially defined by that group. If a situation is socially defined as an emergency, then the continuation of normal role activity is considered deviant behavior. In an emergency situation, only emergency roles are appropriate.

Linton speaks of emergent patterns of behavior as being at polar extremes from habitual patterns. He then modifies this for those advanced societies which do not encounter these critical emergencies at the experience level. We are informed as to what cues should elicit what behavior under greatly diversified hypothetical situations in which we have had no previous experience in real-life situations. As Linton states:

While every situation which can confront the individual is at one point, novel for him, very few situations can arise which will be novel for his society as well. As a member of this society he has access to a store of developed behavior patterns which are adequate to meet almost every eventuality. Even situations of extreme rarity are remembered together with the behavior appropriate to them.<sup>30</sup> (Italics mine)

If Linton's assumptions are correct, then it follows that even emergency behavior would have predictability since the patterns of playing emergency roles are learned prior to their actual use. An alternative assumption by Loomis states:

An objective view of the situation may be gained by attempting to see the event in the context of general disaster, where, within seconds, one social system vanishes and a new one is created, a new social system in which, after a short reconnaissance, a compelling new end or objective suddenly unites

<sup>30</sup>Ralph Linton, <u>The Cultural Background of Personality</u> (New York: Appleton-Century-Crofts, Inc., 1945), p. 93ff, note especially p. 97.

the chance members and forces them into action.<sup>31</sup>

The difference between these assumptions as applied to the concept of "emergency role" implies an ability or inability to modify the "emergency expectations" prior to the time when these patterns serve as cues for appropriate behavior in emergency situations. It is proposed that the behavior pattern itself is not the emergent factor in a crisis situation. Rather, the act of defining the changing situation as socially appropriate for the implementation of emergency roles is that which emerges.

As Form and Nosow explain:

. . . disaster prevails whenever there is disjunction between the personal expectations for emergency behavior and the community fulfillment of disaster services. This occurs when individuals do not fulfill their expected emergency roles, when "emergency" organizations fail to perform as expected, and when the expected emergency relationships between individuals and organizations are not reciprocally functioning.<sup>32</sup>

When organizational volunteers assume these roles, they still maintain a self-awareness of that particular segment of the social structure from which they originate. This tendency to maintain the pre-emergency prestige order dominates the recruitment and assignments within the organization to the point of restricting those persons

<sup>31</sup>Loomis, op. cit., p. 140. Although many elements and processes from Loomis' Social System have provided a basic conceptual point of departure for this thesis, the basic assumptions regarding the phenomenon of disaster emergence appears to be at variance. Of disaster Loomis writes: "Disaster . . . may be said to exist whenever collective and individual actions that were previously structured and made predictable by the elements and processes are made unpredictable by the impact of either external or internal forces," pp. 129-30. The present writer bases the entire theoretical approach to disaster emergence upon the postulate that "emergency behavior" is predictable, patterned behavior incorporating the same elements and processes of "normal behavior."

<sup>32</sup>Form and Nosow, <u>op</u>. <u>cit</u>., p. 16.

technically qualified from performing essential key tasks.<sup>33</sup> When a situation can neither be clearly defined as normal nor emergency, the efficient functioning of recently invoked emergency procedures will compete directly with the enertia of the pre-emergency social structure. When normal relationships are maintained in an organization operating within an emergency situation, a cleavage develops between that organization and the ongoing emergency operation.<sup>34</sup>

In summary, the multiple-role, role-set, and situational dilemmas are to be resolved. Their resolution and occurrence is greatly determined by the combination of crisis dimensions operating. To the degree that these dilemmas are not resolved, to that degree disaster exists.

Disaster or coordinated reconstruction. These two concepts are ideal-type constructs lying along a continuum. No empirical account has been discovered by the writer where all social activity had ceased, neither are there recorded instances where all role expectations were perfectly shared. Rather, all these descriptive accounts were a combination of these two lying nearer to one polar extreme than the other. The criteria to measure the degree of disaster or coordinated reconstruction is contained in the three role dilemmas. The sum of the unresolved role ambivalence in these dilemmas is a measurement of the degree of disaster extant.

# Levels of Social Action

These role dilemmas operate at many distinct levels of social action. At least three such levels can be isolated for purposes of further analysis with possible sub-types within these main categories.

<sup>33</sup>Loomis, <u>op</u>. <u>cit</u>., p. 151.

<sup>34</sup>Form and Nosow, <u>op</u>. <u>cit.</u>, p. 113.

The three are: inter-personal relations, inter-organizational relations and inter-systemic relations.

Aspects of inter-personal relations to be examined would include intra-organizational difficulties arising from structural-functional stresses between individuals. Relations between persons within either social system would be included, also. However, those personal relationships which bridge organizational or cultural boundaries would be contained in these categories which follow.

Inter-organizational relations are those occurring between distinct organizations which are both (or all) contained within either the internal or the external system. This level of analysis bypasses the unique contribution of any given person within these organizations and attempts to demonstrate the function of the organizational charter. It includes as well the approved ends and techniques whereby cooperative effort between formal and/or associative organizations can be accomplished. Since organizations rely on persons within their structure to carry out the ends of that body, it is natural that one focuses on individuals who operate in an official capacity within a given organization.

The inter-systemic relationships in the present study are those social contacts extending across the boundary between the external and internal systems.<sup>35</sup> In this present bi-cultural study, a Latino community is being offered relief aid by individuals and organizations from the larger Anglo system. Since Anglo-Latino relations are the main foci of this study, the inter-personal and inter-organization relations are cogent only as they are meaningfully related to the inter-systemic social interchanges. The general character of these two systems will

<sup>&</sup>lt;sup>35</sup>External and internal systems are synonyms for Anglo and Latino systems as previously discussed in this Chapter under footnote <sup>16</sup> Pages 8 and 9, and as outlined in Chapter II, regarding spatial models.

not be elaborated further since many accurate descriptions of similar Anglo-Latino relations can be found in the literature.<sup>36</sup>

In summary, this theoretical approach considers disaster as one of two end results of a crisis situation in which the various role dilemmas are not successfully resolved. The general hypothesis guiding the study postulates a predictable relationship between the patterned combination of crisis dimensions and how these determine disasterprone points of stress within the social structures involved. The basic assumption for this theoretical position is that behavior in emergency situations is not erratic, undefinable nor irrational. Rather, it is predictable to the degree that the crisis situation can be defined by its dimensions and that the knowledge of the social structures involved can provide a structural-functional matrix in which to measure role ambivalence.

<sup>36</sup>See Ozzie G. Simmons "Anglo-Americans and Mexican-Americans in South Texas." Unpublished Ph.D. Thesis, Department of Social Relations, Harvard University, 1952; Carolyn Zeleny, "Relations Between the Spanish-Americans and Anglo-Americans in New Mexico: A Study of Conflict and Accommodation in a Duel-Ethnic Situation." Unpublished Ph.D. Thesis, Department of Sociology, Yale University, 1944; James B. Watson and Julian Samora, "Subordinate Leadership in a Bi-Cultural Community," <u>American Sociological Review</u>, Vol. 19, No. 4 (1954), pp. 413-17.

For closely related sources see Elizabeth Nall, "The Influence of Crisis on the Modification of Social Organization," M. S. Thesis, Department of Sociology and Anthropology, Michigan State University, 1951; Lyle Saunders, <u>The Spanish-Speaking Population of Texas</u> (University of Texas: University of Texas Press, Austin, December 1949) Inter-American Education Occasional Papers V: Olen E. Leonard and Charles P. Loomis (eds.) <u>Readings in Latin American Social Organization and Institutions (Area Research Center, Department of Sociology and Anthropology: Michigan State University Press, 1953); Roy A. Clifford <u>Informal Group Actions in the Rio Grande Flood</u>. Unpublished report, <u>Committee on Disaster Studies, National Academy of Sciences--</u> National Research Council, February, 1955); Talcott Parsons, <u>The</u> <u>Social System (Glencoe, Illinios: The Free Press, 1951), expecially</u> <u>pp. 110-11, 198-99</u>.</u>

## Methodology, Procedures and Techniques

# Special Methodological Problems of Disaster Research

Two general limitations in disaster research should be noted that are peculiar to this specific field. The first results from the inability of the researcher to pre-determine the time and place of such crisis situations. It follows that research time is restricted for adequately designing the study prior to field contact, and that subsequent rapid modifications of design and procedures to fit the empirical situation are inevitable. One realizes that the entire project is a "one-shot" affair which, if lacking detail in a given category, is not subject to readministration such as the type of research involving captive audiences or clinical situations.

The second general limitation arises from the effect of the catastrophic situation on the investigator. The immensity of the problem to be handled, the constant contact with misery and destruction coupled with the exigencies of time limitations, and inadequate personal quarters and good food, may overwhelm him and thwart purposeful activity. Ofttimes the urgency of the situation causes such an extremely rapid dissipation of energy within a relatively short period of time as to produce exhaustion, thereby blunting the penetrative insights of the field observations.<sup>37</sup> There arises a constant need to restate to others and one self the aims and limits of the research, in order to maintain a purposeful orientation toward the initial research objectives while making the seemingly endless number of field modifications of the original project foci.<sup>38</sup> When a constant restatement of goals is overlooked, the

<sup>&</sup>lt;sup>37</sup>This writer experienced a brief period of hospitalization during this project, attesting to the pressures thus outlined. These pressures are similarly reported by others with field experience in disaster. See Form and Nosow, op. cit., p. 252.

<sup>&</sup>lt;sup>38</sup>William H. Form, Sigmund Nosow, and Charles M. Westie "Rescue Behavior in the Flint-Beecher Tornado." Prepared for the

many ramifications and minutiae of detail collected under pressures of compressed time, obscure initial objectives and weaken the contiguity and integration of the materials.

These limitations briefly discussed do not disqualify the use of traditional detailed design nor of instruments of clinical type research. However, the latter lose much of their utility in situations of rapid flux with limited time for pretesting materials. Yet these special problems need not be regarded as justification for careless methodology or superficial investigation. There is a necessary and profitable body of scientific procedures available to any skilled observer attempting to make a scientific contribution. One must consistently maintain the delicate margin between a rigidly defined area of investigation and the novel modications of the design due to the exigencies of the situation. An intelligent balance is needed between engulfment in exotic detail and the reduction of comprehensive generalizations to narrowed statistical correlations. This study seeks to avoid these extremes.

In such a rapidly expanding area such as disaster research, serendipidous findings might well provide some of the greatest advancements to our understanding of human behavior in unusual situations. With such a rapid growth in research comes a necessity to synthesize disparate and discrete findings and to replicate the basic generalizations upon which subsequent research will build. As Lazarsfeld has stated:

Until recently the social sciences exhibited an unfortunate tendency to conduct a survey here and an experiment there, and to let it go at that. Ph.D. candidates, for example, prided themselves on not repeating a study "which had already been done." Actually, the opposite trend should prevail. Results should be

National Research Council (Lansing, Michigan: Social Research Service, Michigan State University, 1956), pp. 27-29. (Mimeo.) For an outstanding example of project redefinition in the field see the Appendix of William Foote Whyte's <u>Street Corner Society</u> (Enlarged Edition) 1955, pp. 320-328.

checked and rechecked under both identical and varying conditions. The complexity of social life requires that the same problems be studied many times before basic uniformities can be differentiated from transitory social occurrences.<sup>39</sup>

These unique considerations of disaster research force those engaged in it to vary their approach to correspond to the exigencies found in the empirical setting.

#### Design and Procedure

The nature of disaster research demands plasticity due to the inability of the scientific researcher to foresee or manipulate the place, time or conditions under which a catastrophe occurs. All materials were gathered after the introduction of the independent variable (the catastrophe) as is normal in disaster studies. Thus this study follows an "after-only" research design<sup>40</sup> focusing on the descriptive and diagnostic analysis of a community flood in an Anglo-Latino setting. Description, though inadequate by itself for the advancement of scientific knowledge, is a necessary step in disaster studies prior to the more refined analyses of the data. Killian, in a classical statement of methodological problems of field research in disaster emphasized this point.

No matter how narrow the interest and how well crystallized the design, every disaster field study should make provision for securing an accurate description of the overall situation and sequence of events. This is particularly important in disaster because situational variables are so often important in determining human behavior. The physical facts of the disaster . . . The general sequence of events . . . should be discovered.<sup>41</sup>

<sup>39</sup>Lazarsfeld, Berelson, and Gaudet, <u>op</u>. <u>cit</u>., p. viii.

<sup>40</sup>This design is discussed in detail in Claire Selltiz, Marie Jahoda, Morton Deutsch and Stuart W. Cook, <u>Research Methods in Social Rela-</u> <u>tions</u> (Revised Ed., New York: Henry Holt and Company, 1959), pp. 108-112.

<sup>41</sup>Lewis Killian, <u>An Introduction to Methodological Problems</u>, <u>op. Cit.</u>, pp. 7-8.

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Procedurally, this study borders on the case, the experimental, and the typological approaches. It is diagnostic in its attempt to relate emergent disaster, social structure, and the dimensions of crisis within an Anglo-Latino milieu.

## The Research Site

After a 1,000 mile reconnaissance of possible research sites along the flooding Rio Grande, a traditional Spanish-American hamlet in the Lower Texas Valley region was selected.<sup>42</sup> It had a near subsistance economy, was somewhat isolated both culturally and geographically from the nearby Anglo centers, and was composed of less than 100 households. Local or migrant agricultural labor was the most common occupation of the Latino community's inhabitants.

This research was initiated as an addition to an ongoing project of comparative studies across national and cultural boundaries.<sup>43</sup>

<sup>43</sup>Under the direction of Charles P. Loomis, Research Professor of Sociology and Anthropology at Michigan State University, the Area Research Center has carried on various cross-cultural projects. A Carnegie Corporation grant to Professor Loomis had provided funds for an extensive U.S.-Mexican Border project which had shown the merit of cross-cultural studies in that region. A recent U.S. Public Health grant is being carried on by Professor Loomis and associates at various centers throughout the southwest region to facilitate crosscultural acceptance of publicly sponsored health programs. The present study is largely indebted to this Anglo-Latino Public Health project for the major part of the financial support required for its completion. It is expected that the results of this study will serve to more effectively designate the processes through which voluntary aid is disseminated effectively across the Anglo-Latino cultural boundary.

<sup>&</sup>lt;sup>42</sup>The research site was personally visited by William H. Form, professor of Sociology and Anthropology at Michigan State University who was the director of this study. Dr. H. E. Moore from the Department of Sociology, University of Texas, collaborated and personally assisted with the site selection. A Pseudonym has been provided for the Latino community and the Anglo organization leaders involved who cooperated so fully in confidential interviews.

It also followed recent disaster studies which were carried out in an Anglo-Latino setting. Thus, a convergence of interest in cross cultural problems focused in a disaster situation provided an opportunity for a centralization of funds in combining the various interests within the same project.<sup>44</sup>

Data was gathered from both sides of the U.S.-Mexican border but because of time, money and scope, this thesis will deal only with Anglo-Latino relationships in a single community on the U.S. side. Since no human lives were lost from the catastrophe, the description herein lacks the sensationalism included in popular accounts. Therefore, the evidences of extreme emergency behavior will be less pronounced. This will necessitate increased precision in the analysis to clearly delineate these changes.

#### Data Collection

The methods used in data collection were those of observation and interview. The techniques involved varied with the method employed. A non-participant/non-controlled type<sup>45</sup> of observational technique was used during the evacuation, was used at the evacuation site, and was used during the relocation period. Two types of interview techniques were used. Direct interviews were taken of 89 victim households, and focused interviews<sup>46</sup> were conducted with selected household heads in the internal system. Although initial plans were laid for getting both

<sup>44</sup>In studies involving any aspect of disaster, the Disaster Research Group of the National Research Council has participated in supporting field research. Their financial assistance to this study is appreciated.

<sup>46</sup>Ibid., p. 211.

<sup>&</sup>lt;sup>45</sup>This is a classification used and explained in detail by Pauline V. Young, <u>Scientific Social Surveys and Research</u> (3rd Ed., Englewood Cliffs, N. J.: Prentice-Hall, Inc., 1956), pp. 157-59.

adults in each family to respond to a schedule to compare sex roles, women would not be interviewed if their husband were available for interview.<sup>47</sup> Nearly all of the direct interviews were taken by trained bi-lingual interviewers.<sup>48</sup>

<sup>47</sup>In Latino culture, the public expression of opinions is considered somewhat of a male prerogative in conjugal families. A symbol of an unfaithful wife encompasses a spouse who is not loyal to the views of her husband, especially in public. Without having heard the husbands responses, the women feared giving answers which might be contrary to those of her husband. In separate interviews, no opportunity would be afforded to recant and default in favor of the husband's opinion. Such an analysis of family structure is found in Oscar Lewis' "Husbands and Wives in a Mexican Village: A Study in Role Conflict, " in Olen E. Leonard and Charles P. Loomis, op. cit., pp. 23-28.

<sup>48</sup>At the beginning of this project, this writer was hospitalized and through the excellent cooperation of project sponsors, collaborators and directors, qualified bi-lingual graduate students currently employed in research projects dealing with Anglo-Latino problems, were made available for a 12 day period. Arturo DeHoyos, from Michigan State University, was especially instrumental in assuming leadership in conducting most of the direct interviewing. Such qualified interviewers with ability to converse in colloquial "border Spanish" added a great deal to the reliability of the data. All but a half-dozen of the direct interviews were conducted in Spanish due to the inability of Villa residents to be conversant in English. Precautions were taken to prevent class bias or ethnic deference to the interviewer--as outlined by Gerhard E. Lenski and John C. Leggett, "Caste, Class, and Deference in the Research Interview, "American Journal of Sociology, Vol. 65, No. 5 (March 1960), pp. 463-67. Further, the linguistic fluency of the interviewers was also an element of strong rapport in the interview situation resulting in no Villa households refusing an interview. For a classic account of the role of language in social research see Whyte, op. cit., pp. 296, and 304. See also J. J. Feldman, Herbert Hyman and C. W. Hart, "A Field Study of Interviewer Effects on the Quality of Survey Data, "Public Opinion Quarterly, Vol. XV (1950), pp. 734-61.

Focused interviews were held with leading representatives of Civil Defense, Red Cross, Public Safety, Churches, Schools and political organizations. These were done by the writer in the language of the informant.

The final instrument used in the direct interview was a nine page printed schedule in Spanish composed mostly of open-end items arranged in sequential order by time stages. During pre-test, some complicated indices adapted from previous Anglo-Latino researches were discarded because of the limited education and comprehension level of Villa respondents. To obtain more than a brief description of events, feelings and perceptions from Villa residents regarding the various emergency stages, met with failure. The chronological ordering of the content items was not only to assist recall of the interviewees, but also to assist in a meaningful analysis of the changes in orientation and attitudes from one temporal stage to another. Except for unusual circumstances<sup>49</sup> these interviews averaged less than one hour each. There was only one set of items which caused hesitancy and avoidance among respondents. These items were image questions regarding attitudes toward Mexico and comparisons of flood relief and flood consequences on each side of the river. A strong feeling of disassociation with Mexico prevailed and their answers inferred that since they were not Mexicans they knew no more concerning happenings in Mexico than anyone else. This pressure to distinguish their American image coexisted paradoxically with an overt pride in the cultural values and

<sup>&</sup>lt;sup>49</sup>The earliest interviews took much longer because of problems of physical access to sections of the village isolated by high water or impassable roads. When one interviewer was bitten by a dog the second day, extreme caution was shown and deference given to the many stray dogs in the area.

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> <sup>ast</sup>er Co<sub>lloc</sub>

language which Villa residents shared jointly with the Mexican people.<sup>50</sup>

The rapidity with which the direct interviews were completed following the flood is of great methodological import.<sup>51</sup> Full scale interviewing commenced within 10 days of the date of impact and was completed within 10 subsequent days. This lack of time between relocation and interview reduced the problem of consensus among respondents, an enigma of most disaster studies. This concern is well stated by De Hoyos while on a brief reconnaissance to Tampico, Mexico.

. . One of the major problems in finding reliable data is the extensive concensus of opinion reached by the people of the disaster area. It is probably true that the longer the time between the disaster and the investigation, the greater the concensus and the less reliable the answers to given inquiries. This factor, of course, affects adversely the reliability of information gathered long after the disaster.<sup>52</sup>

<sup>50</sup>Zeleny describes this as typical of Spanish-Americans of the Southwest. It appeared to have been carried to some extreme in Villa, apparently through the traditional pressure of the Anglo's to categorize all riverside community residents as "Mexicans." Carolyn Zeleny "Relations Between the Spanish-Americans and Anglo-Americans in New Mexico: A Study of Conflict and Accommodation in a Duel-Ethnic Situation." Unpublished Ph. D. thesis, Department of Sociology, Yale University, 1944, pp. 316ff.

<sup>51</sup>Loomis notes that not only does increased interaction tend to "standardize all the reports of what constituted reality . . . statements contrary to fact can be a part of the commonly held appraisal." (Italics mine) Loomis, op. cit., p. 136.

As this writer departed to the field, Arturo and Genevieve Dehoyos (who gathered the interviews for Clifford's comparative study, op. cit.) warned of this time lapse. Their experience in taking interviews two or three months following the actual flood in those border communities had made them conscious of the consensus which had developed. Since the variations in accounts and perceptions in the present study are attributed to the effect of role playing and existing crisis dimensions, the necessity to avoid consensual responses was of paramount methodological importance.

<sup>52</sup>Arturo DeHoyos, "The Tampico Disaster." Report to the Disaster Research Group, National Academy of Sciences, National Research Council, January 1956, p. 32. (Mimeo.) ţ.

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A unique means to test the degree of distortion caused by consensus was developed within this study. On the direct interviews, the names of those who were ill during the flood were requested. Of 42 names given, only 4 were named more than once, and only one person was mentioned three times. It is clear that no opinion had yet crystallized concerning persons who were ill nor had it been agreed upon what illness had been incurred.

Only three households in residence at the time Villa was first warned of impending danger were not interviewed. These could not be located before the termination of the interviewing. However, since the sample included 96.6 per cent of the total Villa households, it is so near to being a complete population that for analytical purposes, it was considered one.

# Data Analysis

The comparative method was used extensively in comparing role performances in various time stages and performances in various positions in the social structure. These were controlled by the combination of crisis dimensions extant. Logical inference was the basis of most comparisons as the instruments and data lacked the clinical precision to merit rigorous statistical manipulation. This area of research has traditionally been more amenable to the use of logical inference than its statistical substitute.<sup>53</sup>

Information from the direct interviews was coded in both tabular and analytical categories for complete IBM cross-tabulations. Information from focused interviews was arranged according to organization and time stage.

<sup>&</sup>lt;sup>53</sup>John C. McKinney, "Methodology, Procedures and Techniques," in Howard Becker and Alvin Boskoff, Modern Sociological Theory in <u>Continuity and Change (New York: Dryden Press, 1957)</u>, especially <u>PP</u>. 197 ff.

Crisis dimensions, role dilemmas, internal-external systems and the time-sequence model were developed as heuristic devices to probe the changing relationships of Anglo-Latino relations at various levels of social action during a stress situation.

Three indices were developed<sup>54</sup> of which only one, an index of Socio-Economic Status was used to any great extent. An index of Attitude toward Organizational Help and an index of Attitude toward Facility Adequacy at Evacuation Site had limited application within the present analysis.

#### Review of the Literature

Since many of the contemporary research findings will be analyzed in Chapter II, this review will attempt to give only a brief historical account of the major studies which indicate salient trends in the growth and development of disaster studies.

From this literature review it appears that the trends within the area of disaster research are inextricably connected to the relative dominance of a given discipline within the total Social Science field. Thus, prior to and during World War II when psychology was dominant among her sister disciplines, the research of stress and panic reflected this psychological dominance. As sociological research has been competing for scientific recognition since World War II, some of the recent more important contributions to disaster theory have emerged from the sociological tradition.

# Early Disaster Studies and Panic Theorists

As a point of departure for early disaster studies, most authors <sup>agree</sup> that Prince's Halifax account of a Nova Scotia explosion was one

<sup>&</sup>lt;sup>54</sup>A detailed explanation of the construction of these indices is found in Appendix II of this thesis.

of the earliest socially-oriented works.<sup>55</sup> Previous expositions were generally superficial accounts of financial loss, human carnage and misery, replete with sordid and bizarre details of death and destruction.<sup>56</sup> Prince's pioneering work set the stage for the next three decades as disaster investigators followed his assumption of the complete destruction of the social system as a usual occurrence during catastrophe. He relates:

[In Halifax[... there was a disintegration of the home and family ... [and] of the regulative system. ... There was a time when the city ceased to be a city, its citizens a mass of unorganized units. ... 57

Modern disciples of this view have been prominent in crisis and stress research. Examples include Cantril's analysis of the "Invasion from Mars" radio program, <sup>58</sup> the Wallace monograph on the Worchester Tornado, <sup>59</sup> and similar orientations from Speigel, <sup>60</sup>

<sup>55</sup>Samuel Henry Prince, "Catastrophe and Social Change," <u>Studies</u> in <u>History</u>, <u>Economics and Public Law</u>, Vol. 94, No. 1 (1920) Columbia University Press.

<sup>56</sup>Paul Lester, <u>The Great Galveston Disaster</u>: A Full and Thrilling Account of the Most Appalling Calamity of Modern Times (H. W. Kelley: Philadelphia, 1900); John Randolph Whitney, <u>True Story of the Martinique</u> and SS. Vincent Calamities: A Vivid and Authentic Account of the Most Appalling Disaster of Modern Times (Robert A. Pitts: Philadelphia, 1900); Logan Marshall, <u>The True Story of Our National Calamity of Flood</u>, Fire and Tornado (L. T. Myers: Locality unknown, 1913).

<sup>57</sup>Prince, <u>op</u>. <u>cit</u>., pp. 32-33.

<sup>58</sup>Cantril, op. cit.

<sup>59</sup>Anthony F. C. Wallace, <u>Tornado in Worcester: An Exploratory</u> <u>Study of Individual and Community Behavior in an Extreme Situation</u>. <u>Committee on Disaster Studies No. 3 (Washington, D.C.: National</u> <u>Academy of Sciences, National Research Council Publication No. 392,</u> 1956). See also by the same author, "Mazeway Disintegration: The Individual's Perception of Socio-Cultural Disorganization, "<u>Human</u> <u>Organization</u>, Vol. 16, No. 2 (Summer 1957).

<sup>60</sup>John P. Spiegel in Samual Liebman (Ed.) Emotional Reactions to Catastrophe in Stress Situations (Philadelphia: J. B. Lippincott, 1955). Wolfenstein, <sup>61</sup> Drayer, <sup>62</sup> and many others. <sup>63</sup> A modern statement of this view was included in a foreword for a journal issue dedicated to articles on disaster. Herein Wallace and Demarath state boldly that by throwing off "mechanistic fallacies" of behaviorism

our ability to analyze disasters will improve. We will be able to delineate how people normally behave in response to the gradual erosion of their socio-cultural systems. . . We will be able to grasp more precisely the process of response when socio-cultural systems do not disintegrate or change slowly, but collapse precipitously. . . .<sup>64</sup>

An article from the U. S. Armed Forces Medical Journal pushes this individualistic orientation to an extreme stand.

"Psychiatric first aid stations will be needed to take care of victims of panic and fear in case of A-Bomb attacks" two groups of doctors have declared. Panic may take more lives than actual A-Bomb attacks one group pointed out.

"Group panic" it was pointed out "involves unreasoning, uncritical and unadaptive movement of groups toward escape from danger."<sup>65</sup>

<sup>61</sup>Martha Wolfenstein, <u>Disaster - A Psychological Essay</u> (Glencoe, Illinois: The Free Press, 1957).

<sup>62</sup>Calvin S. Drayer, "Psychological Factors and Problems, Emergency and Long Term," The Annals, Vol. 309 (January 1956).

<sup>63</sup>See among others: H. R. Veltfort and G. E. Lee, "The Cocoanut Grove Fire: A Study in Scapegoating," Journal of Abnormal and Social <u>Psychology</u>, Vol. 38, Suppl. (1943); Irving L. Janis, Air War and Emotional Stress, The Rand Corporation (New York: McGraw-Hill Book Co., 1951); Enrico L. Quarantelli, "A Study of Panic: Its Nature, Types and Conditions." Unpublished Masters Thesis, Department of Sociology, University of Chicago, 1952. For additional titles in this tradition see the early chronological entries in Jeannette Rayner's "Annotated Bibliography on Disaster Research," <u>Human Organization</u>, Vol. 16, No. 1 (Summer 1957), pp. 30-40.

<sup>64</sup>Nicholas J. Demerath, and Anthony Wallace, "Human Adaptation to Disaster," Human Organization, Vol. 16, No. 2 (Summer 1957), p. 1.

<sup>65</sup>Quoted from an article entitled "Panic Aid Posts Urged After Bomb Attacks, " Science News Letter, Vol. 59 (June 16, 1951), p. 374. This latter view is the vein in which popular journalistic accounts of catastrophe and disaster are cast. This dominating influence in popular mass media has created a public image of human behavior in stress situations as irrational, uncontrollable, and unpredictable activity. In the light of recent scientific studies, this assumption becomes untenable as the explanation of the <u>usual</u> behavior in a stressful situation.<sup>66</sup> Although the theoretical possibility of a precipitious and complete collapse of the socio-cultural system exists, the most complete empirically based studies to date fail to find such a condition occurring as supposed. The continued use of such a theoretical framework is scientifically suspect for purposes of prediction and producing generalizations of human behavior.

# Recent Disaster Studies in a Sociological Tradition

The sociological approach advocates the proposition that social systems are not shattered with a catastrophic onslaught, but change in predictable, patterned ways during stress situations. This patterned behavior is hypothesized to be manifest even when the exigencies of a crisis cannot be met within the normally defined relationships. Emergency roles, which are patterned responses for unusual situations, are predictable means of handling behavior which cannot be dealt with in the limited confines of normal role expectations.

These restrictions are somewhat foreign to psychoanalysis and certain schools of psychology which have been active in disaster research.

<sup>&</sup>lt;sup>66</sup>This statement is partially a reflection on the disciplines involved and the initial assumptions made. As Inkles states, the professional training of the sociologist demands "explicit indication of operations to be performed, definite indication of the indices to be relied on, reproducibility, the possibility of replication and verification by others. "Alex Inkles, "Psychoanalysis and Sociology," in <u>Psychoanalysis</u>, Scientific Method, and Philosophy: A Symposium, Sidney Hook (Ed.) (London: Evergreen Books, Ltd.) Chapter 6, also Chapters 4 and 5.

One of the earliest<sup>67</sup> contributors to this tradition in 1932 was Carr who conceptualized disaster as a sequence-pattern of social changes.<sup>68</sup> His sequential approach became the groundwork for the extensive use of time models currently prevalent in catastrophe research. His attempt to delineate two dimensions of a crisis situation is a direct antecedent of the six crisis dimensions utilized by this study. Apparently little use was made of Carr's sequence-pattern concept for nearly two decades. Recent references to his work have been cursory rather than attempts to utilize his framework as a point of departure for subsequent analysis.<sup>69</sup>

Harry E. Moore has gathered catastrophe reports from his own tornado research and other sources and coordinated them into an ordered approach toward a theory of disaster.<sup>70</sup> This amalgamation of disparate conclusions, though lacking an overall framework, provides great insight into the various facets of disaster which Moore has emphasized. His studies covering the long range rehabilitation from

<sup>68</sup>Lowell J. Carr, "Disaster and the Sequence-Pattern Concept of Social Change," <u>American Journal of Sociology</u>, Vol. 8, No. 2 (September 1932), pp. 207-218.

<sup>69</sup>For example, Loomis, <u>op</u>. <u>cit</u>., p. 130, utilizing Carr's factors formulated a four-fold table of Disaster types, but no further attempt to relate these types to differential behavior is readily apparent in the essay.

<sup>70</sup>Harry E. Moore, "Toward a Theory of Disaster," American Sociological Review, Vol. 21, No. 6 (December 1956), pp. 733-37. More recently this author Tornadoes Over Texas (Austin, Texas: The University of Texas Press, 1957).

<sup>&</sup>lt;sup>67</sup>An arbitrary point in history should not discredit the work of Malinowski, Durkheim and Sorokin to mention only a few who were concerned with culture change and disaster generally. Sorokin is especially difficult to classify since much of his material on abrupt change in revolutions and calamities is of current usage. Sorokin op. cit.

tornado effects will fill a current void in understanding the postemergency phase over an extended time period.

Form, Loomis et al., while remaining on a rather high level of generalization from one kind of crisis situation to another, have used various empirical studies to frame more clearly the sociological approach--that cultural values and existing social structures must be known prior to assessing meaning to individual behavior.<sup>71</sup> Their propositions tend to refute traditional panic theory as they propose some generalizations which supply a basis for working out predictable patterns of behavior in unusual situations varying according to the sociocultural system involved.

Loomis, in a recent collection of essays, has utilized his Social System framework to study the elements and processes involved in stress situations. This articulating analysis has pointed up the tensionmanagement aspect of catastrophic situations and the persistence of traditional status-roles in the face of physical destruction. The role of the larger social system in sanctioning the work of voluntary organiza- ' tions is clearly outlined. His stated objective was not the testing of specific hypothesis but rather the demonstration of the utility of his conceptual schema for preliminary description and codification of findings.<sup>72</sup> Such a systemic contribution serves as a point of departure from which less inclusive studies might be more meaningfully pursued.<sup>73</sup>

<sup>71</sup>William H. Form, and Charles P. Loomis et al., "The Persistence and Emergence of Social and Cultural Systems in Disasters," <u>American Sociological Review</u>, Vol. 21, No. 2 (April 1956), pp. 180-85.

<sup>72</sup>Loomis, op. cit., Essay Three, especially p. 133.

<sup>73</sup>The Loomis-Beegle social system (an earlier version of the recent Loomis revision) was used as a conceptual framework by Charles Willard Fogelman "Family and Community in Disaster: A Socio-psychological Study of Effects of a Major Disaster upon Individuals and Groups within the Impact Area." Unpublished Ph. D. Thesis, Lousiana State College, 1958, Department of Sociology.

Clifford, in a penetrating cross-cultural analysis has written of the variation in perceptual images and subsequent reactions to disaster because of the difference in the social structures of two border communities.<sup>74</sup> Clifford demonstrated empirically the necessity of knowing cultural norms prior to assessment of emergency behavior as being irrational and erratic.

The National Opinion Research Center has conducted studies of 70 major or minor crises of differing types which involved more than 1,000 persons. A summary of their work clearly supports the sociological approach toward the examination of the phenomenon disaster. The NORC report states:

Our data indicate that the immediate problem in a disaster situation is neither uncontrolled behavior nor intense emotional reaction but deficiencies of coordination and organization, complicated by people acting upon individual (and often conflicting) definitions of the situation. It is this aspect of disaster behavior which is frequently identified erroneously as "panic."<sup>75</sup>

The most recent addition to this scientific tradition was an unpublished report and subsequently published volume covering the Flint-Beecher tornado.<sup>76</sup> In the latter volume Form and Nosow state that even in chaotic ruins, strewn with debris and bodies, the victim population was effective in supplying nearly all of the basic needs for themselves prior to the arrival of outside aid organizations. They further

<sup>74</sup>Roy A. Clifford, <u>The Rio Grande Flood</u>: <u>A Comparative Study of</u> <u>Border Communities in Disaster</u>, Committee on Disaster Studies Report No. 7 (Washington, D.C.: National Academy of Sciences, National Research Council Publication No. 458, 1956).

<sup>75</sup>Charles E. Fritz, and Eli S. Marks, "The NORC Studies of Human Behavior in Disaster," Journal of Social Issues, Vol. 10, No. 3 (1954), p. 33.

<sup>76</sup>William H. Form, Sigmund Nosow, and Charles M. Westie, "Rescue Behavior in the Flint-Beecher Tornado." Prepared for the National Research Council (Lansing, Michigan: Social Research Service, Michigan State University, 1956). (Mimeo.) The book, a revision of the report for lay readers was William H. Form, and Sigmund Nosow, <u>Comm</u>unity in Disaster, op. cit.

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indicate that when emergency and normal role expectations were in conflict, an individual was ambivalent and unable to perform as effectively as someone operating under a single role definition.

Form and Nosow further found that persons exhibiting symptoms of "panic and shock" were not necessarily withdrawn from rescue activity nor were they less effective in emergency activities than were others without these symptoms. Such emotional pressures proved to be no barrier to purposeful activity.<sup>77</sup> These findings are in perfect agreement with the NORC report which evaluates the present use of the "panic" concept in current professional literature.

Considerable attention has been focused in the literature on disaster behavior of one type of agitated reaction--panic. The term "panic" has been used quite widely (and quite loosely) to describe a wide variety of "irrational" behavior of individuals exposed to danger situations. It has in fact been used to describe behavior in situations of such widely different content that one is hard-pressed to name any element the situations have in common.<sup>78</sup>

It is not surprising to observe a professional shift away from the indiscriminate usage of "panic theory" as a residual category in which to place all unordered behavior. Recent scientific data emphasizes that lack of coordination and absence of mutual expectations are the disorganizing effects formerly referred to as "panic." A previous exponent of panic theory intimates that these recent findings have forced the following tentative conclusion:

> The American performs much better when faced with a concrete situation than in anticipation of an abstract future event. No matter how shocking the event might be, if he has something to do rather than to contemplate, his behavior is likely to be controlled and purposeful.<sup>79</sup>

<sup>77</sup>Ibid., pp. 86-90.

<sup>78</sup>Fritz and Marks, op. cit., pp. 29-30.

<sup>79</sup>John P. Spiegel, "Cry Wolf, Cry Havoc," <u>Bulletin of the Atomic</u> <u>Scientist</u> (April, 1954), p. 138. This can be compared with previous <u>authored</u> material cited in this Chapter, p. 32, footnote 60. space made follow

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In line with this recent scientific approach, the models of time, space and crisis which will be used in subsequent analyses, will be made explicit in detail in Chapter II of this thesis which immediately follows.

#### CHAPTER II

#### CONCEPTUAL MODELS IN DISASTER RESEARCH

In Chapter I, the theoretical framework guiding this study was examined. The complex nature of the temporal, spatial and dimensions of crisis models made their detailed examination at that time somewhat awkward. They were mentioned briefly and related to the other elements of the theoretical schema to be considered in more detail in this chapter. A review of time and space models will be followed by the modified versions of these models which were used in the present study. The remainder of the chapter will be devoted to a detailed examination of the dimensions of crisis which serve as a guide to predictable points of social stress during the various time phases of the disruptive situation.

#### A Systematic Approach to Disaster

In reviewing the literature surrounding disaster research one becomes increasingly aware of the need for an overall conceptual framework. Within the sociological tradition previously discussed, successful attempts at systematizing disaster theory have been made by Carr,<sup>1</sup>

<sup>&</sup>lt;sup>1</sup>Lowell J. Carr, "Disaster and the Sequence-Pattern Concept of Social Change," <u>American Journal of Sociology</u>, Vol. 8, No. 2 (September 1932), pp. 207-218.

Form and Nosow, <sup>2</sup> Loomis, <sup>3</sup> H. E. Moore, <sup>4</sup> and Sorokin<sup>5</sup> to mention only a salient few. Building upon their groundwork, the present study will highlight disaster types, a source of behavior prediction heretofore untapped. Killian feels that conceptual frameworks are useful in pointing out the inconsistencies in the present theory of disaster.<sup>6</sup> Janis, Demerath and Wallace agree that the need exists for some systematic categorization.<sup>7</sup> Powell, in calling for a comprehensive mapping of the entire scope of disaster, explicitly lends his support to this view.<sup>8</sup> To date, the major contribution toward systematizing disaster research appears to be the time and space models. In spite of their almost universal application to present disaster research,

<sup>2</sup>William H. Form and Sigmund Nosow, <u>Community in Disaster</u> (New York: Harper and Brothers, 1958).

<sup>3</sup>Charles P. Loomis, <u>Social Systems:</u> Essays on Their Persistence and <u>Change</u> (New York: D. Van Nostrand Co., Inc., 1960). Especially Essay 3 on "Social Systems Under Stress--Disasters and Disruption."

<sup>4</sup>Harry Estill Moore, <u>Tornadoes Over Texas</u> (Austin: University of Texas Press, 1958). Especially last chapter "Toward a Theory of Disaster."

<sup>5</sup>Pitrim Sorokin, <u>Man and Society in Calamity: The Effect of War</u>, <u>Revolution, Famine, Pestilance Upon Human Mind, Behavior, Social</u> <u>Organization and Cultural Life</u> (New York: E. P. Dutton and Company, 1942).

<sup>6</sup>Lewis M. Killian, "Some Accomplishments and Some Needs in Disaster S.udies," Journal of Social Issues, Vol. 10, No. 3 (1954), p. 70.

<sup>7</sup>Irving L. Janis, "Problems of Theory in the Analysis of Stress Behavior," Journal of Social Issues, Vol. 10, No. 3 (1954), p. 12 and Nicholas J. Demerath and Anthony Wallace, "Human Adaptation to Disaster," Human Organization, Vol. 16, No. 2 (Summer 1957), pp. 1-2.

<sup>8</sup>John W. Powell, "Gaps and Goals in Disaster Research," Journal of Social Issues, Vol. 10, No. 3 (1954), pp. 62-63. however, they lack the penetration and precision of a more refined model. Until some overall systematic theory of disaster is formulated, the reconstruction of events in time and space, as gross and wasteful as it appears to be, is still the most profitable means for discovering scientific uniformities. Spatial models have been used extensively in ecological theory and has sometimes been conceptualized as another dimension of "time-space." Suffice to say, it is useful in present disaster research to order and relate synchronic phenomena much as time models order data diachronically.

#### Time and Spatial Models

#### Utility of Time Models

Temporal reconstruction of events is a substitute for having access to a given population prior to the catastrophic occurrence. In disaster research first contact is usually made with the group in crisis during the latter part of the emergency phase or during the postemergency phase. In either case, relationships present at these later times are not identical to those of previous phases or stages. Thus, information regarding behavior prior to the interview must be obtained from memory recall by the victim respondents. Utilization of time models, an ordered sequence of events, allows the respondent to give a more accurate account of experiences and attitudes as they sequentially occurred. A chronological classification also helps to isolate those factors directly responsible for bringing about present attitudes and situations. To demonstrate the added precision when conclusions are limited to given temporal periods, a challenging and sophisticated treatment of community action will be evaluated. In his discussion the writer inferred that a flood occurrence was a cohesive device for promoting community solidarity.

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. . . the type of event helps determine whether a crisis will unite a community, defeat it, or cause controversy. A flood as we have said seldom divides a community; it affects all men much the same; pits them all against a common enemy.<sup>9</sup>

Comparing this to empirical accounts, it is apparent that such a statement is much too broad and covers too long a time period. Fritz and Williams agree that such unity would usually occur only during and immediately following the emergency period.<sup>10</sup> Loomis cites this as the "halo effect" which "lingers so that the heightened community solidarity can be noted well into the rehabilitation stage."<sup>11</sup> But is the inference that floods promote community solidarity a wholly accurate. one? While making a reconnaissance in the Presidio, Texas flood area, this writer was well aware of the reactivation of latent feuds as the water receded. The communities in the throes of destruction began waging an internal battle as rival factions of the social structure fought for supremacy in coordinating aid resources within the area.<sup>12</sup> Moore. studying structural and emotional changes during the time periods following a Waco, Texas tornado, noted both cohesion and conflict, depending upon what time period was involved. During the emergency phase,

Old rivalries and conflicts are forgotten . . . in the face of what seems to be an overwhelming task. Almost complete selflessness and great generosity is the emotional climate of this time. Giving of goods or of physical effort is a way of doing something. Merchants in Waco opened their stores and gave any supplies

<sup>9</sup>James S. Coleman, <u>Community Conflict</u> (Bureau of Applied Social Research, Columbia University. Glencoe, Ill: Free Press, 1957), p. 2.

<sup>10</sup>Charles E. Fritz and Harry Williams, "The Human Being in Disasters: A Research Perspective," <u>The Annals</u>, Vol. 309 (January <sup>1957</sup>), p. 48.

<sup>11</sup>Loomis, <u>op. cit.</u>, p. 142.

<sup>12</sup>Notes of personal observation, Presidio, Texas, October 10, <sup>1958</sup>.

requested by any person, with or without authority or responsibility, whether or not the materials could be used effectively.<sup>13</sup>

As the emergency lessened, Moore noted attitude changes.

. . . losses became apparent, and persons begin to seek someone to blame for their losses. . . Old conflicts are remembered and fanned into new life; new ones are created. Institutions, even religious ones active in rescue and temporary relief work, are attacked and accused of being heartless, of selling supplies donated for relief at exorbitant prices to the sufferers who must have them regardless of cost, or of shipping out relief supplies to be sold in other cities. . . .<sup>14</sup>

It would appear that the author picturing a flood as a cohesive device of initiating community action might well be correct if he limits such cohesion to the brief period during which the emergency exists, whereas conflict might be the norm of the period following the emergency.

Ellemers shows that a distinctive type of leadership emerges according to the phase of the emergency which is appropriate to such leadership.<sup>15</sup> In the account of the English Flood of 1953, tension and loss of high morale occurred <u>after</u> the period of extreme emergency and long-term adjustment was necessary in order to reinstate high morale.<sup>16</sup> In both a Tampico flood, a recent tornado, and the inundation of a U.S. optical plant, the period immediately following flood impact was noted for its "joking, lighthearted and cheerful spirit," followed by tension and fatigue as nerves became raw and physical exhaustion replaced the

<sup>13</sup>Harry E. Moore, "Toward a Theory of Disaster," <u>American</u> <u>Sociological Review</u>, Vol. 21, No. 6 (December 1956), pp. 734-35.

<sup>14</sup>Ibid., p. 736.

<sup>15</sup>J. E. Ellemers, General Conclusions: Studies in Holland Flood <u>Disaster 1953</u>, Vol. IV (Amsterdam and Washington, D.C.: Institute for Social Research in the Netherlands and National Academy of Sciences, National Research Council, Committee on Disaster Studies, 1955).

<sup>16</sup>John P. Spiegel, "The English Flood of 1953," <u>Human Organization</u>, Vol. 16, No. 2 (Summer 1957), p. 5.

"holiday spirit" with apathy, indifference and frequent misunderstandings.<sup>17</sup>

The need to place behavior of crisis situations within given temporal periods has been adequately demonstrated. Time models which have been used in recent disaster research will now be discussed.

#### Present Development of Time Models

Carr conceptualized disaster in a time-sequence pattern of differing stages back in 1932, <sup>18</sup> but little follow-up occurred until after World War II. A paper by Powell, Rayner and Finesinger was prepared for an Army Medical School symposium, which laid out various states or time periods found in their research.<sup>19</sup> Wallace, <sup>20</sup> Ellemers, <sup>21</sup>

<sup>17</sup>Arturo De Hoyos, "The Tampico Disaster." Report to Disaster Research Group, National Academy of Sciences, National Research Council (January 1956), p. 7. (Mimeo.) A descriptive account of a 1957 Tornado was recently published in which the event was seen from an onlooker's view of an event for "fun" and "profit," the latter involving a carnival-like atmosphere. Irwin Deutscher and Peter Kong-Ming New, "A Functional Analysis of Collective Behavior in a Disaster," <u>The Sociological Quarterly</u>, Vol. II, No. 1 (January 1951), pp. 21-36. Also, Anon., "Trial by Flood: What it takes to Recover," <u>Business</u> Week (September 10, 1955), p. 32.

<sup>18</sup>Carr, op. cit.

<sup>19</sup>John W. Powell, Jeannette Rayner and Jacob E. Finesinger, "Responses to Disaster in American Cultural Groups," in the <u>Symposium on Stress</u> (Washington: Army Medical Service Graduate School, 1953), pp. 174-93.

<sup>20</sup>Anthony F. C. Wallace, <u>Tornado in Worcester</u>: <u>An Exploratory</u> <u>Study of Individual and Community Behavior in an Extreme Situation</u>, <u>Committee on Disaster Studies</u>, No. 3 (Washington, D.C.: National <u>Academy of Sciences</u>, National Research Council Publication No. 392, 1956).

<sup>21</sup>Ellemers, <u>op</u>. <u>cit</u>.

Fogelman,<sup>22</sup> and the present study have used modifications of this early schema. Form,<sup>23</sup> Drayer,<sup>24</sup> Smith,<sup>25</sup> and others, though using fewer temporal periods, make somewhat similar functional divisions between the major phases. Moore,<sup>26</sup> as previously stated, used Carr's macrodistinctions but made further temporal distinctions without making them explicit. As seen on Figure 2, page 47, each researcher varies the time model used because of the type of crisis involved or the level of precision desired. But it is significant that these authors agree generally that behavior appropriate to one functional time period would not correspond to another time phase with any regularity.

The time model used in the present study employes a modified version of Form and Nosow and Williams. It is divided into phases and stages as follows:

Pre-Emergency Phase	Emergency Phase	Post-Emergency Phase
	<ol> <li>Warning Stage</li> <li>Threat and Evacuation Stage</li> <li>Dislocation Stage</li> <li>Relocation Stage</li> </ol>	<ol> <li>Immediate or Short-term rehabilitation</li> <li>Long-Term Re- habilitation</li> </ol>

<sup>22</sup>Charles Willard Fogelman, "Family and Community in Disaster: A Socio-psychological Study of Effects of a Major Disaster Upon Individuals and Groups Within the Impact Area." Unpublished Ph.D. Thesis, Department of Sociology, Louisiana State College, 1958.

<sup>23</sup>Form and Nosow, op. cit.

<sup>24</sup>Calvin S. Drayer, "Psychological Factors and Problems, Emergency and Long-Term," <u>The Annals</u>, Vol. 309 (January 1957), PP. 151-59.

<sup>25</sup>DeWitt Smith, "Emergency Mass Care," <u>The Annals</u>, Vol. 309 (January 1957), pp. 118-31.

<sup>26</sup>Moore, <u>op</u>. <u>cit</u>.

47 Evacuation - Threat and Rehabilita--Short-term Rehabilita--Long-term Emergency Emergency tion Stage Emergency tion Stage -Warning Relocation Stage Stoddard Disloca-Stage tion --Stage Stage Phase Phase Phase Post-Pre--- { Impact ---Evacuation Ellemers Warning Restora-Rescue Threat tion Irreversible Rehabili-Isolation Wallace Warning Change Rescue tation Steady Threat Impact State and Conditions Impact ---Inventory Recovery Disaster Warning Remedy Threat Rescue Powell et al. Pre-Integrative Protective Williams Adjustive (recovery Remedial period) Survival Impact Phase Phase Phase and Phase Phase Phase Emergency-Emergency Period III Emergency Period II Period I Disaster Form Phase Phase Phase Phase Post-Pre-Pre-Emergency Permanent Permanent Mass Care) Prepara-Rehabili-Rehabilition and Training Post Im-Relief) tation Smith pact Threat Impact tation 01 Impact ---Impact Drayer Impact Pre-Post Ì Disorganment and Reorgani-Readjustdromal Prelimition and Dislocaization nary or Period Carr zation Phase Pro-1

FIGURE 2. Various Time Models Used in Disaster Research

#### Spatial Models

In disaster research the most common usage of spatial models is to delineate areas of destruction according to intensity or aid sources according to availability. In most accounts it is merely a descriptive category rather than an analytical tool. Thus, it serves a function of effectively and succinctly ordering events as to what happened where.

In some accounts, spatial boundaries have special meanings beyond a mere geographical designation. In the Rio Grande study the spatial limits of the communities studies corresponded to the cultural boundary involved.<sup>27</sup> Yet, no further spatial categories are used in the analysis of the residence of the informant samples. Wallace, while designating some logical and well defined areas and hypothesizing that the "population and resources of each area play systematically different roles in relation to disaster, "<sup>28</sup> never quite arrived at the stage of testing these assumptions. His interviews corresponding to the filter area are mostly from "impressionistic accounts."<sup>29</sup> The time-lapse of aid mobilization in areas of "organized community aid" and "organized regional aid" was at the level of description, not analysis.

In contrast, the Form-Nosow account of the Flint-Beecher tornado utilizes these three main areas (impact, periphery and outside) to gain meaningful insight into the relationship of such variables as role ambivalence and the location of family members.<sup>30</sup> They found that the immediate needs of victims are met for the most part by the residents

<sup>&</sup>lt;sup>27</sup>Roy A. Clifford, <u>The Rio Grande Flood</u>: <u>A Comparative Study of</u> <u>Border Communities in Disaster</u>. Committee on Disaster Studies <u>Report No. 7 (Washington, D.C.</u>: National Academy of Sciences, National Research Council Publication No. 458, 1956).

<sup>&</sup>lt;sup>28</sup>Wallace, <u>op. cit.</u>, p. 3.

<sup>&</sup>lt;sup>29</sup>Ibid., p. 68. See pp. 65-80 for context.

<sup>&</sup>lt;sup>30</sup>Form and Nosow, <u>op</u>. <u>cit</u>., pp. 72-78.

in the impact area.<sup>31</sup> Peripheral residents were mainly concerned with general welfare of others throughout the emergency phase, while people in outside areas helped with general welfare in early stages and then, unable to continue in a meaningful rescue role, looked out for themselves.<sup>32</sup> Residents of the impact area who were outside at the time of the tornado were concerned about self and specific loved ones. Once informed of the safety of specific others, they continued extremely active in general welfare activity in a near euphoric manner throughout all phases. This illustrates at least one analytical use of the spatial model.

Social distance rather than geographical space is the prime focus of the spatial model in the present study. The Anglo-Latino setting is conceived of as the maintenance of traditional cultural boundaries of sanctions initially instigated by the dominant Anglo (or external) system. The Latino (or internal) system characterized by ethnicity and kinship ties, operates in a subordinate role within this context. Hence, the spatial model indicates a socio-cultural boundary rather than a clearly defined contiguous area, and the processes or factors which maintain or bridge this cultural boundary are the main foci of this study.

#### Major Dimensions of Crisis

# General Use of Disaster Type Schemas

As previously indicated, time and spatial models have been widely accepted for use in disaster research while only abortive attempts have

<sup>&</sup>lt;sup>31</sup>They report the following: "Those who lived and were in the impact area were the most active immediately after impact, for they performed more acts during their first phases than did all others combined. Ibid.. p. 81.

<sup>&</sup>lt;sup>32</sup><u>Ibid.</u>, pp. 76-78.

been made to distinguish conceptually the dimensions of one catastrophe from another. The classical meteorological designations (i.e. tornado, flood, earthquake, fire) currently used by Red Cross, Civil Defense and other relief and emergency organizations is more a matter of ease in categorizing relief disbursement and expenses than of a tool for ordering events and anticipating problems. For the social scientist, concepts must be developed which assist in formulating predictable generalizations concerning changing social relationships during crisis situations.

Carr<sup>33</sup> appears to have been the first writer in recent years to initiate the distinctiveness of the various dimensions of crisis and disaster situations. Fritz followed with a similar emphasis fifteen years later in 1954<sup>34</sup> and again in 1957. He made the following listing of crucial factors which must be considered in a scientific analysis of the various types of catastrophic occurrences.

- (1) The speed of the precipitating agent and length of forewarning to the population
- (2) The nature of the destructive agent
- (3) The physical scope and destructiveness of the disaster
- (4) The length of the threat.  $^{35}$

The increased sophistication in recognizing many more of the various dimensions of crisis is evidenced by a brief introduction to a recently circulated inventory of field studies. This inventory was written in August 1959 under the sponsorship of the Disaster Research Group of the National Research Council. One summary is contained as follows:

<sup>33</sup>Carr, op. cit.

<sup>34</sup>Charles E. Fritz and Eli S. Marks, "The NORC Studies of Human Behavior in Disaster," Journal of Social Issues, Vol. 10, No. 3 (1954), Pp. 29-35.

<sup>35</sup>Charles E. Fritz, "Disasters Compared in Six American Communities, "Human Organization, Vol. 16, No. 2 (Summer 1957), p. 7. Disasters themselves differ in many ways. They differ in their predictability, inevitability, and controllability; they differ in the nature of the precipitating agent (flood, explosion, tornado, hurricane, earthquake, etc.); in the assignable origin of the destructive agent (natural, man-made); in the assignable intent of the agent (fortuitious-intention; punitive, retributive, etc.) in the speed of onset (instantaneous, progressive); in their scope (focalized-diffused); in their duration (short, prolonged); in their primary destructive effects on the human organism and physical objects; in their secondary or lingering destructive effects; and in their repetitive quality (non-recurring, intermittent, continuous).<sup>36</sup>

It should be noted that the mere listing of these factors by experienced researchers does not obviate the necessity of demonstrating their utility as instruments of analytical value in disaster research.<sup>37</sup>

<sup>36</sup>Charles E. Fritz with Mark E. Nearman and Devorah K. Rubin, <u>An Inventory of Field Studies on Human Behavior in Disaster</u>, Disaster Research Group (Washington, D.C.: National Academy of Sciences, National Research Council, August 15, 1959), p. iii. This publication was received by this writer in the late spring of 1960, nearly one full year after the present six major crisis dimensions had been devised.

After an initial shock of perceiving much of my efforts of synthesizing summarized in a single paragraph, I realized that if such eminent authorities had felt such distinctions to be worthwhile, no doubt my attempts to pursue them beyond a superficial listing may be of value. The above factors have been included in a chapter on disaster in a social problems text by the same author. Following the listing the following statement appears: "The various combinations and permutations of these variables introduce numerous subtle contrasts and distinctions in human responses to disaster that cannot be covered systematically within the scope of this chapter. Fritz, "Disaster," in Robert K. Merton and Robert A. Nisbet (Eds.), <u>Contemporary Social Problems</u> (New York: Harcourt, Brace and World, Inc., 1961), p. 656.

<sup>37</sup>Dr. Martin Martel, Professor of Sociology, State University of Iowa, mentioned that in his role as a consultant to the National Research Council dealing with an interdisciplinary approach to disaster research, the greatest stumbling block was the lack of definite models. He further mentioned that these models which are needed must serve to delineate the situational factors which occur from one distinct type of disaster to another, in order to formulate generalizations. Notes from a conversation in Ames, Iowa, April, 1961. 52

#### A Detailed Discussion of Six Crisis Dimensions

From available empirical accounts at least six dimensions appear to be salient as factors which greatly determine the types of social cleavages or systemic linkages which occur in crisis situations. To what degree they are important is the focal point of this thesis. Killian suggests that locating these factors is the main aim of disaster research.

Basically, any disaster involves a disruption of the social context in which the individual functions. . .

The central problem of research becomes, 'What factors produce what degree of disruption in this social context, and how do individuals and groups behave in the face of this disruption?<sup>38</sup> The combination in which these six dimensions occur appears to be a crucial factor in predicting the presence and the degree of disruption in a given crisis situation. However, the assessed pattern of a given crisis will be a function of the persons or groups doing the assessment. In the present study there is a minimum of three viewpoints which must be differentiated. They are: The Anglo (external) system, the Latino (internal) system, and the scientific observer. Within the first two are sub-categories such as class, age, or sex groups. The greater the variation between the Anglo and Latino definition as to what aspects of the crisis dimensions best describe the crisis situation, the more potential for disaster which exists. The greater the agreement of these two systems regarding the pattern of dimensions which exists in a crisis situation, the higher the probability for accelerated coordinated reconstruction. For parsimonious reasons, only six of the many variables possible are considered as major dimensions of crisis. Further additions or deletions could be made if the utility of such a schema appears to warrant further refinement or additions. A detailed discussion of each dimension will follow a brief outline of these six.

<sup>&</sup>lt;sup>38</sup>Lewis M. Killian, "Some Accomplishments and Some Needs in Disaster Studies," Journal of Social Issues, Vol. 10, No. 3 (1954), p. 67.

I- FOCUS (Material vs Non-material emphasis)

Statistics of financial loss incurred are a crude index of the material scope of a given catastrophe. Non-material aspects such as personality and social adjustments are not so readily identifiable nor as easily measured as material losses, but are of equal importance in adequately defining the total impact of catastrophe.

### II- DIRECTNESS (Direct vs Indirect consequences)

Direct consequences are the result of the direct action of the catastrophic agent and are readily apparent at the termination of the onslaught in the emergency phase. Indirect consequences are those caused by the situation created by the impact rather than by the action of the catastrophic agent. They are normally less evident until after direct consequences have been dealt with satisfactorally.

### III- CONTROLABILITY (Sensate vs Ideational approach)

A sensate tradition views reality as only that which is presented to the sense organs. Modification of the external world to attain desired ends is through rational or empirical methods. The ideational tradition views reality as mainly spiritual, metaphysical and beyond comprehension of the senses. A fatalistic submission to the inevitability of Fate, Destiny, Nature or Diety either tends to exclude rational attempts at changing the environment or limit such changes to the caprice of the supernatural forces at work.

## IV- PERIODICITY (Unexpected vs Recurrent regularity)

Unexpected crises are those occurring in space or time contrary to their usual occurrence. Recurrent crises are of two sub-types: Recurrent--"near miss" events occur when warning and pre-emergency stages are frequently experienced without subsequent impact or emergency stages. Recurrent--closure crises are those in which anticipated catastrophe normally culminates in a catastrophic occurrence of some magnitude.

# V- TRANSIENCY (Progressive vs Instantaneous occurrence)

Progressive crises evolve over a period of time between warning and subsequent emergency stages, allowing time for less hasty adjustive behavior. Instantaneous catastrophes have a reduced or negligible time lapse between warning and impact stages. This compressed time precludes elaborate precautionary measures and forces hasty, personal definitions and decisions to meet the new situation.

VI- SCOPE (Diffused vs Focalized circumscription)

A diffused crisis encompasses all basic regional services and institutional facilities within the spatial and functional confines of the catastrophe impact area. A focalized crisis involves only a limited area to which nearby local and regional sources of aid and support facilities can be tendered, the latter lying outside the affected area.

Each of these major dimensions will now be discussed in detail, elaborating upon their usage in previous accounts of catastrophe or disaster.

Material vs Non-material dimension. The structural and functional ends of certain emergency organizations are focused upon the extent of material destruction occurring in a catastrophe. This dimension provides insight into the disjunctive effect on the social relationships involved when such an organization attempts to interact with a social system whose focus is primarily that of the non-material repercussions. Demerath and Wallace suggest that in order to curb misunderstandings in this area we must be

. . . More exact in our statements of what a disaster is a disaster to. There is a tendency to speak of "a disaster" with only the impact agent and a statistic for casualties and physical destruction in mind.<sup>39</sup>

Carr considered this dimension but mistakenly assumed that the physical collapse of cultural forms was an inevitable prerequisite to social disruption.<sup>40</sup> More recently, Danzig <u>et al.</u>, studying the effect of a rumor, gives evidence that non-material consequences are invoked even in the absence of real physical danger. When such danger is believed to be

<sup>&</sup>lt;sup>39</sup>Demerath and Wallace, <u>op.</u> <u>cit.</u>, p. 2.

<sup>&</sup>lt;sup>40</sup>Carr, <u>op</u>. <u>cit</u>., p. 211.

forthcoming, the non-material consequences began as if the catastrophe were a reality.<sup>41</sup> From this it can be noted that these aspects are independent entities, neither of which can be used as a criterion to measure the degree of disruption in the other.

When physical destruction is assumed to be a reliable measure of social distuption, a relief organization providing aid to disaster victims may be ineffective. Perpetuation of the organization depends heavily upon the statistical justification of expenditures rather than on accounts of sympathy and spiritual uplift administered.<sup>42</sup> Yet among the victims, the initial reaction to catastrophe is in terms of the disruption of affective relationships and need for sympathy. Paradoxically, the victim might criticise vehemently the impersonality of such an organization while accepting the material benefits which only such an efficiency-oriented structure could guarantee.<sup>43</sup>

Not only is there a distinct difference between those persons or organizations who are concerned with material aspects of catastrophe and crisis, but there appears to be a variation in how such material losses are defined. For instance, when a physical loss is suffered <u>purposefully</u> for the maintenance of non-material goals, it is viewed distinctly from a non-purposeful material loss. As previously noted,

<sup>42</sup>Loomis, <u>op. cit.</u>, p. 156; also Deutscher and New, <u>op. cit.</u>, pp. 28-30.

<sup>43</sup>Loomis treates this area of victim perception of aiding organizations and emphasizes the role of the professional in disaster who tries not to become affectively linked with disaster or his effectiveness ceases. Op. cit., pp. 139, 150-53.

<sup>&</sup>lt;sup>41</sup>Elliott R. Danzig, Paul W. Thayer, and Lila R. Galanter, The Effects of a Threatening Rumor on a Disaster-Stricken Community, Committee on Disaster Studies No. 10, National Academy of Sciences, National Research Council Publication No. 517, 1958). This monograph analyzes a broken dam rumor and finds behavior which would be expected had the dam indeed been broken.



the critical factor in deciding what is purposeful and what is not is the specific person or group making the evaluation.<sup>44</sup>

In summary, material or non-material consequences can occur independently of each other, and neither is an accurate index of the severity of the other.<sup>45</sup> Moreover, on any level of social action, when one person, organization or social system is focused on a materialorientation and the other is non-materially oriented, the potential for emergent disaster is greatly enhanced.

<u>Direct vs indirect dimension</u>. Direct consequences arise immediately from the action of the catastrophic agent whereas the indirect consequences evolve slowly from the disruptive situation left in the wake of catastrophe.<sup>46</sup> The former is much more visible than the latter,

<sup>44</sup>The exploitation and annihilation of the Haiti Indian population to fill Europe's coffers with gold was a rational and purposeful exploitation of natural and human resources from the view of the Conquistadores. From the Indian frame of reference the same occurrence was a disaster to the point of utter extermination. Similarly, the building of Cheops, the engineering of the Great Wall of China, the Kamikaze onslaught, or the slaughter of U.S. Marines at Tarawa, while all materially costly in terms of machines, supplies or human life, were purposefully calculated or risked for the attainment of a non-material goal--personal glory, national glory, religious satisfaction or similar equivalents.

Yet, when the pleasure loving passengers of the Morro Castle, or persons dancing in the reverie of Boston's Cocoanut Grove ballroom lost their lives amid great physical destruction, this was bemoaned as a <u>purposeless</u> loss of life and comparatively overemphasized if the number of lives lost and destruction in dollars were the only factors operating. See Ben Kartman and Leonard Brown (Eds.) <u>Disaster!</u> (New York: Pellegrini and Cudahy, 1948), p. 234; H. R. Veltfort and G. E. Lee, "The Cocoanut Grove Fire: A Study in Scapegoating," Journal of Abnormal and Social Psychology, Vol. 38, Suppl. (1954), pp. 138-54.

<sup>45</sup>An exceptionally clear statement written in lay terms is Fred C. Ikle, "The Social versus the Physical Effects from Nuclear Bombing," Scientific Monthly, Vol. 78, No. 3 (March 1954), pp. 182-86.

<sup>46</sup>These terms have been used in insurance adjustment with a different meaning from the usage here. For insurance purposes direct

and relief organizations are organized to deal exclusively with direct consequences.

In many ways these terms parallel the <u>manifest</u> and <u>latent</u> dichotomy of Merton.<sup>47</sup> While it would be illogical to impute an intended or unintended motivation to an impersonal catastrophic agent, an operational end of catastrophe (that of visible destruction) would allow Mertons concepts to be meaningfully applied.<sup>48</sup>

In 1927 the city of New Orleans was threatened by the rampaging Mississippi River. To save the city, a levee upstream was purposely broken destroying crops, killing livestock and ruining farmlands. These losses were compensated in lump sum cash settlements but these selfreliant traditional farmers did not have the long-term values needed to reinvest this money and in a short time were penniless and without the means of subsistance.<sup>49</sup> The direct losses of farmland and possessions were compensated but the indirect consequences involving a traditional way of life were overlooked.

When relief organizations terminate their emergency operations it is usually because the direct consequences of the catastrophe have been alleviated. The indirect consequences such as the necessity of family

losses are perceptible destruction of facilities and property whereas indirect loss is that of business opportunity and clientele during the period of reconstruction. Unlike present usage, insurance adjustors consider these factors as simultaneous occurrences.

<sup>47</sup>Robert K. Merton, <u>Social Theory and Social Structure</u> (Rev. Enlg. Ed., Glencoe, Illinois: The Free Press, 1957), pp. 60-82.

<sup>48</sup>Since Merton's concepts were not wholly appropriate for these dimensional distinctions, the reasons for not adopting his terminology is obvious. However, the reason for drawing similarities where possible is to allow the use of the entire reservoir of generalizations developed within this Mertonian typology wherever they apply.

<sup>49</sup>Kartman and Brown, <u>op. cit.</u>, pp. 196-205.

and occupational readjustment, and of spatial relocation, loss of selfrespect or loss of family status-givers are less likely to be considered by emergency agencies; yet the latter might be more critical to effective readjustment than the direct consequences involved.

Not all indirect consequences affect the social structure negatively. For instance, the Iriquois Theatre Fire of 1903 and the sinking of the luxury liner <u>Morro Castle</u> were indirectly the basis for establishment of safety codes for theatres and water safety regulations.<sup>50</sup> The bombing of Pearl Harbor, while having a disastrous material effect on the U.S. Pacific Fleet, provided the American citizens with a shibboleth to rally the morale and material sources of America for a World War II victory. The illustrations of this point are legion.

It can readily be seen that direct effects are far more perceptible than indirect consequences. Consequently, the lack of awareness of this dimension appears to be a major source of disaster for programs of relief administration during emergency situations.

Sensate vs ideational dimension. This dimension specifies the means through which given social systems ameliorate crisis situations. The sensate approach is to modify the environment through the rational use of empirical knowledge. There is an attempt to seek natural causes for natural catastrophes in an effort to prevent, blunt or cure the consequences of present or future catastrophic occurrences. Through the ideational approach, appeals are made for supernatural assistance whereas little effort is directed through scientific channels to modify the present disjunctive situation nor to make plans for prevention of its reoccurrence.<sup>51</sup>

# <sup>50</sup>Ibid.

<sup>51</sup>These terms are taken from Pitrim A. Sorokin, Social and Cultural Dynamics, Vol. I, (New York: American Book Company, 1937), pp. 55-101. Only certain aspects of these broad concepts are meant to On the island of Yap, when a typhoon approaches, the inhabitants

. . . get right to the heart of the matter by sending deputations to sacred places to work on the supernaturals sending the typhoons.

Correspondingly, there is a minimum . . . of rational preparation . . . They rely on magic to steady the house, when they have known for about forty years or more that ropes thrown across the top . . . will help considerably in keeping the house from blowing up and then down.<sup>52</sup>

The observation on Yap concludes with the following summary:

A significant portion--indeed, on Yap the most significant portion-of the response is not to the physical impact at all, but rather to the impact of the meanings with which it is invested.<sup>53</sup>

Although all Yap inhabitants define the meteorological genesis of the catastrophic agent incorrectly, all mutually accept sorcery as the precipitating agent. There is no conflict of definition nor of expectations regarding behavior in typhoons within the Yap culture. Therefore, even when a devastating catastrophe has been experienced on Yap, <u>disaster</u> as defined in this study <u>does not exist</u>. Since the Yap people define this phenomenon from an ideational framework, any rational or sensate approach to explain preventative measures by an outside source would only result in conflicting definitions, and disaster would emerge between the systems involved.

be inferred. As used in this study, the sensate approach would view reality as that existence measurable by the physical senses. In crisis situations, rather than take a position of indeterminism, the sensate approach would attempt to modify or exploit the external world to again maximize the physical satisfactions of life and minimize the disruptive elements.

The ideational approach would emphasize the supernatural or spiritual direction of Nature by Fate, Destiny or God. During a crisis situation, either a fatalistic acceptance of God's Will, or a determinism based upon compliance with God's wishes would be the ideational approach.

<sup>52</sup>David M. Schneider, "Typhoons on Yap," <u>Human Organization</u>, Vol. 16, No. 2 (Summer 1957), p. 13.

<sup>53</sup>Ibid., p. 14.

It has been empirically verified that distinct value orientations and social structures are reflected in the social adjustments made during the various periods of crisis.<sup>54</sup> Clifford, in a study involving communities across the U.S.-Mexican border concluded that cultural variations in the perceptions of disaster elicited different responses to the same empirical phenomenon. He states, in part:

A disaster agency cannot attempt to greatly change an existing system nor can it even ignore existing norms, loyalties and obligations. To ignore existing social structures in plans assumes members put community survival above other considerations and that all members evaluate community survival in the same frame of reference. This assumption is not supported by actions in Eagle Pass and Piedras Negras.<sup>55</sup>

The use of the sensate-ideational dimension allows some very basic distinctions to be made in emergency behavior. One can separate the means of effective coordination from the ends of rational efficiency or tradition maintenance. For instance, coordination exists to a high degree on Yap although all social activity is directed toward an end of rational <u>inefficiency</u> (if judged by middle class American standards) or ideational <u>efficiency</u> (i. e. countering sorcery). Were the Yap inhabitants to receive external aid in handling the problems of typhoon destruction and preventative preparation, the coordination would be low between the Yap people and the external aid sources. There is a tendency to "hold on to a familiar stable perceptual organization" and to "act in familiar ways that have proved reliable in the past, even though they are no longer appropriate to the immediate occasion."<sup>56</sup>

<sup>55</sup>Clifford, <u>The Rio Grande Flood</u>, <u>op. cit.</u>, pp. 56-57.

<sup>&</sup>lt;sup>54</sup>Roy A. Clifford, <u>Informal Group Actions in the Rio Grande</u> <u>Flood</u>. Unpublished report, Committee on Disaster Studies, National Academy of Sciences, National Research Council, February 1955, p. 55.

<sup>&</sup>lt;sup>56</sup>F. P. Kilpatrick, "Problems of Perception in Extreme Situations, "<u>Human Organization</u>, Vol. 16, No. 2 (Summer 1957), p. 21.

These same principles appear to be valid when applied to the American culture as well. An aiding organization in the U.S. is structured on the implicit assumptions of the sensate approach (i.e. that man can modify the present situation through his own action). If such organizations are called upon to administer aid to a sensate population, they would enjoy a far greater degree of reciprocal expectations than in giving relief to an ideational victim population.<sup>57</sup> It follows that for a sensate organization to successfully accomplish its ends in an ideational setting, its methods of operation must be made acceptable to both the ideational social structure and its corresponding patterns of behavior; otherwise, the degree of coordination between the two systems will be nil and disaster will prevail.<sup>58</sup>

Recurrent vs unexpected dimension. Recurrent catastrophes exhibit some patterned regularity in their occurrence at given intervals at specified areas or locations. This recurrent pattern has two distinguishable categories which are: Recurrent-closure type which concludes with an actual catastrophe, and the recurrent-"near miss" type in which an imminent threat normally dissipates its energies or alters its course short of impact, rarely resulting in catastrophe after warning have been issued. Unexpected crises are unique occurrences within

<sup>58</sup>For empirical accounts of such inter-systemic lack of coorination see Harry E. Moore, "Toward a Theory of Disaster," <u>American</u> <u>Sociological Review</u>, Vol. 21, No. 6 (December 1956), pp. 736-37; and Form and Nosow, op. cit., pp. 112-13, 166, 235-36.

<sup>&</sup>lt;sup>57</sup>It is generally agreed that the Latino culture is more ideationally oriented than is the Anglo culture. If this be so, the principles and means for instituting medical and health programs within the Anglo culture would not necessarily be acceptable within an ideationally-oriented system. This point is crucial to the problem of directed change across the Anglo-Latino socio-cultural boundary.

a given set of circumstances whose temporal or spatial occurrence does not follow a normally expected pattern.

This dimension examines the extent to which the kind of past experience with catastrophe, if any, affects behavior in subsequent situations. Certain occupations (i.e. miner, pilot, soldier, fireman) involve a calculated risk for those persons becoming actively engaged in these normal occupational duties. Persons who reside in flood plain areas, heavily timbered regions, or "tornado alley's" also are aware of the potential hazards of flood, fire or tornado. On the other hand, an unexpected explosion in a community where such an event had not be en anticipated incites human reactions which differ from the calculated risks foreseen by the Texas panhandle farmer and the Mississippi delta resident.

Recurrent-closure crises appear to have less disaster potential than either the recurrent-"near miss" or the unexpected type. One writer avers that the

> . . . willingness to take calculated risks in living in areas subject to recurrent disasters in order to gain certain ends . . . can all be given considerable credit for the general lack of serious psychological disturbances in most natural disasters.<sup>59</sup>

Fritz reports from his studies that when the impact agent is known from experience and similarly perceived by all, there is less hesitancy and less variations in defining the situation or the roles involved.<sup>60</sup> In recurrent-closure type catastrophes, this rigidity would be an asset for immediate establishment of shared definitions of the situation. As a popular account correctly notes:

**People** where floodtime happens usually don't run from water. They move out. They go away for a while.<sup>61</sup>

<sup>59</sup>Drayer, <u>op</u>. <u>cit</u>., p. 155.

<sup>60</sup> Fritz, op. cit., p. 7. This concurs with the findings of Schneider, op. cit., p. 15, in his account of Yap island.

<sup>61</sup>Mark Murphy, "Here Comes Another Flood," <u>Saturday Evening</u> <u>Post</u>, Vol. 222 (May 27, 1950), pp. 24-25.

In recurrent-"near miss" incidents, past experience would serve to insulate the internal group from reacting to external stimuli and warnings.<sup>62</sup> In such localities, warnings of impending catastrophe are held in disrepute. Those who react to such warnings with any seriousness are greeted with negative sanctions from the "old timers." It is not uncommon in a recurrent-"near miss" situation to find that manliness, courage and social prestige are incompatable with the taking of precautionary measures at a catastrophe warning. In the Piedras Negras-Eagle Pass, Texas, flood of 1954, previous warnings followed by recurrent-"near miss" episodes were so common as to create little or no disturbance to the civilian population nor to their religious leadership.

One priest reassured some members . . . by saying, "Don't worry until you see the church steeple under water." Fortunately, the water did not rise that high for it would have put most of the town under 20 or more feet of water.<sup>63</sup>

In downtown Eagle Pass, engineers painted a line along building fronts to indicate the expected water level within the next 24 hour period. It was not only ignored but made fun of by the "old seasoned veterans of the Rio Grande." A similar reaction occurred in a Miami, Oklahoma, flood where pre-impact flood maps were drawn showing the expected water levels. They were completely ignored.<sup>64</sup> A recent well-documented

<sup>63</sup>Clifford, Informal Group Actions . . ., op. cit., p. 30, footnote 9.

<sup>64</sup>Bradford B. Hudson, "Anxiety in Response to the Unfamiliar," Journal of Social Issues, Vol. 10, No. 3 (1954), pp. 57-59.

<sup>&</sup>lt;sup>62</sup>Loomis, <u>op</u>. <u>cit</u>., p. 128 and others correctly note that "speed, accuracy, and authoritative information, coordinated and adapted to specific needs of various groups concerned . . . is the most crucial need in emergencies." It is suggested that this dimension assists in specifying some of the major problems of coordination and adaptation of emergency information to target groups on the basis of the type of past experience with emergency situations.

historical treatise of the coastline floods of Essex, England, reported that people had been socialized to anticipate catastrophe rarely, and as such did not become sufficiently alarmed at the big tide warnings because of the numerous false alarms previously. People become immunized to frequent prognostications of danger which rarely materialized and as a result are forced to relearn the lesson of passivity at least once each century.<sup>65</sup> Moore reports that most persons living in areas subject to tornados make wry jokes about the possibility of being involved, but do not see themselves threatened to the point of preparatory action beyond the mere building of a storm cellar.<sup>66</sup> Civil Defense exercises such as the Chicago Mock Air Raid and **Project East River**<sup>67</sup> also tend to substantiate the theoretical proposition that continued warning without subsequent reinforcement tends to breed apathy rather than awareness as commonly supposed.<sup>68</sup> Such apathy is not shown in recurrent-closure nor unexpected emergency situations but is peculiar to the recurrent-"near miss" situation.

<sup>65</sup>Hilda Grieve, <u>The Great Tide:</u> The Story of the 1953 Flood <u>Disaster in Essex</u> (Chelmsford, England: County Council of Essex, 1959).

<sup>66</sup>Moore, op. cit., p. 734.

<sup>67</sup>Dwight W. Chapman, "Some Psychological Problems in Civil Defense," Bulletin of Atomic Scientists, Vol. 9 (September 1953), pp. 280-81; NORC Investigations (Mimeo reports) Surveys No. 308 and 284-A "Chicago Mock Air Attack."

<sup>68</sup>To demonstrate the necessity of making the distinction of this dimension, Chapman, <u>ibid.</u>, p. 281, has made some generalizations which are meaningless when applied to all three types discussed in this dimension. He states: ". . . excited or paralyzed behavior is the less likely the more the emergency triggers ready habits of reaction which have been learned in previous practice." If <u>apathetic</u> reaction had been learned in previous practice then so-called "paralyzed behavior" would be <u>more</u> likely in such a situation. In the recurrent-closure type, emergency role behavior is not only practiced frequently but the act of taking preparatory emergency precautions is socially acceptable and expected.<sup>69</sup>

In the unexpected catastrophe, emergency roles become appropriate immediately although the infrequent opportunity to play these roles results in a lack of precision as well as conflicting individual definitions of the situation. Due to the nature of the unexpected crisis, there is a lack of shared role expectations. In writing of the Yap people, Schneider clarifies this point.

The unique catastrophe is responded to in terms of the socially structured motives of individuals. The chronic threat takes on common meanings for a wide population.<sup>70</sup>

It is the unexpected crisis of which Kilpatrick speaks in suggesting that factual information released after impact be already interpreted before being issued so that personalized interpretations by the various individuals or organizations involved might be minimized.<sup>71</sup> Janis states that suggestibility is highest whenever reliable guides from past experience are lacking as a basis for perception or action.<sup>72</sup> These generalizations, while useful in explaining unexpected emergency situations, are not adequate to explain the recurrent emergency situations and the responses to them. It seems there exists ample evidence to demonstrate the utility

72 Janis, op. cit., pp. 21-22.

<sup>&</sup>lt;sup>69</sup>When this writer actively participated in Atomic maneuvers, a study was done of reducing anxiety among soldiers by adequate training and information disbursement. Such findings do not appear to be applicable to a civilian population whose immediate chances of encountering such danger is extremely remote. More anxiety was shown by the men in regard to passes to nearby Las Vegas than the "War maneuvers in Yucca Flat, from the consensus of fellow officers leading platoons through maneuvers. This absence of reinforcement among the civilian populace is often overlooked in applying such findings to Civil Defense. Shepard Schwartz and Berton Winograd, "Preparation of Soldiers for Atomic Maneuvers, " Journal of Social Issues, Vol. 10, No. 3 (1954), pp. 42-52.

<sup>&</sup>lt;sup>70</sup>Schneider, <u>op</u>. <u>cit.</u>, p. 15.

Kilpatrick. op. cit., p. 21.

of the recurrent -unexpected dimension to minimize error in the analysis of emergency behavior.

Progressive vs instantaneous dimension. A progressive crisis is recognized by the existence of a time period between the warning and impact stages suitable for some effective preparation for the ensuing catastrophe. In cases of instantaneous crisis, little or no time lapse occurs between the danger warnings and the actual impact.

In traditional meteorological designations, there is overlap and ambiguity in assuming that all floods are similarly progressive and that each tornado is like all other tornados--instantaneous. For example, flash floods and general floods were classified together. Also, tornadoes occurring without any warning, and those occurring with days of advanced notices are categorized together. The relative importance of limited time in which to adjust to the changing conditions is evident in nearly all other areas of social inquiry and should be given its rightful emphasis in disaster research.

The NORC concludes that the absence or presence of sufficient time between warning and impact stages in which to adjust to the situation is critical in evaluating the extent of disruption which such events will normally cause. They state:

> Our data indicate that an instantaneous disaster--i.e. one in which there is no forewarning--tends to produce the maximum in social and psychological disruption. If persons are given sufficient forewarning to prepare psychological and social defenses, the traumatic effects of the disaster will be minimized.<sup>73</sup>

Why should instantaneous events create more strain than a slowly evolving or progressive kind of stress or catastrophe? Harry Williams attempts one explanation in relating this paucity of time to the difficulties in decision-making. Analyzing communication within a cybernetical

<sup>&</sup>lt;sup>73</sup>Fritz and Williams, <u>op</u>. <u>cit.</u>, p. 7.

model, he asserts:

Compelling pressure to act and a compressed time perspective lead to error. . . In a servo system, rapidity, sensitivity and stability of response are reciprocally related. One result of a sharp increase in rate of response can be a decrease in the system's sensitivity; there is an increase in the probability of errors.<sup>74</sup>

In sudden crisis, internal and external feedback differences (i.e. an inability to define the situation internally consistent with the external perception) confuses choice-making which is a subsequent contributor to the dilemmas of role ambivalence. In the Beecher-Flint tornado, a brief period of indecisiveness after the instantaneous event was followed by intensive activity bordering on the euphoric by the victims themselves to restore equilibrium.<sup>75</sup> Moore cites evidence from his tornado research to affirm that the suddenness of appearance and the unexpectedness of the event causes reactions not commensurate with normal expectations.<sup>76</sup> That such reaction is true in sudden occurrences other than tornados is substantiated by an observation of the English flood by Speigel.

. . . people had very little time to orient themselves to the stimuli which suddenly confronted them. For this reason many initially made a series of incorrect assumptions as to what was going on. The usual process was an attempt to relate the emergency stimuli to normal events.<sup>77</sup>

In a progressive type catastrophe there is time for some preparation and forethought of appropriate roles and possible solutions to conflicting demands which may occur. Often such behavior is characterized by its calm and consistent implementation of normal or emergency roles.<sup>78</sup>

<sup>&</sup>lt;sup>74</sup>Harry B. Williams, "Some Functions of Communication in Crisis Behavior," Human Organization, Vol. 16, No. 2 (Summer 1957), p. 17.

<sup>&</sup>lt;sup>75</sup>Form and Nosow, <u>op</u>. <u>cit</u>., Chapter 4, pp. 54-82.

<sup>&</sup>lt;sup>76</sup>Moore, <u>op</u>. <u>cit</u>., p. 734.

**<sup>77</sup>**Spiegel, "The English Flood of 1953, "<u>op</u>. <u>cit</u>., p. 4.

<sup>&</sup>lt;sup>78</sup>Murphy, <u>op</u>. <u>cit</u>., pp. 24-25.

External aid organizations can be alerted and mobilized prior to actual impact. The internal system also has time to begin a systematic self-help program frequently at variance with the prepared directives and procedures of the external relief organizations.

This dimension emphasizes the distinct questions which are asked in each type. In the instantaneous catastrophe, the question arises: "WHAT is to be done to alleviate this problem?" In the progressive situation the question becomes: "IF and WHEN this condition becomes an emergency, what can be done?" The former question imposes greater problems on the multiple-role and role-set dilemmas, the latter creates ambivalence in the situational dilemma. The problems involved are not synomymous and this dimension is useful in pointing out the distinct implications in each type.

Diffused vs focalized dimension. A focalized catastrophe occurs in an impact area limited in scope in which surrounding basic facilities, services and relief sources are maintained intact. A diffused catastrophe encompasses a larger, more general area including the <u>basic</u> services and facilities. This latter type looms even of greater importance in the present day emphasis on national and international relief organizations to assist local associations when an emergency warrants an increased amount of aid.

In a focalized catastrophe, the areas adjacent to the impact area are potentially capable of a broader supply of goods and relief services than similarly oriented local outlets.<sup>79</sup> Where it is possible in a focalized catastrophe situation, centralized control for the relief operation lying outside the stricken area allows a high possibility of sending in coordinated groups of workers.<sup>80</sup> However, this type of

**<sup>80</sup>Form** and Nosow, <u>op</u>. <u>cit</u>., p. 234.

<sup>&</sup>lt;sup>79</sup>Lewis M. Killian, "Some Accomplishments...," <u>op</u>. <u>cit.</u>, pp. 69-70.
circumstance also invites the mass assault of donated goods and services, along with the hordes of sight-seers, volunteers and onlookers, which create an operational problem for both the relief and regulatory agencies.<sup>81</sup> When donated relief fulfills a large share of emergency needs, local solidarity or pride will stimulate criticism against further outside relief help which does not coincide with the emergency norms of the affected population.<sup>82</sup> Moreover, when functional exigencies and charter responsibilities makes an entire operation dependent upon the non-completion of one single aspect, national organizations are loath to coordinate a vital part of the program to another agency without retaining some control in carrying out the responsibility thus relinquished.<sup>83</sup> For this and related reasons, a tendency toward

<sup>81</sup>For an excellent monograph dealing with the problem of the mass assault see Charles E. Fritz and J. H. Mathewson, <u>Convergence</u> <u>Behavior in Disasters: A Problem in Social Control</u>, Committee on Disaster Studies Report No. 9 (Washington, D.C.: National Academy of Sciences, National Research Council Publication No. 476, 1957).

<sup>82</sup>Fritz and Williams, op. cit., p. 48.

<sup>83</sup>Form and Nosow, op. cit., pp. 128-29, suggest that an internal coordination of all aid organizations at every phase of disaster "would aid in avoiding overlaps and gaps in relief aid. Such a suggestion begs the question of legal or charter responsibility of the Red Cross and its quasi-official status. Held Congressionally responsible for effective relief and rehabilitation of a declared disaster area, it is dysfunctional to imagine their delegating a critical facet of relief to another volunteer relief agency without being assured that such agency would work in harmony with the procedures and ends of the Red Cross. Were such delegated activities not accomplished, the Red Cross would be held responsible for the failure and would be forced to reassume the portion delegated and carry it to completion. Hence, they forstall such inevitabilities by insisting upon their domination of activity which is coordinated with and part of the Red Cross program. While such quasi-legal obligations carried by the Red Cross are not shared by other relief agencies, it is safe to assume that little progress will result from efforts to share and coordinate relief activities under multiple decisionmaking bodies when one of these organizations is the American Red Cross. See also, Clifford, The Rio Grande Flood, op. cit., p. 133.

independent and uncoordinated organizational help is noted especially in focalized catastrophes. The theory underlying this overlapping of supplies and services, the Cornicopia theory,<sup>84</sup> has been in widespread use without manifest awareness of its limitations.

Wallace noted that in Worchester, successful application of the Cornicopian principle was possible because (a) there was little damage to the external sources of aid, and (b) there was no area nearby competing for aid from these same sources.<sup>85</sup> A classical illustration of the failure of the Cornicopian theory is the case of Peshtigo, Wisconsin, which burned at the same time as the great Chicago fire. As Chicago became deluged with food, clothing and supplies, a special proclamation by the Wisconsin Governor went unheeded as Peshtigo suffered without external relief aid, even though more casualties were incurred in the Peshtigo fire than occurred in Chicago.<sup>86</sup> Realizing the limitations of the application of the Cornicopi principle in focalized catastrophes, it would seem to be even more dysfunctional in diffused situations.

A diffused type of catastrophe exhibits an entirely different problem from that of the focalized type. Disaster plans (with the possible exception of atomic defense) rarely anticipate the diffused crisis. For example, a thesis designed to establish procedures of emergency Hospital operation in a metropolitan area never explicitly questioned the survival of the hospital nor its sources of water and power. The implicit assumption was that a focalized catastrophe would occur in

<sup>85</sup>Wallace, <u>op. cit.</u>, pp. 155-57.
<sup>86</sup>Kartman and Brown, <u>op. cit.</u>, pp. 47-50.

<sup>&</sup>lt;sup>84</sup>This theory is derived from the mythical Cornicopian horn of plenty and is the sheer mass of services and material aid which is able to meet the demands of the crisis situation in spite of inefficiency and duplication. For further detailed explanation of its implementation see Irving Rosow, Authority in Natural Disaster, Disaster Research Group, National Research Council. He treats it as a "wave supply." (Unpublished mimeo.)

some other location than the immediate hospital area.<sup>87</sup> Such planning for diffused situations must involve the possibility of district, regional or Federal assistance.<sup>88</sup> An empirical account of a diffused catastrophe will be briefly examined to demonstrate the distinct type of problems which are encountered within this type.

In the Kansas City flood of 1951, most of the pure water facilities, pasteurizing and sewage plants were out of action. More than 16,000 head of dead livestock littered city streets. The basic facilities and services of the city had suffered the brunt of the catastrophe. There was immediate need to denature contaminated edibles, restore communication and transportation facilities, and repair power and water sources. This was effected by the establishment of an internal coordination center. External aid sources were unable to assist except by channeling their aid through the internal coordination center.<sup>89</sup> There appears to be grave limitations as to how applicable procedures developed for relief in a focalized catastrophe would work in a diffused type or vice versa.

In programs advanced which are not aware of the functional differences between these two dimensions, there is slight hope for effective action. In a medical plan formulated for use in a diffused catastrophe, the following procedures were suggested:

The unprecedented problems to be faced demand uniformity of supplies, training and emergency procedures and patterns among

<sup>87</sup>Virginia A. Reid, "A Disaster Organization Plan for St. Johns Hospital, St. Paul, Minnesota," M. A. Thesis, School of Hotel, Restaurant and Institutional Management, Michigan State University (1954).

<sup>88</sup>Val Peterson, "Co-ordinating and Extending Federal Assistance," The Annals, Vol. 309 (January 1957), pp. 52-64.

<sup>&</sup>lt;sup>89</sup>D. F. Metzler, "Emergency Sanitation Lessons from 1951 Flood in Kansas," <u>American Journal of Public Health</u>, Vol. 43 (April 1952), PP. 367-38.

medical practicioners and volunteers. Routine peacetime practices cannot be employed.

First aid stations will be set up in concentric rings around each disaster area. They [the medical group], by-pass the earliest injured encountered and go the innermost rubble-free streets to establish location of operation.<sup>90</sup>

These procedures implicitly assert that no organized activity will be in operation, that the disaster area can be readily defined, that those injured can locate such stations when and if rubble-free streets are found and other unrealistic specifications. Even more utopian is a suggestion that in case of A-Bomb attacks psychiatric first aid stations will be needed to handle panic and fear cases.<sup>91</sup> In one instance, nutritional experts have adapted emergency menus to both focalized or diffused situations. The menus include alternatives with water and heat and all other combinations of one or both water and heat lacking.<sup>92</sup> One certainty arises from identifying the differences between the focalized and diffused types, and that is the need for testing the generalizations developed from one type to its applicability in the other.

In summary, the utility and coordination of external relief agencies to assist with internal problems will vary according to whether a focalized or diffused situation exists. Moreover, the organizational level of relief to which appeals must be made might well be a function of this same dimension.

<sup>&</sup>lt;sup>90</sup>Anonymous, "Emergency Medical Care if Disaster Strikes," <u>Ameri</u>can City, Vol. 66 (July 1951), pp. 106-8.

<sup>91 &</sup>quot;Panic Aid Posts Urged After Bomb Attacks, " Science News Letter, Vol. 59 (June 16, 1951), p. 374.

<sup>&</sup>lt;sup>92</sup>Robert S. Goodhart and Norman Jolliffee, "Principles of Emergency Feeding for a Large Metropolitan Area in Catastrophe," <u>American Journal of Public Health</u>, Vol. 42 (April 1952), p. 373.

#### The Empirical Use of These Major Crisis Dimensions

These constructs have separated certain aspects of the catastrophe or crisis situation which have been somewhat fused in earlier accounts. They are heuristic devices to more clearly delineate the distinct aspects of a given variable thereby increasing the predictive utility of empirical generalizations derived from disaster studies.

Like all ideal-type constructs, no empirical case fits into the polar extremes. Hence, additional precision might be gained by inserting an additive metrice for each dimension, presupposing that such dimensions could be shown to have some analytical utility. In the present stage of development, they serve only to focus on the major factors concerned and to provide a conceptual framework in which to order empirical data in a meaningful manner.

#### CHAPTER III

#### **PRE-EMERGENCY PHASE**

The Research Site

The research site was a community located in the Lower Rio Grande Valley of Texas near the banks of the Rio Bravo.<sup>1</sup> To fully understand the cultural, social, and economic atmosphere in which the catastrophe occurred, a brief description follows of the region surrounding the project area.

#### Historical and Regional Setting

The Lower Rio Grande Valley consists of a 40-mile wide land belt along the Rio Grande extending roughly from Laredo, Texas, to Port Isabel, Texas, on the coast of the Gulf of Mexico. Spain colonized this valley in the mid-Eighteenth century and it was declared part of the United States a century later in 1846. This region was prominent in the 1848 war with Mexico and figured strategically in the Civil War, being a port of entry and export with Europe. During this time it became a marginal land with marginal cultures. Small settlements of 100-500 persons mainly of Spanish descent, emerged along the entire riverbank of the Lower Valley. It is one of these traditional Spanish-American river border communities that is the object of research in this study--Villa,<sup>2</sup> Texas.

<sup>&</sup>lt;sup>1</sup>Spanish synonym for the Rio Grande, used especially by those persons who were born and/or raised in Mexico and that still converse principally in the Spanish language.

<sup>&</sup>lt;sup>2</sup>To preserve the anonymity of confidential information, the name of the Latino community, its residents and key figures in relief agencies have been given pseudonyms by the writer.



There is a heavy concentration of Spanish-speaking inhabitants throughout the Lower Valley, but especially are they concentrated in Hidalgo county in which Villa is located. For example, in 1948 Hidalgo was one of two Texas counties to have over 100,000 Spanishspeaking people in their official population figures.<sup>3</sup> With a concentration of more than 400,000 of this ethnic group in the four adjoining counties of Cameron, Hidalgo, Starr and Willacy alone, the Anglo-Latino ratio creates an intensification of the cultural barriers traditionally existing between these peoples. This tradition consists of two ethnic groups existing in juxtaposition on a non-equalitarian basis.

The dependency of this region for employment and survival on cultivated agricultural products is a critical factor in the present analysis. One third of the buying income of the "valley city" (these four counties previously named) comes from the one million cultivated acres which depend principally upon the stored water of the Falcon reservoir. Citrus, vegetables, cotton, and tropical fruits as well as beef animals, require a tropical region. In the sequence of events leading to the flood studied in this project, this perennial demand for storage water is a crucial element in the decisions which were made concerning water preservation and flood control.

Upstream from Villa are two giant reservoirs; the Falcon reservoir on the Rio Grande 75 miles downstream from Laredo, and the Marte Gomez reservoir on the San Juan river. The latter converges with the Rio Bravo just 25 miles downriver from Falcon Dam. Future dams downriver are in the planning stages as flood control and water storage units. To aid these dams to avert floods which are a constant threat to the downriver communities, a complex network of floodways

<sup>&</sup>lt;sup>3</sup>Lyle Saunders, <u>The Spanish-Speaking Population of Texas</u>, Inter-American Education Occasional Papers V: The University of Texas Press, Austin, Texas, December 1949, p. 56.

carry excessive water from the upstream Rio Grande to the Gulf.<sup>4</sup> The floodway outlet farthest upstream is located only a few miles downstream from Villa. Recent leveling and reclamation projects along the river bank near Villa had forced a shift in the river current over the past few years and had unknowingly eliminated the effectiveness of this floodway outlet. Lack of a floodway to reduce pressure upstream had much to do with what occurred in Villa.

The 83 hamlets and cities comprising the "valley city" tend to be highly integrated within a complex network of transportation and communication channels. Three major highways running parallel to the river attached to a maze of secondary blacktop roads, provide good farm-to-market transportation. These do little for the hordes of subsistance farmers or farm laborers of the riverside hamlets who cannot afford their own automobiles. There are only 92, 500 automobiles in this population of nearly a half-million persons. Two way communication is somewhat limited in rural hamlets also, there being only 57, 658 telephones in this population center of half a million people.<sup>5</sup>

In contrast, mass communication facilities provide good coverage to Valley communities. Two TV channels (Harlingen KGBT-TV CBS) and Weslaco (KRGV-TV NBC) give adequate news, weather and storm warning reports to valley TV owners. Seven full or part-time U.S. radio stations supplement the four daily newspapers of the region. In addition there are numerous local and community newspapers with

<sup>4</sup>The Lower Valley floodway system has been 35 years in building at a cost of over \$30,000,000. More than 90,000 acres of farmland have been contracted for flood easements. It was begun soon after the disastrous flood of 1922. Corpus Cristi Caller, Saturday, October 18, 1959, p. 10B. See also, Valley Evening Monitor, October 19, 1958, p. 11A for additional sketch and facts.

<sup>5</sup>Valley Events, An Official Publication of the Lower Valley Chamber of Commerce, Brownsville, Texas, 1958.

periodic editions. Because of rural delivery time lapse, the newspapers and press are not as important as the mass media in disseminating weather news. Moreover, the lack of facility in reading English makes the Spanish-speaking adults depend more upon TV and the Mexican radio stations for their information than upon written sources.

The Internal System

#### History and Social Structure of Villa

Villa is in the eastern end of the Lower Valley. It is situated in the southwest corner of Hidalgo county within the trading area of Mission, Texas. A brief history of the community was given by an elderly reliable informant.

The first families to settle in the vicinity of Villa came in the initial years of the eighteenth century. These people migrated from the interior regions of Mexico because of land grants obtained from the King of Spain. Among these were my grandfather's parents, Dionicio Cado. At that time, the Rio Grande was not yet the boundary line separating our country from Mexico. Most of the original families settled in the area then pertaining to Reynosa Dias.

In 1865, a gigantic flood completely destroyed that settlement and the people were dispersed. Reynosa Dias was moved to the area presently occupied by the City of Reynosa, Tamaulipas, Mexico. Many families left and came to Villa, then known as "Ojo de Agua."

Among the early settlers came the Cado, Millar, Gorda, Laguna, and other well known local families. These family groups have remained ever since and presently compose the larger percentage of the community's population.

In the course of time, families have moved away and failed to return. Sons and daughters have departed in the search for better educational and economical opportunities. But the community lives on. Its existence has been strengthened by the tremendous increase in agriculture which has come into effect in recent years. This is the product of the introduction of new farmlands and new techniques to increase crop yields.

Many floods have come and gone. Some of the worst occurred in the years of 1909, 1922, and 1933. Should the community ever be destroyed in its entirety by another flood yet to come, we will come back and build again.<sup>6</sup>

Many respondents know that their parents, now dead, were raised in these very houses. The present day Villa had changed little over a period of many years remaining still, in Toennies terms, a Gemeinschaftlich society.

Villa residents had zealously guarded their history of American citizenship, while simultaneously maintaining the cultural traditions and language of their Mexican ancestors. The degree of intermarriage and direct consanguial bonds between certain families had resulted in the dominance of the Tula, Quinto, Millar, and Gorda families. The sole isolate in this Latino community kinship network was an Anglo family who had lived for some years in the community but whose interests were centered elsewhere.<sup>7</sup>

Only 15 per cent of Villa adults had been in the United States for less than 30 years, and only one male (a recent groom) was the only known non-U.S. citizen.<sup>8</sup> The permanence of the citizenry was further demonstrated by the fact that only 4 of the 86 household heads interviewed had lived in this region less than ten years, and four out of every five households had spent their entire lives as Villa residents.

The language ties with Old Mexico were strong inasmuch as very little opportunity occurred for the non-educated adult population to learn

<sup>&</sup>lt;sup>6</sup>An interview with Juan Cado, the local authority in genealogy and tradition of Villa, taken by H. Torres, a project interviewer and Juan's pariente. November 7, 1958.

<sup>&</sup>lt;sup>7</sup>This family was an Anglo Mennonite missionary who taught in a nearby Church school of that faith.

<sup>&</sup>lt;sup>8</sup>The criterion for "citizenship" of Villa residents is unknown and may differ somewhat from the legal requirements set forth by U.S. immigration statutes. The recognized criterion is whether a person can be referred to as "we" since Villa respondents never associate "we" with Mexico nor Mexicans and are always very careful to make this point clear.

or use English. The nearby Reynosa, Mexico, radio stations provided music and news in Spanish. The children of necessity were bi-lingual, receiving their formal schooling in English, but conducting family and community affairs in "border Spanish."

The total population of Villa was estimated at 513 persons comprising 110 households. Many of these householders were perpetually absent from the community working in agriculture further North as migrant laborers. For instance, at the time of this flood, only 89 households totaling 364 persons were actually in Villa. A graphic portrayal of the population pyramid for these 89 households is shown in Figure 4.

The household composition of these same 89 households showed a heavy concentration of children, typical of a rural Spanish-speaking Catholic community. These households ranged from one single person to eleven and seventy-five per cent of them were conjugal type families.

All but three Latino and the lone Anglo household were associated with the traditional Catholic faith. A small Catholic Church in the community had held masses continuously each Sunday since 1932 until the present flood.<sup>9</sup> A cemetery located on a nearby knoll to the north of the village was maintained by the voluntary Catholic fellowship, the St... Joseph Club. While not consciously restricting membership, active participation in the St. Joseph Club appeared to be limited to higher status members of the community. The non-Catholic households consisted of an Anglo Mennonite missionary family and two Mennonite and one Baptist Spanish-speaking households. The single Anglo family was extremely isolated socially and its members apparently had little understanding of the community or its activities. The Spanish-speaking

<sup>&</sup>lt;sup>9</sup>Stated by Reverend Edward Fitzgerald, Pastor of St. Mary Magdelene Church, in Valley Evening Monitor, October 20, 1958, p. 2.

FIGURE 4. Population pyramid of 86 Villa households by Age and Sex.\*

Male





\*Note: Sex of children under 14 years not determinable from data collected. This age group was plotted assuming an equal sex ratio.

non-Catholics were integrated within the kinship structure despite their religious difference.

The Villa school was a functional part of the Alfaro Consolidated School District, the latter covering an approximate area of 16 square miles with over 6,000 students. The Villa grammar school provided only four grades of formal education. Additional training up to 12th grade was available in the nearby Verde High School. Some neighboring riverside villages had six grades while others had no local school facilities. A central grammar school at Verde provided schooling for villages with no local facilities. As compared to other river border communities of equal size, Villa had a rather high proportion of persons with relatively good education. It, like neighboring border communities, had a high percentage of adults with no formal education at all. Living in Villa were four Alfaro School bus drivers, the high school vocational agriculture instructor, and two Villa grammar school teachers. This provided a relatively close tie between school activities within the school district and the Villa residents. A more extended analysis of educational attainment by Villa residents reveals that there was a strong inverse relationship between years of formal education and age. The older adults who either came from Mexico at an early age or had no opportunity to attend educational facilities in the World War I era, rarely had more than one or two years of formal schooling, and more often than not had none. Four out of every five persons beyond high school age had less than eight years of formal schooling, with a median of four years completed. At the time of the study, however, only three persons of school age (all girls) were not currently enrolled and attending public school.<sup>10</sup> Educational attainment seemed to be related to sex. The males had a considerable number of dropouts

<sup>10</sup>At this time there were 31 families away from Villa working as migrant agricultural laborers. It is safe to assume from information available that children up north are those who have previously been

at the 4-5 grade level. This might well be related to the pressure to leave school after the fourth grade to work as a migrant agricultural laborer. Moreover, males tended to be underrepresented in the categories of High School graduates or those going to college. A female, not having to carry the breadwinner role, was able to use education as one of the opportunities to rise above the laborer level of her parents.

By far the greatest majority of Villa adults were employed directly in agriculture, locally or up North. Apart from a half dozen businessmen, those in education and a few older persons on various relief or pension grants, the remainder of Villa families depended upon agriculture for life's necessities. Living at a near subsistence level, it is not surprising to find that one-third of Villa households raised animals for personal food consumption. Nearly the same percentage had, in addition, small garden or farm plots to raise their own vegetables. Since the modest bungalows and lots were 97 per cent owned by the occupants, little outside income was necessary to sustain life. Conversely, a small financial reversal in such a near subsistence economy could produce untold hardship and near starvation. Debt was rare except for the temporary extension of credit at the local grocery store for items not raised locally. The importance of economic independence and the concern for personal gardens and small meat animals must be emphasized prior to an evaluation of the attitudes and concerns of Villa residents during the period of catastrophe.

Forty per cent of Villa households earned less than \$1,000 per household, demonstrating the low economic standard prevailing there.

forced to return each year to the fields from economic necessity and will not have the opportunity for further formal education. Occasionally, one or two family members are left with a relative and can attend school while the other family members are away. It is not known whether legal enforcement of child labor laws and compulsory school attendance has any influence here.

Only about one in four Villa households earned more than \$2,000 in 1957. All but one of the latter had been in the region 30 years or more (and that one had been there 13 years). These "higher income" households were characterized further by a single male breadwinner. In contrast, the multiple-breadwinner family type was characteristic of the households earning less than \$2,000 annually.

Despite such low incomes, 32 households had TV sets, 37 had radios and 14 telehpones were located within the community. With onethird of the households without transportation, radios and television sets were the main source of contact with the external system.

Social stratification existed in Villa in spite of the relative homogeneity of the population and the subsistance type of economy. An arbitrary division of high and low socio-economic status by a modified Warnerian type scale<sup>11</sup> coincided rather closely with a distinct style of life between these two Villa strata recognizable from observation. Of the 86 families, 14 were designated as high SES households and included the educators, larger farmers, facility owners and two regularly employed tradesmen. These 14 households also appeared to be more independent of the day-to-day economic pressures. Furthermore, their occupations and social obligations brought them more in contact with the external system and resulted in certain Anglo oriented values.<sup>12</sup> The occupational distribution was as follows:

<sup>11</sup>The weights assigned to the four factors (i.e. Occupational Level, Income, Education, and House Appearance) is included in Appendix II.

<sup>12</sup>These values are largely reflected in the criteria used to assess the SES level (vis. occupational status, emphasis on education and longterm planning, general upkeep of the home, and the ability to relate themselves to persons in the external system).

	Unskilled Farm Tenants, Laborers	Semi- Skilled	Clerical, Sales	Farmer Owner	Busi- ness, Pro- prietor	Profession- al Clergy Teacher
High SES		3	1	3	3	4
Low SES	52	3	1	4	-	-
Total	52	6	2	7	3	4

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Table I. Occupation Classification of Villa Household Heads by SES Level (N = 84)

None of the 15 families in which children contributed to the family income were found in the high SES category and only two of the high SES group had wives working. In the lower SES it was the norm for both parents to contribute to the family income whenever possible.

Data in Table II indicates that few of the low SES households but all of the high SES families earned more than \$2,000 per year. Moreover, the general appearance of the latter's homes was better than those of the lower SES.

		Annual Household Income			Years Formal Education				Rating of House Appearance		
		Under	\$1000-	Over					Below		Above
		\$1000	\$2000	\$2000	None	1-6	7-11	12+	Ave.	Ave	. Ave.
High	SES			14	1	6	1	6		2	12
Low	SES	36	28	6	21	33	13	2	12	38	16

Table II. Income, Education and House Appearance of Villa Households by SES Level

One of the largest landholders in the area was the Chairman of the Alfaro School Board. Though he did not reside in Villa he directly influenced its activities through his foremen and workers who dived there. He was the political representative of the numerous border hamlets in the county and regional politics, and was financially able to break through the local Anglo social restrictions. His only competition in dominating Villa politics was an older informal and traditional Spanish-speaking widower, Juan Cado, who provided an alternative to blind obedience and complete subservience to this powerful landholder. No political influence appeared to be strong enough to obtain agency help from the Anglo-dominated Hidalgo County welfare. There was fear of abuse if help was extended to this ethnic minority.<sup>13</sup>

In summary, the internal system was a Latino border community in the Lower Valley of Texas. This region was economically dependent upon semi-tropical agriculture, and Villa residents being mostly unskilled agricultural workers, provided a ready labor source for such production and was consequently heavily influenced by losses of potential employment.

Nearly all households owned their own homes and lots and grew their own vegetables and meat animals. The Latino community expressed great pride in its American tradition while maintaining the customs, language and religion of Spanish ancestors covering a span of two centuries. It was politically, socially and economically an out-group to the dominant Anglo culture of the region. Strong familistic and

<sup>13</sup>During the emergency period local Red Cross officials were deluged with petitions for assitance from desperate victims of the flood who had been refused even to be considered for temporary County welfare assistance. Even U.S.D.A. surplus commodities designated for the flood victims were not disbursed to Villa residents by the County welfare.

communal bonds existed between members of this internal system. This familistic structure tended to blunt any overt display of social stratification, although some rather marked differences were perceptible in life styles and value orientations between the high and low SES categories. The majority of those in the high SES strata were occupationally connected to education skills. This strata was also more apt to have occupational and social contacts with the external Anglo system.

#### The External System

This discussion will be an attempt to more closely delineate those organizations of the external Anglo system whose activities were directly relevant to the present study. The general character of the Anglo culture is available in the literature.<sup>14</sup>

#### Voluntary Organizations

The American Red Cross was operated locally by a full-time executive secretary from the Hidalgo County Chapter Office in McAllen, *Texas.* A local College Professor served as the Chapter President. *The Disaster Chairman* was a local Child Welfare field worker with previous experience in local disaster relief. His efforts to complete the various committee assignments met with only token success.<sup>15</sup>

<sup>14</sup>See studies listed in footnote 36, page 21, Chapter I, supra.

<sup>15</sup>Form and Nosow, <u>Community in Disaster</u> (New York: Harper and Brothers, 1958), pp. 193-200 and ff present a more complete analysis of social status and the dysfunctional aspects of placement, recruitment and operation of voluntary organizations. In Hidalgo County, he disaster chairman was chosen because of his functional qualifications ather than because of his status level. Since the Red Cross structure id not mirror the status levels of the larger society, little prestige eccrued from accepting these positions, making them difficult to fill. Some professional colleagues consented to become committee chairmen such as the supervisor of the County Public Health nurses who pledged her support. The Principal of Verde High School accepted the supply post. The Public Affairs chairman was a remedial teacher at the Verde school. The disaster plans called for the National Guard to furnish field kitchens and to supply the transportation and necessary communication. A college sorority pledged their assistance in registering evacuees in an emergency.

Rehabilitation caseworkers would be drawn from local public welfare agencies for professional investigation and be reimbursed through Red Cross funds.

Prior to the emergency, tones of dissonance emerged from between some chairmen and the executive secretary of the County Chapter. The Public Affairs chairman and the full-time secretary were in constant disagreement regarding policy and protocol. The former proclaimed Latino equalitarianism and emphasized a humanistic approach to intercultural problems. The Red Cross Chapter secretary was Anglooriented and accepted the present dominant-subordinate relationship between these two peoples as evidence of Latino lack of desire to get ahead. There was little two-way communication between them and even prior to the emergency, many occurrences were used as power and prestige struggles.<sup>16</sup>

<sup>16</sup>Charles P. Loomis, Social Systems: Essays on Their Persistence and Change (Princeton, N.J.: D. Van Nostrand, Inc., 1960), p. 143. He notes that an individual's rank is somwhat gauged by his degree of indispensability in the disaster system. These two people were both seeking to be indispensable to the efficient operation of the organization. In pre-emergency struggles for status ascendency, the ight centered on acquisition of a position of indispensability in anticiation of a disaster situation in which to promote a higher personal ank within the organization. The Salvation Army was somewhat poorly organized in Hidalgo County due in part to a recent change of local leadership. For a three year period prior to the flood, a working relationship had existed between the County Red Cross and the Salvation Army officials. On previous disaster occasions, the Salvation Army had administered first relief; then the Red Cross had come in with their mass care, shelters and rehabilitation programs. With the recent director change, an in compatable friction was the sole relationship between the officials in these two organizations.<sup>17</sup>

Local brotherhoods, service organizations and church groups had facilities and resources for assisting in periods of distress and emergency. However, in view of the minimal visible destruction in this focalized area, there was a tendency to leave the relief work to the Red Cross and Civil Defense workers who were already organized and functioning.

The activity of Church groups was slight during the Villa event. The Mennonite school teacher, the sole Anglo in Villa, became actively involved only in taking care of members of his denomination. The nearby Catholic women's groups were aware of impending needs through kinship

<sup>17</sup>The Red Cross Disaster Chairman, Pedro Gomez, had been a disaster leader in the Salvation Army prior to his appointment in the Red Cross. In fact, at the time of the catastrophe, Gomez was still a member of the local Salvation Army board. In a personal interview he related the following account of the present inter-organizational clash: "Before Villa was flooded, a little town to the North was hit. On that occasion Prof. Hiller (Chapter President) and I had received various pleas for help from there and reports that local Salvation Army funds would soon be exhausted. Thereupon, a reconnaissance trip was made to the stricken area and the new Salvation Army director contacted to offer Red Cross support if needed. 'Get the Hell out of here,' the new director yelled at us, 'I'm going to carry this on here. I've already called my Headquarters in Dallas and they gave me the go ahead to spend what I need.'" The Salvation Army played a minor part in the Villa incident. and friendship communication channels and gave token aid to the hardest hit of Villa residents. The Seventh-Day Adventist group had been previously engaged in clothing drives so they were asked to distribute their clothing in the Red Cross shelter under their Church banner.

All along the river from El Paso to the Gulf other organizations became activated, especially on occasions when the major voluntary emergency organizations did not respond immediately.<sup>18</sup> The potential of these groups who constantly stand by to await a call for all out support cannot be estimated. Many do not function because they understand the confusion which results in duplication. When the larger relief organizations are on hand, further aid is neither acceptable by formal organizations nor is there any mechanism set up which would allow them to receive credit for organized volunteer activity.

## Governmental and Civil Defense Organizations

Texas is an area which had realized its potential for catastrophes, especially natural calamities.<sup>19</sup> Therefore, it had taken steps to coordinate the various levels of governmental authority into regions and districts administered by a State Director of Civil Defense and Disaster Relief. Both civil and military units under state jurisdiction could be

<sup>18</sup>One of these organizations was the rather amorphous "Good Neighbors" organization. The local Catholic women's group was organized as a Good Neighbors Home Demonstration club. Further upriver in the Presidio area, these clubs were the prime movers of social welfare to refugees from both U.S. and Mexico while the Red Cross and other organizations were engaged in internal strife and impotent in relief activity.

<sup>19</sup>In 1957 and 1958 there were 534 tornadoes and other severe storms in Texas at a cost of more than \$55 million loss. <u>Annual Report</u>, <u>Division of Defense and Disaster Relief</u>, Austin, Texas, <u>December 1958</u>, especially p. 7 ff.

activated to deal with situations of an emergency nature.<sup>20</sup> At the lowest formal level, each County Judge had primary responsibility for the local organization and could either delegate this responsibility or personally direct its functions. Moreover, the elements of Civil Defense and that of Disaster Relief could be functionally divided to correspond to these separate demands as was the case in Hidalgo County. Judge Richardson had separated these functions of Civil Defense director and the Disaster Relief Chairman. The latter post was filled by a small town businessman, Marty Edwards. As County Disaster Relief Chairman, he could request assistance from the National Guard, U. S. Border Patrol, all State and Local Safety officials and any governmental or military facilities needed to carry out relief in case of natural calamity. Men or equipment designated for this work ceased to be independent entities but were coordinated under this single administrative office until the termination of the emergency phase of the event. It proved to be an extremely efficient system.

<sup>20</sup>Federal and State Laws Relating to Civil Defense and Disaster Relief, Executive Department, Division of Defense and Disaster Relief, Austin, Texas, 1956. For a lucid statement of the actual functioning of the Texas State organization, see William L. McGill, "How a State Prepares for Disaster," The Annals, Vol. 309 (January 1957), pp. 89-97.

### CHAPTER IV

## THE EMERGENCY PHASE

In the last week of September 1958, abnormally high amounts of rainfall accumulated within the Rio Grande watershed, extending the full length of the River on both the Texas and Mexican sides. The Rio Conchas, Rio Alamo and Rio San Juan and minor tributories overstocked the water reserves in Falcon Reservoir (U.S.) and the Marte Gomez Reservoir (Mexico). To maintain safety levels, excess water was released daily in greatly increased quantities, adding to the downriver burden of the already swollen Rio Grande.

A broken levee at Presidio, Texas, on September 25th alerted communities downstream to possible flood conditions. In the month following, seven million dollars worth of damage to crops and property was estimated on the United States side alone, not to mention an estimated \$31 million worth of usable water<sup>1</sup> (ordinarily a scarce item during this normally dry season) which was dumped into the Gulf of Mexico.

By October 14th, lowland farms or yards were covered with a shallow blanket of water in the vicinity of Villa. By Wednesday, October 14th, the gravity of the situation was such as to activate a Red Cross shelter in nearby Verde High School. Until Friday morning, October 17th, few families had evacuated. When a levee broke a few miles upstream, water poured through the Villa area about dawn.

<sup>&</sup>lt;sup>1</sup>Annual Report of Division of Defense and Disaster Relief. Executive Department, State of Texas, Austin, Texas, December 1958, p. 7.

A run-off drain incapable of handling increasing water caused the flooding in Villa proper and eventually the water flowed over the exit road. By this time all but those few persons who were acting as guards against looters had or were being evacuated en masse.

In this catastrophe there was a limited amount of physical destruction of buildings. No deaths were directly attributable to the flooding action. The Red Cross expenditures of only \$828.92 for building repair and household goods replacement in Villa indicates the lack of material consequences. Other less visible repercussions will be considered later in more intricate analysis of the situation. Admittedly, the popular criterion of physical chaos and human carnage present would classify this event as a comparatively mild catastrophe.

It is necessary to make some arbitrary designations of the various emergency stages involved because of the nature of the crisis situation in field disaster studies. In the present study, the warning, threat and evacuation, dislocation and relocation stages pertain to the emergency phase. A factual account of each stage will be followed by a detailed analysis of greater depth.

## The Warning Stage

## Descriptive Account--Warning Stage

Heavy rainfall in the El Paso area together with floodwater from United States and Mexican rivers converged on Presidio, Texas, causing nearly a \$2 million loss in cotton crops. The continuous rain up and down the Rio Grande during the succeeding month broke rainfall records dating back to the middle 1800's. Falcon Dam, completed less than a half-decade previously, was releasing excess water for he first time in its history to counter the 50,000 acre feet of water it

was gaining daily.<sup>2</sup>

Small communities from Presidio downstream were isolated as the River extended to widths of three to four miles in shallow regions. General warnings were issued to all downstream border communities and the IBWC<sup>3</sup> was attempting to store all excess water, to avoid abrupt dam discharges and to maintain the safety limits of the reservoirs, all at the same time. By October 2nd, it was anticipated that the releases from El Azucar Dam in Mexico and the Falcon Dam spillway would raise the river high enough to spill into the elaborate floodway system downstream, the safety valve for protecting the Lower Valley communities against the full impact of upriver flooding.<sup>4</sup>

By Tuesday, October 13th, the flood level had approached the upper end of the Lower Valley region. Local weather reports by TV, continuous radio and other mass media had been available to Villa residents. A few families had made emergency preparations for evacuation in the face of disparaging jeers from old-timers; the rest just sat and waited.

### The Internal System -- Warning Stage

Utilizing the crisis dimensions previously discussed, certain aspects of behavior might be anticipated and then compared to the data to ascertain the precision of the prediction. For instance, during this stage the focus of the internal system would be expected to be primarily non-material; concern for persons and especially loved ones, more than

<sup>2</sup>El Paso Times, September 28, 1958, p. 1.

<sup>3</sup>International Boundary Water Commission, set up by treaty serves in an advisory capacity in international agreements regarding the Rio Grande watershed, common to both the U. S. and Mexico and directly coordinates information on storage and releases from reservoirs.

<sup>4</sup>Mission Times, October 2, 1958, p. 1.

material and economic considerations. The fears of the direct consequences of catastrophe would overshadow any indirect considerations at this stage. Within a traditional Latino community in semi-isolation with a long history of recurrent--"near miss" episodes, apathy and non-response to external warnings would be expected, especially with the gradual and progressive nature of the river rise and the lack of a crucial demarcation level to determine when the emergency situation had begun. The traditional Anglo-Latino boundary increased the reluctance of the internal system to accept external definitions of the focalized river situation.

The data indicates that during the warning period, Villa residents were strongly oriented toward the internal system concerning personal considerations. Three of every four households reported having fears for persons of close attachment as opposed to general personal or material considerations. Of those persons oriented toward economic considerations, most of the economic worries were concerned with personal gardens, meat animals and either their own home or the homes of their relatives.

The situational dilemma, that problem of defining the existing situation as appropriate for emergency behavior, appears to be the most crucial point of ambivalence in the internal system during the warning stage. The few who were able to perceive the gravity of the situation early as meriting immediate evacuation were ridiculed by others as they assumed emergency roles. Those who scored and did not consider evacuation as socially appropriate behavior, accounted for 9 of the 10 families isolated in the community at impact time.

From Table III, on the following page, it is concluded that the information source varied considerably according to SES level. The high SES respondents reported having received first notices from two or three external-impersonal sources. The low SES respondents

	Impersonal Source	Personalized Source	External System	Internal System	Both External and Internal System
High SES	12	1	12		1
Low SES	52	18	45	16	9
Total	64	19	57	16	10

Table III. Source of First Warning Information of Villa Residents by SES level.

received notices from this same type of source, but relied heavily on personal contacts and those within the internal system as well. Although radios and television sets are not too disproportionately distributed throughout the hamlet it appears that first notices followed the mass media channels. It is important to note, however, that the mere indication that first notices came through these external, impersonal sources does not imply that serious consideration was given to mass media information unless it was locally validated through group acceptance and response.

Only two persons attempted to verify the information received from external sources and they were both of the high SES category. The external system assumed that the people in these bordering communities were not evacuating because of lack of notification of the existing river conditions. Consequently, Villa was deluged with personal telephone calls by one group and then another. It is strange that the many telephone calls initiated by the external system and considered by the Anglo group so important as an early source of information were not reported by the victims as being the first notices received of the danger. Since no telephone calls were reported as being he first notices of the flood, the assumption that a lack of information

was the cause for deferred evacuation is highly questionable.<sup>5</sup>

Upon receipt of the first notices of the flood, a dozen households reacted overtly in preparation for possible danger. The remaining 74 households reported that they "did nothing" or "waited for further information." The existing tradition of a recurrent-"near miss" history seemed to be the source of this apathy. Only 64 households even believed the first notices when they received them, and of this number only 7 households made any emergency preparations. Inasmuch as the flood is a progressive type catastrophe, there was no definite point at which it was considered an emergency. Moreover, with the barrage of conflicting reports, the internal system becomes aware of the discrepancies in the numerous exaggerated accounts. This may well have reduced the effectiveness of later authorized suggestions for evacuation or emergency preparation.

### The External System -- Warning Stage

At early notices the more emergency-oriented organizations anticipated mobilization and began to make tentative preparations. As flood accounts pyramided emphasizing the sensational nature of the catastrophe, emotional appeals for help and assistance gathered momentum. However, in reality few organizations were activated fully during the warning stage and these were capable of no more than a token support of potential emergency needs.

<sup>5</sup>Though the data is incomplete, the victims reported that the reatest problem in advising people of flood dangers are the multitude f conflicting communication sources. The tendency was to reject all sternal sources when some inconsistencies were noted and then to  $1\circ$  on internal informal leadership to discriminate between the urces available and validate those worthy of credulity.

The Red Cross experienced a paradoxical situation. They began early to have personnel and supply sources contacted in anticipation of future needs. Yet, publicly they dared not mobilize overtly until a definite need was demonstrated. The mere opening of an official shelter binds the organization to see the situation through with or without an actual catastrophe. Such a decision, if in error, would hamper fund drive support because the expense of opening a shelter which was subsequently not needed could not be fully justified. Therefore, this stage is one in which much cautious activity occurs on the executive levels of these relief organizations. Apparently little was done to implement or disseminate the policy decisions beyond this executive level during the warning stage.

The most obvious external activity during the warning stage was the competition between the various types of mass media to keep everyone abreast of events. In vying for listeners, events were usually written or broadcast with great emphasis on the spectacular. From seven newspapers publishing information during the warning period, a superficial survey of stories demonstrated an item to be newsworthy only if it could exceed in seriousness or optimism (change the status quo) the accounts of the preceding day.

# Summary--Warning Stage

During this stage the internal system operated to preserve its normal communication channels to handle and evaluate the first reports of the emergency. Because of a historical recurrent-"near miss" experience, to disbelieve external notices and "do nothing" was the appropriate behavior, with informal sanctions by the "old timers" against non-conformists.

The external mass media capitalized on the sensationalism of the flood. Organizations formally took no action but began to anticipate mobilization needs. The non-existence of a specific criterion to indicate when a progressive catastrophe had become an emergency situation, allowed individual definitions of the situation which promoted initial cleavages at all social levels. Until a cue occurred which was mutually acceptable, such as a levee break or opening of floodways, a state of disaster and immobility existed between the external and the internal system. Thus, during the warning stage in a progressive, recurrent-"near miss" type, the situational dilemma provided the greatest source of non-reciprocity contributing to disaster.

The Threat and Evacuation Stage

## Descriptive Account-- Threat and Evacuation Stage

By Monday, October 13th, the information of possible flooding conditions had activated the Alfaro School District officials to check the condition of grammar schools in the various border communities, including Villa. Concurrently, the Hidalgo Red Cross Disaster Chairman, Pedro Gomez, was contacting the IBWC and "old timers" in various border communities, leaving his phone number for them to call if conditions became more acute. He was at a loss to get reliable information concerning river conditions, the villages in greatest danger, and the population totals of border communities who might need Red Cross assistance. These facts were needed as a basis upon which o plan mass care and shelter facilities. The Red Cross supply officer, Principal Perán of Verde High School, had begun that Monday to comlete the roster of all Red Cross personnel who might be needed in use of emergency.

On Tuesday, October 14th, an increased water release from lcon Dam to 26,500 cubic feet per second coupled with a weather eau prediction of still more rain expected, increased the potential

threat to Villa and other border communities. Ramon Reyes, large land owner and chairman of the Alfaro School Board, had been busy checking the grammar school sites of the various border villages. He appeared to be the most informed individual in the area both in the pre-emergency and the emergency area. He had contact with the IBWC, with the Hidalgo County Pump Station (who had a direct wire to El Azucar Dam in Mexico), with his farm foremen in Villa, and with informal sources through his wife and her friends. He had placed wooden stakes in the shallow part of the river bordering his own land which he used to measure the rate of river rise. He was, in fact, the most reliable source of information according to the full-time Red Cross Chapter secretary. Yet, none of this information held by the Chapter Secretary seemed to be available to the volunteer Disaster Chairman. This was an intra-organizational communication gap.

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Later on Tuesday evening, as the river crest approached Villa, the Mission floodway was dynamited<sup>6</sup> but it failed to divert the surplus floodwater from the river. More pressure was applied to the levees upstream as the river continued to rise. Disaster chairman Gomez laid out the Verde High School gymnasium as a mass shelter Tuesday evening in anticipation of its possible use in the near future.

Wednesday morning the school board chairman went into Villa and talked to his foremen and to those who traditionally worked for him harvesting his commercial crops. He tried personally to convince

<sup>6</sup>The Mission floodway inlet was located downstream from Villa, but because of farm reclamation and river bank leveling in the past ouple of years, the course of the river had been altered to where the ngle of the stream veered away from the floodway mouth, leaving the tter dysfunctional. Various attempts at dynamiting the floodway inlet iled to divert more than a small trickle of water down the floodway annel. This had been a latent consequence of the previous riverbank rm reclamation activity. them to leave and told them that all of them could not be evacuated at once in the event of a sudden emergency. El Azucar Dam was full, he warned, and the Alamo river and Rio Grande were bursting above Falcon Dam and that the latter had raised its discharge rate from 26,500 to 31,400 cubic feet per second. He told them of the good facilities which would be available later that morning at the Red Cross shelter located in the Verde gymnasium. His pleading met with failure.

That same morning the local Red Cross public affairs officer, Jane Goode, had contacted Mrs. Reyes to have her husband go to Villa and persuade the residents to leave. In addition, Miss Goode, a remedial teacher at Verde High, had personally phoned those families in Villa whom she knew to tell them to get out before the flood arrived. Meanwhile, Mrs. Reyes reported back to Jane Goode that everyone with a telephone in Villa had been contacted to tell them to evacuate. In addition, the local Superintendent of Alfaro Schools, Mr. O'Brien had personally phoned some families in the border communities and had visited their schools to ascertain the danger. While O'Brien was opposed to coersion in forcing families to leave their communities, he was concerned that they knew the extent of the peril involved in remaining at home.

By mid-day Wednesday, October 15th, Mrs. Howell, the Hidalgo Red Cross secretary, had phoned Marty Edwards, the Disaster Relief Chairman<sup>7</sup> concerning the danger of levees rupturing. He in turn

<sup>7</sup>Disaster Relief is a part of the Texas Division of Civil Defense and Disaster Relief, explained in detail in Chapter III. It is not to be confused with the Disaster chairman of the Red Cross organization, he latter having no direct governmental connection. contacted Judge Richardson<sup>8</sup> who had directed Edwards to contact the State Coordinator of Civil Defense and Disaster Relief in Austin, Texas. This he did. The State Coordinator immediately placed local National Guard units at Edwards disposal. A few large National Guard trucks were called into immediate service reporting to the Verde Red Cross shelter to assist with voluntary evacuation.

When Edwards arrived at the shelter, he found that the United States Border Patrol jeeps had been patrolling the dike and levees to report possible breakthroughs. He then arranged for the IBWC to give him daily reports on the river via the Highway Patrol radio channel through the Harlingen Sheriff's department. The decision had been jointly agreed upon by Red Cross and Disaster Relief officials that no forced evacuation would be undertaken, so only those families who accepted assistance were helped by the National Guard trucks standing by.

In the Red Cross Shelter, the District Red Cross representative<sup>9</sup> contacted Gomez and said: "Well, I guess I'll have to take over and get something done!" Gomez stated that he felt no pressure from such a remark as the District official didn't know local conditions, didn't have the personal contacts for materials which he, Gomez, had made, and probably wouldn't have done so if given the chance.<sup>10</sup> There were critical decisions to be made as to supplies which would

<sup>8</sup>Judge Richardson was the County Judge, thus automatically was head of the County Civil Defense and Disaster Relief program. He had divided these responsibilities and assigned Marty Edwards the task of handling that phase of the program dealing with Disaster Relief.

<sup>9</sup>Other than the full-time County Chapter Secretary, the District Red Cross Representative is the first line of professionals just superior to the voluntary County Red Cross officials.

<sup>10</sup>Notes from personal interview with Mr. Gomez, October 1958.
be needed. Since Gomez did not know the approximate population of the affected area, anticipating beds and blankets in addition to those currently on loan from the United States Air Force was a problem. If more were ordered, they would have to be flown in and the Red Cross would be required to pay the transportation for them whether or not the beds were used. But if extra cots and blankets were not ordered soon, these supplies would not be available during the weekend period if they were needed. Other problems were happening within the various committees.

The registration committee to sign in evacuees could not leave school, so the public affairs officer took over in this capacity.<sup>11</sup> Gomez had requested the Seventh-Day Adventist church group (who had recently conducted clothing drives) to distribute clothing to those needing it. They accepted this responsibility providing they could display their own name and wear their own badges while distributing the clothing within the Red Cross shelter. Gomez was grateful for the assistance with the clothing, but the professional Red Cross officials who began to arrive were incensed at the "foreign" banner within the shelter confines. Many individual problems occupied Gomez so that

<sup>11</sup>The Sorority at Pan-American College which was appointed to the registration committee, was unavailable when needed. The public affairs officer who sat down at the registration table immediately assumed control in the managing of the entire shelter, as the Disaster chairman was involved with many personal problems of the families in the gymnasium. She had also been engaged in an intra-organizational feud with the local Chapter secretary over policy administration by volunteers and professionals. The male nurses reported that "Jane Goode went day and night" and they "had to go out in their cars to rest while on call because she wouldn't let them alone." (Quoted from a personal interview with a Regional Director of the Red Cross, November 1958.) Miss Goode prided herself in understanding Latinos, and had participated in a 30 page mimeo booklet for teachers teaching Spanish-speaking students which would help them understand their culture better. She requently condemned the Red Cross professionals for their ignorance n this area of inter-ethnic affairs.

the running of the shelter was left mostly to the volunteer public affairs officer Miss Goode who was acting as the registration committee. The Verde High School cafeteria facilities were used for mass feeding and regular cafeteria personnel were alerted as needed. However, by that evening there were just a handful of evacuees registered who had not already departed. As Gomez stated, "the impersonal and spacious gym with no privacy was not very appealing and many entering by the front door departed just as rapidly by the back door."<sup>12</sup>

By Wednesday evening Laredo, Texas, had more than an inch of rain adding to the heavily increased flow into Falcon reservoir. An increased discharge rate from Falcon Dam was expected.

Thursday morning, Edwards made a personal reconnaissance to the riverside communities in a Department of Public Safety vehicle while five manned National Guard trucks were on a standby basis at the Verde shelter. Thus far only two families had accepted National Guard assistance to evacuate. When a Villa school bus driver accompanied the trucks shouting in Spanish "A wall of water is coming. Get out of here!"<sup>13</sup> people became dubious of the urgency. Since Villa residents refused to evacuate with National Guard help, the trucks returned to the Verde shelter to be on call for any of the other border communities requesting emergency evacuation.

<sup>12</sup>Personal interview with Pedro Gomez, October 28, 1958.

<sup>13</sup>This instance was quoted by various respondents, such as Ramon Reyes and Deputy Sheriff Wingert. All concurred that the anxiety of this Villa bus driver in shouting such a warning had a negative effect on those who might have been persuaded with a more subtle approach. Some respondents remembered this bus driver as the one who helped others decide to evacuate, yet none felt that this helped him personally in the decision to leave.

Mrs. Ramon Reyes, wife of the school board chairman, called Jane Goode Thursday morning and reported large evacuations from a small hamlet upstream from Villa. Those residents had been telephoned personally by the Verde principal O'Erian before dawn.<sup>14</sup> In addition, Miss Goode found out that some families had evacuated to the Villa grammar school and were there without either heat or food. She promptly contacted Sheriff Deputy Ton Wingert at Edinburg who acquired hot plates, heaters and a coffee-maker from the County Jail. Then Miss Goode with board chairman Reves and superintendent O'Brian took these articles to the Villa grammar school. By this time water was beginning to cross the road leading from Villa north to the main highway. Disaster chairman Gomez of the Red Cross, seeing many cars and much activity at the highway junction, went personally to invite the evacuees to come and register at the Red Cross shelter. Many came, but after noting the impersonal vastness of the gymnasium with its lack of privacy and abundance of curious onlookers, most of the early registrants found other quarters. At this time most of the Villa families had not evacuated.

Thursday evening, a Major and Captain from the Dallas Headquarters of the Salvation Army arrived at the Verde Red Cross shelter requesting permission to serve coffee and doughnuts to local workers. omez consented and invited them to serve workers and evacuees even thin the shelter itself. However, after supplying coffee and doughnuts he National Guard, Public Safety officers and those patrolling the

<sup>&</sup>lt;sup>14</sup>Jane Goode in her personal interview felt that the reason that small hamlet evacuated early in an organized manner was that the of teachers there left first providing a good example. In Villa, teachers were the last to leave in deference to their aged parents refused to be evacuated.

dikes, the Salvation Army representatives departed and offered no further relief assistance at the Verde location. Red Cross professionals and volunteers alike were furious at allowing the Salvation Army to be seen working in and near to the Red Cross shelter area and were further incensed by the invitation to serve refreshments within the confines of the shelter itself.

By nightfall, approximately half of the families had evacuated from Villa. The Quinto family staying at the Villa grammar school were among those reluctant to leave. Although the Quinto children were well educated school teachers with families of their own, the norm of filial loyalty held them fast with their elderly father who refused to evacuate. Another son, perhaps the wealthiest man in the community, also refused to leave the community until his father consented to be evacuated. Both Marty Edwards and Jane Goode called Tom Wingert, a local deputy and old time friend of the elderly Juan Quinto. Wingert arrived with the Edinburg Fire Department ambulance pressed into service at the request of the Disaster Relief chairman. With friendly persuasion, the old man consented to leave<sup>15</sup> and he and

Juan was happy to be away from the water later that night. Sometime later he told me, 'Compadre, I'm glad I didn't stay there until the next morning.'

<sup>&</sup>lt;sup>15</sup>In a personal interview Tom Wingert said he had known Juan and other Villa residents for about 10 years and had been of personal legal advice. "I've always told them straight" he stated, and he thought he could talk to Juan Quinto as a friend, not a law officer, and convince him to come out. "I went in and sat on the cot where he was laying. I said 'Juan, I've known you a long time. I'd like to have you not stay here. It would be better for you in a good quiet place until this thing is over.' He wanted to stay 'til morning.' I told him 'I may not be able to get in for the water.' After a brief thoughtful moment Juan replied 'Compadre, I'm ready to go---' Then other family members said they were ready to do also. I had the ambulance driver go by the other son's place who said he wasn't going to leave as long as his father was still here. As soon as the son was advised that Juan was in the ambulance, he gave orders to pick up some blankets and clothes and followed the ambulance out.

all the Quinto children with their families followed the ambulance out of Villa to the Verde shelter. By this time the Falcon Dam release had been raised to 34,000 feet per second and the pressure on the levees downriver was serious.

Just before dawn Friday morning, a levee broke on the large Gorda farm upstream from Villa and by 8 A.M. the community was a shallow, churning riverbed for the onrushing floodwater. Falcon releases had been raised to 41,000 feet early Friday and the Mission floodway inlet was still unable to siphon off the excess floodwater.

As seen in Figure 5, page 108, the 90 degree turn in the road leading from Villa north to the main highway acted as a dike to back up the water into the community proper. A 12" drainage pipe under the road was insufficient to carry the great volume of water under the road into the floodway. Consequently, the blacktop road was soon covered by water for a three-mile span. Some National Guard trucks and farm tractors were high enough to maneuver through the floodwater without stalling. These were used to carry out some households who had delayed too long. Even late Friday some few families evacuated in boats to where either National Guard or friends could transport them to their destination.

Although deep water divided Villa into two parts, there was telephone communication to both sections at all times. Those few men who stayed to prevent looting and to care for farm animals were instrumental in evacuating isolated persons living in the open country nearby. By Friday afternoon half of Villa households were evacuated to relatives houses; the other half mostly in rented and empty houses with a few at the public shelter or with friends. These families were not concerned with getting telephone reports from the men standing guard and with adapting themselves to their temporary evacuation site.

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## The Internal System -- Threat and Evacuation Stage<sup>16</sup>

Having had prior experiences with recurrent-"near miss," progressive, focalized catastrophes residents of Villa were somewhat apathetic toward the emotional warnings of the external system. The feeling was held that they "do not know the river as we do who have lived on its banks for years."<sup>17</sup> Hence, it is not unexpected that evacuation occurred toward the end of the threat period and during the time of impact. With the negative sanctions imposed upon those who engaged in emergency type precautions, it was a calculated social risk to violate communal norms and even those of higher SES standing remained in Villa.

	Warning Stage	Threat and Evacu- ation	At Im- pact	Post Impact	Never Did Evacuate	Unknown (N-84)
High SES	-	4	3	2	1	4
Low SES	8	17	18	8	2	19
Totals	8	21	21	10	3	21

Table IV. Stages of Evacuation of Villa Households by SES Level

Another 6-8 persons took families out and returned to Villa to help guard against looting.

<sup>16</sup>At the outset of the study the sequential stages outlined included an impact stage and a threat stage. However, in the empirical situation, the data did not break meaningfully at the time of impact. The impact was more of a catalyst to speed up the slower evacuees than being a causal agent in motivating the evacuation. Since it was felt that the impact period was not a point of clarification, this category was combined.

<sup>17</sup>Spontaneous mention of previous floods indicated the historical infrequency of flood occurrence in Villa. In the 30 year period from 1904-1944 only 5 floods were mentioned. The floods of 1909 when Santa Catarina Dam broke and the flood of 1933 were considered the The significance of defining the current situation by the recurrent-"near miss" standards is evidenced by the data in the three following tables. There was much recognized error in defining the critical nature of this catastrophe. Two-thirds of Villa households took few or no possessions as they evacuated. Both high and low SES families made similar erroneous definitions demonstrating again the social demands of conformity placed upon leaders as well as followers.

	Little or None	Part	A11	
High SES	10	4	-	
Low SES	43	18	6	
Total	53	22	6	

Table V. Amount of Possessions Removed by Villa Residents by SES Level (N-81)

In estimating future evacuation behavior more than two-thirds of the respondents admitted error by their attitudes to behave differently next time. The data in Tables VI and VII show the changes in anticipated behavior based on recent erroneous definition of the existing situation.

Most error occurred in procrastinating the evacuation time and underestimating the gravity of the situation as shown by these data.

worst catastrophes by most respondents. Those of 1904, 1909, 1922, 1944, and 1948 were regarded as less serious. Only 3 residents evaluated the present flood as more serious than any past ones.

	Take More	Take Same	Take Less
	Next Time	Next Time	Next Time
High SES	9	4	-
Low SES	51	18	
Total	60	22	-

Table VI.Future Estimation by Villa Respondents of PossessionRemoval in Case of Another Flood by SES Level (N-82)

Table VII. Estimation of Future Evacuation Behavior by Villa Residents (N-76)

Leave Earlier	Leave Same	Leave Later
Next Time	as This Time	Next Time
52	22	2

The experience of Juan Quinto and his family who would not evacuate without him, <sup>18</sup> illustrates the relative contribution of the role dilemmas concerned toward a situation of disaster. The elder Quinto was in a situational dilemma, not wishing to leave the community as he did not define the situation as an emergency. His children were presented a multiple role dilemma of reacting as either fathers to their own children or sons of their father. Because of the supremacy of the patriarchal order in Latino society, they properly gave filial allegiance in preference to fulfilling their conjugal responsibilities.<sup>19</sup>

<sup>18</sup>See footnote 15, page 106 for details.

<sup>19</sup>One woman reported that her husband upon hearing the early warnings departed immediately saying; "I'm going over to see that Mother is all right, and that nothing happens to her. I can always replace a wife and children, but if anything happens to ones mother, she can never be replaced." In a progressive crisis, there is adequate time in which to make arrangements for evacuation and quarters if such activity is anticipated. Yet, 32 of 72 (or 45 per cent) of Villa households made no such arrangements. Eleven families had no idea where they were going as they evacuated. The higher SES households knew where they were going and were more apt to have made prior arrangements than those of the lower SES category. Only a suggestive hypothesis could explain the lower SES respondents failure to make arrangements for evacuation quarters. These families seem to be internally oriented to where the only possible evacuation sites available were relatives common to other families in Villa. The data do not furnish complete information on this point. Those who made no previous arrangements normally stayed with relatives with whom they were in frequent contact.

The type of family structure gives meaning to the choice of evacuation sites. Widows and widowers who traditionally play a dependent role, all knew their destination before they evacuated. Families with small children tended to acquire rented quarters or empty houses whereas families with teen-age children were located most frequently in the homes of relatives. No families with teen-age children from Villa were found at the Red Cross public shelter. The lack of privacy in the large gymnasium presented an awkward situation for this highly sensitive age group.

What finally motivated Villa residents to evacuate? The higher SES householders stated that they were convinced to a much greater degree by external-impersonal sources while the low SES respondents were more reliant upon internal sources, internal contacts or personal experience for this decision. It is significant that evacuation prompted by whatever sources could not take place until the situation was redefined from a recurrent-"near miss" type to a potential catastrophe. Apparently the presence or absence of transportation facilities was not

a crucial factor in whether or not Villa residents evacuated at a given time. The sensate Anglo organizations did not understand that the reason for not evacuating had no relation to transportation facilities. Hence, when the Villa families rejected "free" National Guard help in evacuation, this did not increase Latino esteem among these relief organizations.<sup>20</sup> On the contrary, this demonstration of self-reliance commonly acclaimed as a virtue of the highest magnitude when manifest by an Anglo, incurred the enmity of the external workers and agencies. They anticipated the Latino to play the dependent, freeloader stereotype which the data show he refused to do. With such conflicting expectations, little coordination was possible and disaster persisted in this relationship.

In summary it appears that Villa residents resisted attempts to define the situation as an emergency, preferring instead to use the traditional social approbations to govern behavior even in the critical impact period. The higher SES families who are normally more oriented toward the external Anglo system in their day-to-day occupational responsibilities, were conscious of being oriented toward these same sources in receiving first notices. Yet their evacuation pattern corresponded to the internal system's definition of the emergency rather than the situation as defined by the Anglo sources.<sup>21</sup>

<sup>21</sup>This appears to substantiate the leadership pressures reported by James B. Watson and Julian Samora, "Subordinate Leadership in a Bi-Cultural Community," <u>American Sociological Review</u>, Vol. 19, No. 4 (1954), pp. 413-17.

<sup>&</sup>lt;sup>20</sup>Contrast the reaction of the external system with the comments made by S. Bittinger, the first researcher into the community after impact. He stated that 'most of the residents of Villa were not reluctant to leave because of ignorance or bull-headedness but were taking a very calculated risk to protect all they had in this world."

The lower SES were more reliant on local community leaders and kinship contacts to validate information received through the externalimpersonal mass media.

#### The External System -- Threat and Evacuation Stage

During the early period of the threat and evacuation stage, the aiding organizations in the external system had much the same problem of situational ambivalence as experienced within the internal system. The progressive, recurrent-"near miss," focalized dimensions of the catastrophe confused any clearly defined designations as to when the present situation was no longer normal and had become an emergency. Whereas, in an instantaneous, unexpected crisis, the situation would be of an emergency nature before the Red Cross was mobilized, the reverse was true in Villa. The arbitrary decision of the Red Cross Disaster chairman to open the shelter Wednesday morning, preceded by 24-36 hours a similar acceptance by Villa evacuees that an emergency really existed. The opening of the Red Cross shelter allowed Hidalgo County Disaster Relief to mobilize. By the act of opening the shelter the situation was defined as a crisis in which emergency type behavior was appropriate.

In initial operation, these relief organizations who are trained to administer aid and help the needy found few persons desiring their help. National Guard trucks which were called up as an emergency measure to evacuate those without transportation, were rejected by the Latinos on the basis that external help was not needed in a situation which had not yet internally been defined as an emergency. This ambivalence was emphasized by the decision of Disaster Relief and Red Cross officials not to use force in evacuating riverside communities. Without force or some similar visible cue, the gravity of the

situation was <u>unilaterally</u> defined by the external agencies standing by hopelessly and not understanding the Latino rejection of their assistance.

The paradoxical role of the Red Cross organization as administered by volunteer and professional officials is of paramount importance in this and in the succeeding stage. The local volunteer who sees his organization as a friend to those who need a comforting hand with their problems, often runs contrary to and subverts the primary goals of the chartered purpose of the Red Cross. The Red Cross has quasilegal responsibility in disasters involving five or more families but is perpetuated by fund drives for voluntary donations. Thus, the criterion for additional funds is the ability to justify expenditures for helping the needy in times of calamity. To assume legal responsibility for such help, all coordinated effort must be channeled through and administered within the set procedures of the Red Cross itself.<sup>22</sup> Thus, the role-set dilemma of the Red Cross Disaster chairman was to supply clothing to evacuees by accepting a foreign agency to assume this control, or to expend great amounts of money to have the Red **Cross** supply such apparel. The decision to accept outside help from local Church organizations on their terms was contrary to the established pattern of the Red Cross even though it resulted in clothing being provided for the evacuees. For the professional it was a breach in the appropriate role-set in the Red Cross charter, but to local workers and evacuees it meant having clothing immediately available

<sup>&</sup>lt;sup>22</sup>See the remarks concerning the structural-functional aspects of the Red Cross and their quasi-legal status, footnote 83, p. 69, Chapter II, Loomis, <u>op. cit</u>. He cites a "faulty ranking system" between various levels of volunteer and regular Red Cross workers for some of the interorganizational disturbance which was noted in the Villa situation. This appears to be very applicatory to the present analysis. See especially pp. 151, 155.

for the evacuees. The invitation to serve refreshments in the Red Cross shelter extended to the Salvation Army as a friendly gesture was similarly in defiance to the set procedures enforced by the Red Cross professionals. Likewise, professional direction of handling food order forms by local volunteers created a wider gulf between these organizational strata. This intra-organizational cleavage within the Red Cross had functional implications as well. The volunteerprofessional vendetta being carried on between Mrs. Harwell and Jane Goode created a problem wider than the 12 miles separating the Chapter headquarters with the shelter. Disaster chairman Gomez could never gain information from either of these sources without a personal visit. In lieu of a central communication source both switchboards were constantly jammed with curious inquiry. Edwards, the Disaster Relief chairman, found working with this uncoordinated bi-communication center dysfunctional to the efficient operation of his program. According to his report he gained some semblance of efficiency only after he bypassed these sources and made direct contact with authoritative officials. He related bitter memories of seeing the many agencies who worked in this catastrophe including his own, overlooked because of this intra-organizational struggle for status.

He also experienced the situational dilemma in his official capacity. When the Red Cross called him two days prior to the impact period, he sent the Hidalgo sheriff's department immediately to check on the situation. He didn't receive information enough concerning the existing conditions upon which to assess the seriousness of the flood. When he did make a personal reconnaissance, <u>he was unable to tell</u> whether the level of the river constituted a state of emergency or not. Moreover, a technical unavailability of communication equipment<sup>23</sup> temporarily halted any inter-organizational coordination. Luckily, the situation was not so grave as to necessitate a coordinated effort at that particular time.

There was no centralized communication authority and many reports were issued which contributed more to the problem than helped to explain it. For instance, a local radio announcer assumed a personal responsibility to announce that the Red Cross shelter was in dire need of volunteers. A deluge of untrained and mostly unqualified persons answered the call and upset the shelter procedures for the greater part of an evening. Edwards personally upbraided a local News Information Service representative who "reported 10,000 evacuating--without spelling out which side of the river or nothin".

<sup>23</sup>When the National Guard was alerted, their radios were all in Austin National Guard Headquarters undergoing modification repairs. A State Highway Department vehicle was dispatched with the National Guard trucks to provide a communications link between the Disaster Relief chairman Edwards and the roving National Guard trucks. Edwards himself rode in a State Highway Patrol car using this communication system to relay tactical decisions. Friday, an emergency call for walkie-talkie type radios was made to Austin and these arrived by staff car in the afternoon. Then a communication system was set up on 3 portable radios and the regular Highway Patrol car radio as follows:



County Sheriff's office Also relay for IBWC river information and relay for urgent telephone calls to Edwards

National Guard roving trucks and the National Guard Headquarters at Mission, Texas

U. S. Border Patrol Planes and Jeeps patrolling the dikes

McAllen Police Department, Relay for phone calls and an alternate route for Harlingen sheriff's office calls when out of range. There is not 10,000 people total along the River area. . . .<sup>1124</sup> On Friday, a report of a 15 foot rise on the Alamo River combined with a statement that the Mier bridge was washed out, was checked personally by Edwards through the sheriff's department at Harlingen. They verified the bridge as being out and hinted some rise on the Alamo although the extent of the rise was not ascertained at that time. Edwards notified the Red Cross professional in charge who retorted that no action would be taken since the Red Cross does not accept information unless verified by the United States Weather Bureau.

Edwards' estimate of the greatest deficiency in his own operation was that he didn't go in often enough to get information concerning the waterlevel. He also felt his past experience was inadequate to assess the degree of emergency which existed.<sup>25</sup> Once the communication network was established, he was able to coordinate adequately the units directly under his command. Without a central communication headquarters, any attempt to integrate the efforts of the external relief organizations resulted in futility and disaster.

#### Summary--Threat and Evacuation Stage

The existing pattern of crisis dimensions--a progressive, recurrent-"near miss, " focalized type--placed the internal system

<sup>24</sup>Notes of personal interview with Edwards.

<sup>25</sup>In an informal meeting with Marty Edwards and his family, his wife became highly antagonistic to the early field interview comments which minimized the physical destruction of homes in Villa. She stated in a loud voice that she had "seen with my own eyes water rolling through a house--in one window and out another--" had seen the destruction on TV and knew how much debris and wreckage and home destruction which must have occurred. Her husband was not sure of how much destruction had actually occurred himself, thus his own personal assessment appeared to be quite insightful. and the external organizations in a situational dilemma. The question before them was; Is the present situation an emergency? If so, at what point are we justified in acting according to emergency standards and norms? Since no easily definable point of emergency designation was available in this progressive type catastrophe, arbitrary definitions of the situation by persons within the internal and external system were at variance, thus creating a temporary state of disaster; an inability to mutually define the degree of emergency existing and the role expectations appropriate within this situation.

Intra-organizational cleavages developed among the personnel within the volunteer-professional strata of the Red Cross organization. The local volunteers were somewhat more ideationally oriented and wished to lend friendly assistance to the local residents in distress. The bureaucratic structure of the quasi-legal Red Cross emphasized only the efficiency of material aid distribution. Such an end requires standardized procedures, bureaucratically trained personnel and the assumptions of the sensate approach to catastrophe. Those volunteers who carry an ideological attitude from their pre-emergency roles into their Red Cross activity effected a personal emotional rapport with the victims at a cost of subverting the procedures and established aims of the Red Cross organization. Hence, the structure, goals and diversified sources and varied degrees of training of Red Cross personnel are conducive to intra-organizational cleavage and disaster.

Past experience with floods or amount of information appear to have had little impact on the decision to evacuate in areas where a recurrent-"near miss" tradition has prevailed over a period of time. Informal social sanctions arose which prohibited the taking of emergency roles during early stages of the emergency. These traditions of disdain for those who would take emergency precautions required social conformity from high SES and low SES members alike.

In the Latino tradition, multiple role dilemmas involving non-complementary requisites of conjugal and consanguial obligations usually resulted in the latter being dominant although this may have appeared somewhat inconsistent to the external Anglo observers.

A coordinating and authoritative communication center appeared to be a functional pre-requisite for efficient inter-organizational relief activity. Without such a headquarters in a progressive, focalized, recurrent-"near miss" crisis situation, individual definitions emerged which were inconsistent with those of both the victims and other cooperating relief agencies. This type of catastrophe required a mutual solution to the situational dilemmas so that all could operate within the same framework based <u>either</u> on normal or emergency norms. If both norms are present, disaster is the result.

#### The Dislocation Stage

This stage covers the period from the time that the majority of the Villa residents had left their homes to the time when they were relocated in their own homes. Inasmuch as evacuation took place over a long period of time, some families temporally entered this stage earlier than the majority of Villa residents. However, this need not be a major obstacle for drawing together the threads of the dislocation experience from all households involved.

## Descriptive Account--Dislocation Stage

Half of the households which evacuated stayed with relatives. Some of them rented houses or rooms, some stayed at the Red Cross shelter at Verde High School, and a very few stayed with friends. The period of time spent away from home ranged from 2 to 25 days except for two families who did not return. Except for rare cases, those who stayed away for more than 5 days were either renting or staying with relatives.

Inasmuch as the focus of this study was concerned with the activity at the Red Cross shelter at Verde, this type of billeting will be emphasized. It is recognized that numerically, however, these families make up a small part of those who evacuated. The existence of so many empty houses of families picking cotton up north partially accounts for the relatively small number of Villa families billeting the Verde gymnasium.

Wednesday, October 15th, the Red Cross banner was displayed at the Verde school signaling the official designation of this area as qualifying for disaster assistance. Much deliberation preceded this decision inasmuch as the mere opening of a shelter is extremely costly whether or not anyone is cared for within the facility. Once a shelter is opened there are decisions regarding how many supplies, cots, blankets, food and medical supplies to have on hand. Gomez reported that Red Cross officials not only did <u>not</u> have the necessary information to anticipate the number of evacuees expected, but that sources to procure this information were not available. The need for a central information source was consistently noted where the latest information could be pooled and used by all agencies concerned.

By Wednesday evening, the District Red Cross representative had arrived at the Verde shelter. From the time of arrival, the enmity between professional and local volunteer workers became more and more pronounced until the shelter operations had ceased. The operation of the shelter at Verde school enjoyed some built-in advantages. The school had buses which were pressed into service, the school gymnasium was used to house evacuees, and the school cafeteria was utilized for mass feeding purposes. The Red Cross called the regular bus drivers, cooks, and clerical help to work in mass care and feeding programs and paid their salaries for the services rendered. The cafeteria staff consisted of 22 persons who served for 800 hours at a cost to the Red Cross of \$410.85. The following table shows the number of meals served during the days the shelter was in operation.

	Breakfast	Dinner	Supper
Wednesday	_	_	78
Thursday	63	328	378
Friday	246	365	396
Saturday	318	378	301
Sunday	158	298	126
Monday	36	43	-

Table VIII.Number of Meals Served at Verde Cafeteria by the<br/>Red Cross to the Border Community Evacuees.

Fourteen buses in 94 hours used 103 gallons of gasoline to transport persons into the cafeteria for lunches. This was discontinued for the direct order system. To show the total cost incurred in this one operation, in Table IX it is compared with just the cost for Villa residents.<sup>26</sup>

The arrival of professional help was appreciated by the local Disaster chairman Gomez who had taken annual leave time from his

<sup>&</sup>lt;sup>26</sup>This information was sent by the Casework Supervisor with the fine cooperation of the Regional Red Cross Supervisor. The total number of cases from Villa (79 persons) includes at least half from the rural area surrounding Villa. Thus, much of the cost ascribed to Villa was used to assist families who were not included in this study since their domicile was not contained within the legal boundaries of the Villa community.

Category	Cost, Total	Cost, Villa Only
<ol> <li>Mass Care</li> <li>Food, Clothing and Shelter</li> <li>Building and Repair</li> <li>Household Furnishings</li> <li>Medical and Nursing</li> <li>Occupational Supplies and</li> </ol>	\$1,383.10 2,954.67 283.38 2,426.94 146.60 318.74	\$1,745.00 64.00 746.60 138.50
Equipment	\$7 513 43	\$2 712 42

Table IX. Total Red Cross Expenditures by Categories for the Verde Shelter and the Villa Share.

regular job to work at the shelter. He had minimized his time off by allowing Miss Goode to become his replacement as daytime shelter director. The transfer to professional control was not without incident however. Miss Goode considered the professional direction as "intervention" in the work of the volunteers. The professionals saw her as a problem. To gain further insight into these cleavages extensive quotes from these persons will be used. Pedro Gomez the Red Cross Disaster chairman explained why he welcomed the arrival of professional Red Cross help.

Some of my volunteer co-workers felt threatened by National workers and resisted giving over their jobs when the professionals arrived. I was relieved. I had to get back to my job. There was some confusion as to who should take over and the local people were bucking it. Their attitude [i.e. that of the professionals] was partially the reason for local resistance to them.

One new man [District RC representative] came in and aggravates people just by the way he talks. He called me one day and said "Well, I guess I'll have to take charge." It didn't threaten me because he didn't know anything about the resources of the community.

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I admit that I was confused and hesitant about policies. A girl sprained her ankle and the nurse saw it. Next day I saw the girl. She had sprained her ankle in a physical education class at Pan-American College. According to Red Cross rules if I had sent her to the Doctor, I would have been personally liable for the doctor's fee, so I hesitated making such decisions until the professional help arrived. In the case of the man drowned at Penitas. Should we foot the bill for the funeral? Here is where professional case workers know if we should foot the bill. . . .

An old man evacuated had a chronic kidney ailment. It was hard to keep that man there. We put him in an isolation room. The question comes up. Can we send him to a hospital or rest home? Is the situation caused by flood? No, but we can't keep the man here at the shelter. . . . I wasn't about to take everything in my hands. I consulted with supervisor of professionals. We will have to contract with others to care for him until he can return to his home was the decision. . . . We tried to put him in the County rest home but found he would not be admitted. It took us half a day to put him in a rest home in Mission with a blanket authorization for seven days. The daughter-in-law, about 25 and a widow with 3 children, began to cry after he left. I should have known better and prepared the girl. It was a lack of communication; she thought he was gone for good. I told her it would be for only 7 days. She said "I am afraid his other two sons will say I tried to get rid of him." We got address of son in Port La Vaca and contacted him through Red Cross. Next day his son was there. He approved the action we had taken. That night that same girl started crying again and got convulsions. The nurse thought it was epilepsy. I didn't think so. What should we do with her? . . .

Gomez continued:

People in the shelter were worried about a woman about to have a baby. The woman herself was somewhat unconcerned but everyone kept pestering all the Red Cross officials so that finally on Thursday we sent her out and she didn't have her baby until the next Sunday. I should have taken a more firm stand but the only nurse on duty at the shelter didn't even know how to deliver a baby, and that left most of the decision up to me.

Another widow woman started to cry and worry about 2 small sons. In fact, I had picked her up where people were piled up at the road junction who did not know about the shelter. She had lost everything she had; pigs, chickens, everything. Her cheeks were wet. I talked to her. I didn't blame her, in her situation I'd worry, too. All I could do was talk to her and give her support. I told her we could replace certain of her things. . . .

In summarizing his problems and in trying to assess the errors made in the relief operation, Gomez suggested the following measure.

I feel that separating the administrative officers from the physical shelter would be a real improvement, so as to not get molested with petty details. I forgot to get recreation facilities because of these other problems and the hubbub of the shelter itself.<sup>27</sup>

Since Gomez was employed in the State Child Welfare agency, he was susceptible to the emotional needs of the individual evacuees and in one sense abdicated the role of shelter director. Miss Goode was unfamiliar with the subtleties of Red Cross procedures and policies and she allowed her personal reactions to govern her decisions even when assuming the role of a Red Cross representative. She confided her reactions to the way the shelter was organized and administered.

I feel that people who stayed in the shelter did not even feel related to the Red Cross. They seem to rate all social services as something they are entitled to and that they are the ones who should determine how long it should last.

Jane Goode continued:

I think we had too many Red Cross professionals all here at once, mostly surveying and sitting on their fanny, and it botched up the work of the volunteers. They were always having a meeting. They even met with the Chapter chairman Hiller and appointed a Professional in charge of the shelter without the knowledge of the local Disaster chairman. I did not know of such an appointment until Sunday evening and had worked under

<sup>&</sup>lt;sup>27</sup>Personal interview October 29, 1958.

the impression that Gomez had left me in charge. They came and went as they liked and only two nights was there a professional here at the shelter.

Something I think was unforgivable is that they insulted Mr. Perán our High School principal, to his face. They treated him like they considered him an uneducated Mexican, whereas he is a fine man, well educated and a gentleman.

They had a complete lack of cultural understanding, which I consider very important in my work and have gone to great lengths to develop. [She then handed me a Mimeo booklet, helps to teachers in Spanish-speaking areas, in which she had been a major contributor.] If the Red Cross wants to send people in, they should send them in teams who already know their area of responsibility and not delay to set up their organization at the location of the disaster.

You know, I didn't believe right up to this time that volunteers do the work and the professional gets the glory. Well, I believe it now! This group had never worked together-four hadn't had disaster experience before, and only two had. There was a complete lack of attempts to understand the roles of the local volunteer workers or the local culture. One of them said something which I feel sums up their attitude quite well: "My job is to keep the volunteer workers in line!" They know that the volunteers must stay and take the glory or shame of how the disaster is handled while the regulars move away and forget about what happened. . . .<sup>28</sup>

A more subdued criticism was voiced by the soft spoken but extremely hard-working and efficient supply officer, Mr. Perán, the Verde High School principal. In commenting on the final reports prepared for the National Office of the Red Cross he made the following brief comments:

The Regional Red Cross representative had us type up the report for her which we did here at the High School as a courtesy, not for pay. Most of the details were of the Elsa, Texas, disaster where the Salvation Army did most of the work and this Verde operation was only mentioned here and there. It certainly doesn't give appropriate credit for the fine work done here at this location by our local people.<sup>29</sup>

<sup>&</sup>lt;sup>28</sup>From notes of personal interview with Jane Goode, November 1958 at Verde High School.

<sup>&</sup>lt;sup>29</sup>Personal interview with Mr. Peran, November 1958.

The personal concern and emotional overtones of these local volunteers is somewhat at variance with the bureaucratic emphasis on standardized procedures advocated and enforced by professional Red Cross officials. While it is not strange that some feelings of bitterness were expressed by the volunteer workers concerning the impersonality of the Red Cross regulars, much of this resentment emmanated from their own deviancy from the quasi-legal goals and purposes for which the Red Cross was founded. As Lynne Booth, the regional director, explained:

Local volunteers are rather oblivious of the legal separation of responsibility in protection of life and property carried by the Red Cross under Public Law 4 for over 75 years. Having specific responsibility in these situations forces us to conform to certain legal standards to carry out these charter responsibilities. This is something which is not open for change by each local Red Cross group. The function of local volunteer leadership is to train local people for service in positions which might be needed in the event of disaster. They are to implement the program as rapidly as they are able when the situation so warrants it. Then the full-time Red Cross personnel are assigned to assist them to carry out this legal responsibility for life and property within the procedures outlined in the printed manuals. It is not expected that local people will be as apt to be familiar with the technical aspects to the same degree that the full-time representative is. The only thing that causes trouble is when those with this knowledge arrive and begin to bring the operation into line with the outlined procedures, there is sometimes stubborn resistance by local officers to keep their place in the sun.

# The regional Red Cross representative went on:

From my 15 years experience, this was not a major Catastrophe. People had adequate warning, there was no flash flood and the National Guard was standing by to evacuate those who wished. . . Houses suffered little, disaster caused few **Problems**. The buckled floors will come back without replacing the entire floor says our building advisor. There was literally no current and subsequently little or no house damage. As I see it, there are no major problems here. The mass care personnel (3 male nurses around the clock on 8 hour shifts) complained about Jane Goode. Many tried to sleep when not on call but reported that they "had to talk to Jane Goode all night." One man slept in his car to get away from her and get a good nights sleep. She went night and day and hindered the operation somewhat in her opposition of implementing correct procedures which the professionally trained Red Cross workers tried to explain to her, but she didn't understand and refused to change.

Our people are aware of the cultural distinctions of this area. We have an agreement with the State Department of Welfare to supply trained Latin case-workers for disaster rehabilitation. We always use them on border operations involving Latin communities. The Latin-American people are not often heard from, they have no effective pressure group. They are, however, one of the nicest groups I have ever worked with in disaster circumstances. . . . Generally they do what they are told and are little bother.<sup>30</sup>

The physical dispersion of the evacuees necessitated some modifications in the mass feeding arrangements. It was decided that it would be easier to provide transportation and feed persons at the cafeteria itself than to cook the food centrally and attempt to carry it to the evacuees in the many different locations. Mimeograph sheets (<u>avisos</u>) were distributed by Alfaro School bus drivers announcing time schedules for bus pick-up and return from Verde cafeteria twice daily. This program proved to be somewhat ineffective. Instances were reported of a family hardly touching a turkey dinner with whipped potatoes and peas because it differed to such a degree from the traditional diet to which they were accustomed. Also, films were taken of the cafeteria line and shown over local TV news broadcasts. The number of evacuees coming into the cafeteria fell off sharply. Much comment was overheard by cafeteria and local Red Cross workers concerning the fears of those being cared for at the shelter. They felt

<sup>&</sup>lt;sup>30</sup>Personal interview with regional Red Cross Representative, November 1958.

a loss of pride in having to accept free food and were embarrassed at being photographed so that everyone who they knew could see them accepting help from persons unknown. One young boy who normally eats in the cafeteria during the school year, following the example of his parents and deposited nearly the entire "balanced meal" plate in the garbage can. Professional Red Cross workers defined this behavior as "wasteful, hard to please these Mexicans" and similar responses.

A food distribution system much less costly to the Red Cross and more enthusiastically received was the program of direct orders. Forms were filled out with a given quantity of beans, flour, lentils, lard and rice depending upon the family size. These forms or direct orders were redeemable at any local grocery store for the foodstuffs. The local grocers in turn would turn these orders into the local Red Cross for cash reimbursement. Many families staying in vacant houses, without electricity, heat or water who were able to obtain direct orders for food appeared as satisfied if not more so than those staying in the dry and comfortable but public Verde gymnasium. Sometimes the families had to retrieve their cooking utensils and dishes from Villa in order to set up housekeeping. At all locations, gnats and mosquitoes were a constant bother. Sources of unpolluted drinking water were available but some families had to carry all their water over extensive distances. The ever present problems of stagnant water, especially at locations south of the main highway, involved fear of children drowning, the stench of polluted water and the fear of disease carried by the water. The presence of water also made the drying of clothing somewhat difficult both at the public shelter and at other local quarters.

When the public shelter was officially closed on Monday, October 29th, only 7 families still remained in the spacious gym. These families were transferred to a nearby Cotton Gin equipped with cubicles and kitchen facilities for migrant agricultural laborers during the regular harvest season.

Although families who stayed in private homes were not the focus of this study, they informed us of certain types of problems they encountered. Some women who were eager to work were kept from the hosts kitchen so they might rest and recuperate. In most of these cases the respondents reported that they would have felt more at ease if they could have engaged in some normal activity. Some instances involved small bungalows where two families with many children could not avoid personal friction after the first days excitement wore off. These persons were more isolated from what was happening to their neighbors and friends and felt less well informed of events than those who stayed in the public shelter.

During the shelter operation, the Disaster chairman Gomez was very reluctant to give out public releases for fear of "getting people excited." There was also some evidence of local Chamber of Commerce pressure to minimize the gravity of the situation so as not to scare away the tourist trade. In return, local merchants were willing to furnish anything within reason which was deemed necessary for the operation of the Red Cross shelter. It is of tangential interest that when Gomez did not give out releases, similar information was gathered from other sources.<sup>31</sup> Only once was an official report

<sup>31</sup>In a brief newspaper analysis of quoted sources of information, the following breakdown appears. <u>Source</u> <u>Newspaper Report</u> Dept. of Public Safety <u>San Antonio News and Express, Saturday</u> Oct. 18, p. 1. Corpus Cristi Caller, Saturday Oct. 18, p. 1. El Paso Times, Thursday Oct. 16, p. 1. (continued)

released by the Red Cross. This was handled by the Public Affairs officer Jane Goode. She was unaware that in a closed meeting of the local Chapter Officers earlier in the week, she was restricted from making releases which were not personally approved by those in charge. She never was advised of this until after this initial release was sent out and she was severely reprimanded for "doing such things on her own."

In summary, the public shelter was open from Wednesday to the following Monday. It provided physical comfort for the few evacuees who had nowhere else to go. There was little or no privacy, no activity nor recreation, and dietetically balanced meals were served which varied so greatly from the traditional diet of many as to be impalatable. Moreover, disaster existed within the Red Cross organization between the distinct orientations of volunteers and professionals.

### Th e Internal System--Dislocation Stage

The tendency within the Latino culture for evacuees to go into the homes of relatives is in accord with the norma indicating the importance of kinship ties. There are other factors which also affect this. Since the catastrophe was of a progressive nature, time permitted making some type of preparation. A focalized type of

Tabasco School Board Chairman	Houston Chronicle, Friday, Oct. 17, p. l.
Red Cross	El Paso Times, Thursday Oct. 16, p. l. Valley Evening Monitor (McAllen) Friday Oct. 17. This account emphasized that Red Cross officials refused to release any details other than that they had opened a shelter and were receiving riverside evacuees.
No <b>S</b> ources	Valley Morning Star, Saturday Oct. 18, p. 1. (Except State Highway Dept. for Road information) Mission Times, Thursday Oct. 23, p. 1.

Į.  catastrophe enabled Villa residents to stay with relatives who lived nearby but outside the focalized area. The numerous empty houses available because of the migrant families up north, provided an alternate dislocation site to the public Red Cross shelter. Had these other facilities not have been available, more families would have been forced to stay at the shelter.

Distance was no deterrent in seeking private quarters. Families generally traveled further to stay with relatives and friends than to rent, stay in a vacant house, or stay at the Verde shelter.

Those who waited until near the time of impact were more likely to go to the Red Cross shelter than those who left earlier. It is not known whether those who had nowhere to go stayed in Villa longer or whether those who tarried discovered that previously available facilities were no longer available. From our previous discussion concerning the social pressures to remain, it would seem that the limited selection of dislocation sites would be applicable only after the threat and evacuation stage was in progress.

The data from Villa refutes the stereotype of the Latino population being ready and willing to live on a public dole. The reluctance with which families stayed at the physically comfortable shelter and preferred less desirable facilities which were more private, the refusal of National Guard help in evacuating, and the tendency to impose on relatives rather than accept public food doles all refute the common negative stereotype of the Spanish-speaking population. It appears that the acceptability of assistance is dependent upon the relationship with the giver and not on the quality of the services or facilities offered as was assumed by external aid organizations. The impersonal procedures of listing names and getting personal information at the shelter registration, the impersonal atmosphere of the large Verde gymnasium, the feeding emphasis upon non-traditional type foodstuffs, and the lack of familiarity with the purposes and procedures of the external organizations seemed to create negative attitudes toward the very organization currently providing these basic necessities.

In ascertaining what activity occurred at the evacuation site, age, sex, and SES differences provided some clues as to variations which occurred at the differing types of quarters. The activity of younger children at all locations except that of the shelter, approximated normalcy. Pre-school children in the shelter were loath to leave the mother or the vicinity of their cot, and were awed into immobility by the novelty of the situation, and the vastness of the gym. Some of the older children had been taken to private quarters. Those in nearby empty houses were engaged in some normal and some emergency activity. The male youths checked out livestock, evacuated family possessions and reported on flood progress. The teen-age girls assisted with domestic duties. The incomplete account of teenagers from Villa prohibits any further generalizations concerning their roles.

Since the separate interviewing of males and females was not possible because of cultural resistance, the generalizations regarding sex roles are tentative, based upon information gleaned from about one-half of the Villa interviews taken. It is readily apparent that the act of evacuation affects the female role more than that of the male, especially in the role-set area of housekeeping, cooking, and domestic duties. The role-set dilemma was most evident among females at the Verde shelter, less evident for those staying with relatives and friends and almost non-existent for those in rented and vacant quarters where the normal domestic female duties could be preformed. High SES women were more apt to play normal roles than lower SES females or else they were able to verbalize their activity with greater clarity.
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The male role appeared to suffer less in dislocation and the type of quarters appeared to have little to do with whether normal or emergency activity could be performed by the male. Higher SES males mostly went to work as usual, helped at the various evacuation sites or gave aid to others. They were less occupied by flood loss, home destruction or the welfare of subsistence meat animals than the lower SES males. The lower SES male, while tending to do nothing other than stand around and talk about the flood or go out from time to time to check on personal property, was deviating little from preemergency activity. Most of them were unemployed except during harvest time and sitting about talking of the newsworthy events of the day was a normal routine.

As stated, high SES males and females were able to continue playing normal roles to a greater extent than those of low SES.

Lower SES families were prone to stay at the dislocation site a somewhat longer period of time than those of the higher SES households. The construction, durability and slightly higher elevation of some of the higher SES homes might have been a factor in relocation. Also, the higher SES evacuees took few possessions in evacuation; hence, they had fewer to be returned. Ownership of transportation facilities might have been a deterrent to immediate return for some lower SES families, especially those who were evacuated by the National Guard trucks. Table X indicates the time spent away from Villa.

Table X.Length of Time Spent in Dislocation Quarters by VillaResidents--by SES Level (N-64)

	5 days or less	6-10 days	More than 10 days
High SES	4	6	2
Low SES	11	23	18
Totals	15	29	20

The attitude toward organizational help received was generally favorable. In reading the negative comments of external help received, the reasons given were because of the <u>early discontinuance of help</u> especially of direct food orders. The higher SES individuals supported and helped the Anglo organizations so a reasonable positive attitude from them would be expected. There are many who did not receive help and were therefore not qualified to evaluate the aid received.

		Positive Evaluation	Neutral or Mixed	Negative Evaluation
High S	SES	6	1	
Low S	ES	38	5	11
T	otals	44	6	11

Table XI. Attitude Toward Organizational Help of Villa Residents Receiving Aid by SES Level (N-61).

There is a perceptible shift in the fear-orientations held at the warning stage and that expressed at the dislocation site. Upon hearing the first warning nearly all respondents directed their attention to considerations within the internal system; 75 per cent worried about persons and the rest worried about material things. From the safety of the evacuation site the 25 per cent who had worried about material things during the warning stage had expanded to 97 per cent of the families. In both stages the worries were directed toward the internal system. About two-thirds of the respondents worried most about the home and furnishings, and about three-quarters worried about food crops and animals. None were overtly concerned with health problems at the dislocation stage nor were they presently concerned with rehabilitation or money problems. The direct concern for basic food crops and food animals was a reflection of the near-subsistance

economic level of these migrant agricultural laborers who made up the bulk of the residents of Villa. Such exigencies precluded the development of long-term goals and rehabilitation plans and the help from the external organizations seemed hopelessly inadequate to cover the immediate problem of enough food and clothing for comfortable living.

### The External System--Dislocation Stage

Inter-organizational cleavages in the external system occur when two or more organizations are in a power struggle for occupancy of key prestige positions in the larger social system. Motivation therefore exists not only to try to outdo the other competitively, but to thwart attempts to share the glory or prestige. A report from the regional professional at the Verde shelter to the National Red Cross somewhat overemphasized the Red Cross work done at Elsa, Texas, and had few remarks concerning the Verde operation which was a total **Red Cross operation**.<sup>32</sup> The Elsa situation was a somewhat greater emotional and sensational occurrence than the Verde center, and had **POS sibly** a greater fund-raising potential.<sup>33</sup>

<sup>33</sup>One recent article suggested that "it is necessary for such agencies [Voluntary relief organizations] to use specific disasters to augment their general funds so that they may provide services in other sometimes less dramatic areas. Irwin Deutscher and Peter Kong-Ming New, "A Functional Analysis of Collective Behavior in a Disaster," <u>The Sociological Quarterly</u>, Vol. II (Jan. 1961), p. 29.

<sup>&</sup>lt;sup>32</sup>Such a final report was rather successful when evaluated in retrospect. The Civil Defense bulletin which reported the rescue activities up and down the river during this flood period, gave the Red Cross the credit for the shelter at the Armory which was in reality set <sup>up</sup>, staffed and supplied by the Salvation Army exclusively. The Verde shelter was mentioned just in passing and yet the total hours of volunteer and professional Red Cross work was greater at Verde than in all other areas along the Rio Grande in September or October.

Likewise, a violent reaction accompanied the local Disaster chairman's invitation to the Salvation Army to extend refreshment to shelter officials and refugees. Moreover, the functional utility of asking a local Church group to supply clothing under a banner other than that of the Red Cross did not coincide with the Red Cross procedures and purposes, and the professionals took issue immediately with such deviancy. To the professional, the Red Cross is a Congressionally chartered quasi-legal bureaucratic structure which assumes primary responsibility in any major catastrophe, providing minimal mass care, shelter and rehabilitation to victims on the basis of economic need. To the volunteer, the Red Cross is a relief organization which helps persons in trouble during troubled situations. The latter is much more diffuse and particularistic where the former is more specific and universalistic in nature. This difference in defining the role of the organization carries the seeds of intra-organizational disaster when local volunteers are not trained to accept the prescribed ends and procedures of that organization. When volunteers are trained to this end, there exists a strong resistance from victims to the impersonal professional role of the disaster worker.<sup>34</sup>

The professionals assessed the Verde situation as being not a serious situation. The major criterion upon which such a conclusion was based was that of the small expense involved in the local relief program. Apparently the Red Cross structure did not enable volunteer

<sup>&</sup>lt;sup>34</sup>Loomis, <u>op</u>. <u>cit</u>., p. 139ff, discusses this role as follows: The professional worker from the bureaucratic structure which is set up to handle disaster must, in time, find disaster commonplace. He would find it difficult if not personally undesirable to try to be affectively linked to a never-ending procession of disaster victims.

Loomis further cites the reaction of victims to this professional role as one of a lack of understanding the problems of the victims. They complain that while waiting in line to register, professional workers "laughed and joked as if they didn't care that people had died."

or professional workers to be aware of the indirect consequences of the catastrophe for the Latino system. For Villa residents, the indirect consequences were far more devastating than the direct effects of the holocaust. The awareness of these two dimensions (directindirect and material-non-material) by both Red Cross professionals and local volunteers and evacuees might well have reduced the disaster potential in this relationship traditionally involving conflict and ambivalence.

A multiple-role dilemma forced a college sorority to reject the Red Cross registration duties for school attendance. It was then necessary to fill this assignment with available volunteers. The Disaster chairman experienced a role-set ambivalence between the personal problems of the evacuees and the administrative direction of the shelter. To pursue the personal problems of the victims he abdicated his responsibilities in the communication and tactical post at the shelter. The registration was handled by the public affairs officer and was located at the same table used for the shelter telephone. This strategical position was handled by a volunteer who rejected the basic premis of standardization upon which the Red Cross structure is based. Her personal attempts to interject the ideological orientation was dysfunctional to this sensate organization and resulted in aggravating and widening the gulf separating professionals from volunteer workers.

Other role-set dilemmas experienced by the local Disaster chairman included that of press releases. In an effort to keep local mechants happy, his reluctance to release information caused a great deal of variation in reports from outside sources describing the Red Cross operation. Integration of the various committees, the establishment of a recreation committee for the shelter and other duties were overlooked as Gomez became personally involved with the emotional problems of the shelter evacuees. He looked with favor on

professional replacements to make decisions and carry the responsibility, while the affectively-oriented Miss Goode saw the professional's arrival to take over as a "bid for glory by a disorganized bunch of disinterested regulars."

The reaction of the evacuees to the balanced, nutritional meals of the Verde cafeteria staff illustrated an intersystemic disparity. The assumption was made that traditional Anglo food was equally savorous to the Latino victims. This was a near disastrous assumption. When direct orders were given out and corn meal, beans, rice, and other traditional foods could be purchased and prepared as they were accustomed, satisfaction increased tremendously among the Latinos receiving aid. Attitude was generally favorable toward the reflief organizations. The negative feelings did not concern the help which had already been extended but expressed the uncertainty of future help until the personal sources for sustaining life could be reestablished.

Refugees found out about available help through the normal communication channels. The sources varied somewhat according to SES levels as with other communications. Also, those who acquired quarters out of the area found it difficult to remain informed of the general conditions in Villa. The public shelter on the other hand, proved to be a combined communication, administrative and tactical center for governmental and Red Cross coordinated relief, and a focal point for informal transfer of personal communications.

An informal channel of communication between the shelter and the home of the local School Board Chairman provided a great deal of information not available elsewhere. Mr. Reyes appeared to have the greatest number of information sources of any person or organization in the entire area. Since the volunteer-professional battle isolated the Chapter Headquarters from the shelter operation in terms of information

exchange, the Red Cross Disaster chairman was never able to acquire at any time the total view of the catastrophe and the relief operation. It is interesting to note that although School Board Chairman Reyes appeared to be the best informed man in the area, his marginality to the internal system significantly reduced his effect upon decisionmaking within that system.

#### Summary--Dislocation Stage

There is apparently a structural-functional cleavage within the Red Cross organization between the efficiency-oriented professionals and the affectively-oriented volunteers. This cleavage similarly appears between the defined goals and procedures of the Red Cross as carried out by its regular cadres, and the goals and procedures of other relief organizations such as the Salvation Army who expend their purposes to include personal involvement with evacuees. The latter organization is much more free to do this because of its ability to choose or disregarc commitment to any given catastrophe. The quasi-legal charter of the Red Cross forces it to commit its resources to any or all calamities. This commitment requires a greater emphasis on standardized procedures. Dissatisfaction increased in all emergency billets in which the evacuees were unable to play some normal or emergency roles. More contentment was reported in quarters where a near normal resumption of domestic duties could be assumed by the woman. The assumption of normal male roles was relatively unaffected by domestic dislocation since its performance is not tied to housekeeping duties. Thus, the clean and comfortable surroundings of the Verde gymnasium was rejected in favor of empty or abandoned dwellings in which more normal domestic activities could be carried out in greater privacy. In general, the quality of assistance offered appeared not to be a major factor of the acceptance or rejection of aid. The critical

factor in accepting or rejecting aid by the internal system was the relationship of the giver and the receiver. Gifts and assistance from kinship members were acceptable, even expected, whereas aid from the external system was accepted only as a last resort.

The fears for personal well-being so paramount in the warning stage shifted to an overwhelming concern for material possessions at the dislocation sites. The concern in both stages remained centered about the internal system almost exclusively.

The intersystemic relationships were in a state of disaster in the dislocation stage. The external system was almost wholly concerned with the direct and material consequences of the catastrophe. The internal system was concerned first with the non-material aspects; then with the indirect consequences which the external system had failed to recognize even existed. As the spectre of future unemployment, destroyed home gardens and polluted wells emerged, external aid was withdrawn because the rehabilitation programs for the direct losses had been concluded.

#### The Relocation Stage

This stage commenced with the return of the majority of the Villa residents to their homes and continued until the temporary relief sources had ceased or failed to provide the necessities of survival. When permanent plans of rehabilitation are instituted, the relocation stage and with it the Emergency phase gives way to the post-emergency phase.

#### Descriptive Account--Relocation Stage

**Familities** were eager to move back into their homes and relocation commenced before the water had receded very far. Those who owned cars or trucks were able to return at their own discretion but those whose possessions had been removed by the National Guard were forced to find other sources of return transportation since the National Guard had been removed from further emergency service. Homes along the main road through town (the only asphalt road) tended to be the first to be inhabitated again. Some roads were impassable and houses in the lower levels were accessible only by boat for some time.

When Villa residents returned they found that although the flood had been extensive, physical destruction was minimal. Sixteen homes had not even been touched by the floodwater and another 43 had little more than water seepage through the floorboards. Only seven households, reported more than a foot of water inside the house. Polluted and filled wells were commonplace. In many cases, drinking and utility water was brought into Villa by barrels from uncontaminated sources away from the river.

Most of the houses on the south (or river) side of the main road had their backyards under water for a period of three weeks or longer. The outside toilets stood half submerged in the stagnant water, a constant source of disease and contamination. Clogged drains, mold, and the stench of small dead animals caught in the weeds added to the misery. The latter drew swarms of flies while the standing pools of water created ideal breeding places for mosquitoes and gnats. Fuel supplies became depleted, and the wet clothing and bedding added more problems to an already hungry village. The loss of just a couple of small pigs, a lamb or a calf, or the destruction of a small plot of vegetables created a major food crisis for many Villa households.

Because of the flood, no work in field crops would be available until the crops could be replanted. About 10 per cent of Villa households reported that they had no economic resources available, about 20 per cent

of the households were receiving Social Security or child support, only one family had personal savings to see them through and the rest of them were equally divided between those with regular local work and those planning to go north in search of migrant agricultural labor.

#### The Internal System -- Relocation Stage

The same general status pattern of giving or receiving help was evident in relocating as was the case in the evacuation stage where higher SES helped more than they were helped and the lower SES received more help than they gave. One difference noted was that the lower SES families were able to give more help in returning than they had in leaving, possibly because of their free daytime hours when most moving back occurred. The higher SES families gave some help and as before, received little or no help, whereas the lower SES households both received and gave much assistance in this latter stage.

A paradox involving aid acceptance by the internal system developed at this stage. Those Villa households who were finally persuaded to accept external aid and relinquish help from kinship sources, were abruptly discarded by the external agencies when the <u>direct</u> catastrophe effects were mitigated. Those who withstood the external criticism of not accepting voluntary aid, were able to gain independence and equilibrium gradually through receiving a continuous decreasing amount of aid from relatives and friends. This situation once more reinforced the conceptions of the internal system that external relief organizations lacked consistency, reliability and personal feelings for the <u>real</u> (indirect) problems of the flood victims. It would be hypothesized from the Villa data that in an ideational culture less abrupt transition from the emergency to normal situation would be encountered by those who were oriented toward the internal system for assistance than those who accepted the help offered by the external system.

The capacity to cope with the economic pressures resulting from the flood also varied with the position of the household in the social strata. Nearly 85 per cent of the higher SES families had regular jobs which were unaffected by the catastrophe and which provided an unbroken flow of income throughout the emergency period. In contrast, only 20 per cent of the lower SES households retained employment and their hopes for future local agricultural work were washed away by the flood waters.

When asked what community experienced the greatest destruction in the recent flood, 80 per cent mentioned Villa. Those who gave other answers most frequently mentioned small Mexican villages which had been prominent in the press and TV coverage. This may indicate that Villa residents were well <u>informed</u> concerning the flood but defined the situation differently than the external system defined it. The external system had supposed that an absence of information was the reason for so little response to the repeated flood warnings.

#### The External System -- Relocation Stage

The evidence indicates that the external system defined the termination of the emergency period at an earlier time than the internal system. When the immediate direct effects of the catastrophe had been somewhat alleviated and the sensational character of the crisis situation was reduced, Latinos perceived a lack of concern and an attitude of self-accomplishment among the members and organizations of the external system. As public interest waned, the community was left to settle its own problems composed principally of the indirect consequences of the catastrophe. Red Cross casework which extended into this stage was concerned almost exclusively with home repair. Local businessmen extended credit to as many needing food as possible, but they could not maintain such a situation for any length of time. Kinship help from migrant relatives up north, those in nearby villages and those in Villa receiving social security provided enough funds to keep anyone from physical hunger.

The tradition of refusing County Welfare assistance to Latino families is well-known to both ethnic groups. This tradition was maintained during and after the emergency period. The United States Department of Agriculture had released surplus government commodities for free distribution to the victims of the flood but they were never distributed to the Latino population. The adjacent counties of Willacy and Starr had given out their allocations of powdered milk and dried foods. In Hidalto, the Welfare director<sup>35</sup> had attempted to get the Red Cross to assume charge of these goods and distribute them to border communities. The Red Cross had refused to do this and rather than deviate from the Latino-exclusion tradition, the local County Welfare Agency had retained the commodities.

From the data, many items question this stereotype of the "freeloader Latino" a view quite common among the Anglos and one which was demonstrated by the Hidalgo Welfare Agency. Not only had they refused to accept the free shelter privileges, free cafeteria meals and free transportation of their possessions from Villa prior to the flood, but their individual assessment of their own loss was strikingly dissimilar to a lazy and greedy person looking for a dole. Only one respondent in ten felt he had lost as much or more than his neighbor.

<sup>&</sup>lt;sup>35</sup>This information was gained in a confidential interview with a high Red Cross official who had been contacted to handle the surplus commodities. It was verified through indirect sources but the County Welfare director was unavailable for interview or comment at the time of this study.

Only nine (all lower SES) families felt they lost more than their neighbor.<sup>36</sup> Among Villa households, the data show that where any other alternative existed to get help, <u>the dole from external agencies</u> was avoided at all costs. It is apparent that the divergency in the norms of the internal and external were so pronounced that each did negative cognative mapping of the other, using their own norms as a basis for evaluation. Each erroneously assumed that the other system was attempting to do something which the other system had no intention of doing. Thus, disaster prevailed.

<sup>&</sup>lt;sup>36</sup>The type of evaluation used in determining the loss differed and an attempt was made to distinguish the basis of the evaluation. An assessment based on a pre-emergency norm (i.e. a neighbor owned more property, with more to lose he lost more) differed from one based on an emergency norm (i.e. my neighbors flood damage in dollars is greater than mine). While the latter evaluation seemed more prevalent, the inconclusiveness of the data and coding interpretations were so subject to error as to question the validity of the findings. However, this appears to be an important area for further research in subsequent disaster projects. The shifts from one type of norm to another would give clues to the processes involved in shifting from normal to emergency norms.

### CHAPTER V

## POST EMERGENCY PHASE

#### Short-term and Long-term Rehabilitation

Due to the focus and nature of this project, the post-emergency phase of the crisis was not emphasized. Hence, the information gained which is applicable to this phase is extremely limited. In addition, the field interviewing of Villa households was done so rapidly after relocation that no empirical account exists regarding the rehabilitation plans which were actually undertaken. Only the attitudes concerning future plans which were obtained through direct interviews are available for analysis. Since the relief organizations had creased operations, no further information is available from the external system. The larger Anglo culture was not concerned with the indirect consequences of the Villa flood, so no rehabilitation plans were seen nor were anticipated by Villa residents.

Attitudes toward whether or not to stay in Villa and risk a reoccurrence of the flood demonstrated that few breaks with the close traditional and ethnic ties were even contemplated. Only six respondents reported they would not stay; four of them gave the recent flood as the basis for their decision. Eight additional respondents considered moving to be an unrealistic alternative but wished that the situation were such that they could move. Close friendship and kinship ties, ack of prospective buyers for their property, paucity of savings to

carry them over while changing location, and reluctance of spouse to move were the factors which prevented them from considering relocation elsewhere.

There is little evidence to suppose that any of the families are economically able to leave Villa at present. It is assumed that as consensus becomes stronger after this experience, the ability to disassociate their family from such a close-knit group will diminish steadily.

There was some evidence that the families who were already contemplating a trip to the north to work in agriculture will follow through with their plans. Families who have not gone to the north previously or who have no prearranged contacts with prospective employers will be hesitant to attempt such an undertaking at the present time. The economic pressures caused by the floods have made such expenditures to find work more a gamble than is usually the case. It is expected that in a very short time period, consensus will form minimizing the desirability of permanent relocation elsewhere. It is doubtful that any families will leave Villa as a result of this recent flood experience.

## CHAPTER VI

## CONCLUSIONS

#### Summary of Findings

This study reaffirms the persistence of social systems under stress. It supports the proposition that behavior under emergency situations can be predictable by the mapping of emergency roles which are deemed appropriate to a given type of emergency situation.

The general working hypothesis that the combination of crisis dimensions determines the types of role ambivalence at the various levels of social action is clearly established by the data from Villa.

The second general hypothesis regarding the Anglo-Latino systemic linkage is also supported by the data; that is, that the acceptance of assistance and relief aid, of early warnings, and of temporary evacuation sites was based more upon the social relationship with the person or group administering this aid, warning or shelter than upon the quality of goods or merit of services performed.

The experience in Villa questions the assumption that prior experience with catastrophe promotes an increased ability to correctly define the emergency situation and to more readily act in an efficient and meaningful manner in such a situation. The data show that <u>the</u> <u>type of prior experience</u> with catastrophe is far more crucial in predicting reaction to it than whether or not a person has had previous contact with catastrophe. Among Villa residents, the recurrent-"near miss" flood tradition had created an apathy, a disdain

for the catastrophic potential of the Rio Grande. This apathy had been reinforced by negative social sanctions invoked against those assuming emergency roles and moving out when flood warnings were received. Educated people and those with high status were subject to these sanctions to the same extent as the other residents even though their source of information made them rationally more aware of the imminent danger. The members of the Anglo system defined this reaction to the flood warnings as evidence of "ignorance, stubbornness, and outright stupidity."

Another major cleavage between the Anglo-Latino systems was the inability to mutually define the situation as an emergency and both act in complementary emergency roles. The Red Cross was operating under emergency norms for nearly two days before most of Villa's residents deemed the situation serious enough to engage in the appropriate emergency behavior. In a progressive type catastrophe, there are no definite cues as to when the situation has become an emergency, and the arbitrary definitions of the two systems involved were not co-incidental. This cleavage which developed between the Red Cross and Villa evacuees was made possible because of the distinct value orientations of these two systems. Moreover, the former was primarily interested in the direct, material losses which their quasi-legal bureaucratic organization could handle with standardized procedures. This impersonal approach and disregard for the indirect consequences of the catastrophe were interpreted by the Latinos as a lack of interest and a lack of humanitarianism. A further extension of this disaster situation involved the various levels of the Red Cross organization itself. As some of the volunteer workers continued to play humanitarian roles rather than the prescribed roles of the Red Cross volunteer, they became emotionally engulfed with the personal problems of the evacuees and though more

personally acceptable by the latter became a detriment rather than a help in carrying out the charter responsibilities of the Red Cross relief organization. Pre-emergency struggles for ascendancy between full-time and volunteer workers restricted the channels of communication wherein the professionals and volunteers continued the struggle for power and status throughout the emergency phase.

As the external aid was withdrawn, the indirect consequences of the catastrophe became more evident to the Villa households. Those who had accepted external sources of aid were abruptly discarded without further means of relief. Those families who had sought help within the traditional kinship structure were receiving a gradually diminishing amount of aid from kinfolk and were able to adjust their resources accordingly.

Adult female sex roles appeared to require more readjustment than those of the adult males. Domestic duties were affected more than male activity as the family evacuated to a temporary site. A tentative finding based on incomplete data suggested that women located in the Public Shelter or in private homes who were not allowed to pursue normal or emergency roles were affected more from the catastrophe than those who could perform these roles even if the latter were performed under primitive conditions. However, both male and female adults of the higher SES strata were able to pursue normal roles with a minimum of adjustment as compared to the lower SES adults. There was a minimum of concern with health problems during the emergency just as was normally the case in the pre-emergency period. The physical discomfort caused by gnats, mosquitoes, stagnant water stench or the contamination of drinking water sources was lamented.

Various attitude and activity changes were noted during the various stages of the emergency phase. At the first warning, the vast

majority were concerned about specific loved ones and persons within the Latino community. By the time they had evacuated and the possibility for personal harm had diminished, all but a few families had realigned their fears to concentrate on their personal material possessions, especially their food animals, gardens, and household possessions. By the time the relocation stage had been completed, the focus was on clean-up activities and the waiting for future job opportunities.

In summary, where one system operates within a definition of normalcy and the other invokes emergency norms, coordination cannot take place and a state of disaster exists. The pattern of crisis dimensions delineates more clearly the points of stress where disaster should be expected in disjunctive situations. It can thus be used as an heuristic tool for the analysis of disaster emergence.

# Application of the Findings

The findings from this study are applicable in three general areas: In effecting change across socio-cultural boundaries such as the effective introduction of health practices, in the coordination and acceptance of relief help by social systems experiencing a catastrophe, and in bringing the present planning of Civil Defense more in line with recent scientific principles of human behavior.

In the area of directed change across the Anglo-Latino cultural boundary, it becomes evident that nutual definitions of the situation must exist prior to effective communication of ideas and practices. A sensate organization (one who assumes that man can manipulate his environment to maximize his physical satisfactions) has certain procedures to carry out the goals of its program which are not complimentary to the ideational social structure characteristic of the Latino community, Villa. To be effective, such an organization must first be acceptable

to the target culture. The mapping of the local approach to social problems is a pre-requisite for social action. In a community such as Villa, <u>personal social acceptance must precede rational changes in</u> <u>behavior patterns or practices</u>. It is possible that the education of the younger generations might allow a different approach to be used in the future. But at present, the inference from the Villa experience would be that an intimate knowledge of the language and the traditional customs of Villa would be of greater utility in changing health practices than the overt display of symbols of hygienic proficiency such as an M.D. degree.

The Red Cross has a difficult job in assuming the quasi-legal responsibility of assistance in any catastrophe involving more than five families within the continental limits of the United States. It is committed to give material assistance to all areas within the United States whereas other organizations can organize and operate in only those areas where local enthusiasm gains support for their relief program. Moreover, other such relief organizations can commit their facilities early in the emergency stages when emotion is high and banner headlines are frequent. Based on the Villa data, Latino evacuees are somewhat more receptive to a warm, personal administration of a low-quality aid than a more efficient, impersonal disbursement of highest quality materials and technical services. The professional Red Cross workers are constantly associated with misery and destruction. They have assumed an impersonal attitude to avoid personal engulfment in the affective milieu of the victims which dissipates the energies of a key administration official. On the other hand, the pressures to conform to the evacuees expectations is heavy upon the local and partially-trained Red Cross volunteers. They identify with the local social structure from the pre-emergency period, and the chance for personal glory and gratitude from giving personal comfort and solace is a beckoning enticement.

It appears that unless the Red Cross can include an additional segment of its structure to provide this affective contact, or arrange to coordinate activities with organizations who are structured to perform this function, the negative image of the Red Cross as an "unfeeling, aloof and unsympathetic" organization will persist. To alleviate the intraorganizational cleavage between professionals and local volunteers, a more careful training of local workers might be emphasized. This in turn creates a more distinct gulf between the lower eschelons of the organization and those to whom they render service. In an attempt to maintain rapport with victims through local volunteers, it will increase the cleavages between the professional and volunteer Red Cross workers. And as long as only the Red Cross alone must assume this charter responsibility for catastrophe occurrences, it would be dysfunctional for them to depend on other organizations for coordinated activity since the failure of the other organization to remain committed in routine catastrophes would leave the legal responsibility once again to the Red Cross.

In the space age where missiles and atomic warheads are a reality, Civil Defense planners are concerned with human reaction to mass destruction. The implicit assumption underlying the present series of Civil Defense drills and warning devices has been that of developing a stimulus-response pattern habitually practiced which can be triggered in case of an emergency. It is supposed that by decreasing anxiety, less irrational panic type behavior would result. Recent scientific evidence concludes that panic is an <u>extremely rare occurrence</u> in even the most serious catastrophic events. If this be so, then the present Civil Defense plans are oriented toward a minor part of human behavior in stress situations, while unintentionally creating latent reactions. <u>The drills which have the manifest function of anxiety</u> reduction simultaneously produce the latent consequence of apathetic

reactions to warning and habitual disregard for assuming emergency roles. As shown in the Villa data, with a tradition of a recurrent-"near miss" situation of which the Civil Defense drill is a type, when a real emergency is imminent the habitual response is to consider it another "near miss" situation. Present sanctions toward persons openly taking emergency roles during Civil Defense drills are similar to that which occurred in Villa; ridicule and disdain. In London during the waning years of World War II, anyone seeking a bomb shelter at the sound of an air-raid siren was immediately categorized as a "newcomer." Might our present Civil Defense set-up be accomplishing the same situation which existed in Villa? (vis. that the apathetic attitude of Villa residents extended the definition of normalcy well into the critical emergency stages).

An alternative method of controlling and purposefully coordinating human activity in catastrophe might be derived from a recent tornado account.

((In Waco, Texas)) . . . it was commonly agreed that the volunteer workers from within the community were badly in need of the direction supplied by military personnel. The actual system was to mix one or two soldiers in with a group of civilians. Observers such as the City Engineer agreed that this produced much better results than working either the soldiers by themselves or the civilians by themselves.<sup>1</sup>

A core of trained cadre might be able to deploy their men and inaugurate specified programs without other organized interference or competition.

<sup>&</sup>lt;sup>1</sup>Harry Moore quoted in Loomis, Charles P. <u>Social Systems</u>: <u>Essays on Their Persistence and Change</u> (Princeton, N. J.: D. Van Nostrand, Inc., 1960).

### Implications for Future Research

In disaster planning, only recently has there been a growing awareness of the possibility of a diffused type of catastrophe. The methods of relief aid successful in small, focalized type of calamities need to be tested so as to determine which of them might be applicable to a diffused disaster covering even the regional sources of aid. In the present atomic era, the necessity for such distinctions are obvious in strategic military planning.

There is a need for more adequate description of normal and emergency norms and roles. From the Villa data, the evaluation of personal loss compared to neighbors' losses appeared to be made from two sets of standards. From the pre-emergency setting the question answered was "What possessions did my neighbor have which could be destroyed?" whereas the emergency basis asked "What was the direct loss of my neighbor compared to what I lost?" To delineate the factors which contribute to taking one or the other role will lend insight into the process through which emergency roles are assumed.

There is a great void in tracing the differential behavior patterns in crisis situations according to sex and age roles. In the planning stage, this study focused on sex roles but this aspect was slighted due to a cultural barrier in interviewing Latino women separate from their husbands. The replication of the hierarchy of roles (i.e. family, sex, age, occupation, etc.) controlled by culture and class would lend valuable assistance in predicting role ascendency.

In Latino culture, the relative position of conjugal and consanguial family roles needs to be considered further. With sparse data on this point the Villa research hypothesizes that among the adult Latinos, conjugal responsibilities are subordinated to consanguial duties. Not only the mapping of the multiple-role hierarchy is needed

but the hierarchical arrangement of role-sets within each role could be related to positional and situational factors.

The greatest singular contribution to disaster studies would be an acceptable system of social symbols with specific meanings. The term "disaster" itself encompasses so many meanings as to lack the precision of a scientific instrument. The refinement of major concepts and language symbols will allow a greater synthesis of disaster research findings in the future.

In an applied sense, much more information is needed of a descriptive nature concerning communication networks in relief activities. The centralization of communication sources, the authoritativeness of early warning sources, the use of informal communication channels to supplement official sources are all key problems in effective governmental and voluntary relief activity. The coordination of communication between competing voluntary agencies is another problem which would be of future assistance in proposing complex programs involving multiple-relief agencies.

Last but not least, methodological studies are needed to determine what effect the lack of experience of researchers, or the lack of preparation for a disaster study inhibits or assists in gaining new insight into this phenomenon. The means of field expediency should be explicitly stated so that specific types of errors might be anticipated and alternatives prepared. It is hoped that a key experimental study to consolidate content findings and more closely examine methodological weaknesses is not far away. The close examination of several catastrophe-prone areas prior to a natural disaster would, in time, give us a test as to what prior attitudes and conceptions produce which subsequent behavior patterns. Until then, disaster studies will slowly piece together their disparate findings as the study of crisis develops from its infancy to a major area for interdisciplinary theory testing.

## Limitations of the Findings

The foremost weakness in the present study is the previous lack of direct disaster research experience of the writer. Though a veteran of more than a dozen field studies, the distinct and traumatic effect of this experience resulted in a temporary physical impairment which minimized direct interviewing by the author.

The cultural taboo restricting the interviewing of both husband and wife shifted the focus of the study somewhat radically within the short interval between pre-test and commencement of direct interviewing. Had more care been taken by the writer, age roles could have been highlighted to a much greater degree even though the information on sex roles was not available. Unfortunately, these terms were conceptually tied together and both were withdrawn together.

This small Latino community is typical of a small minority of that socio-ethnic group along the United States-Mexican border. It is not known how closely these findings would apply to more urbanized areas of that region which comprises the bulk of these Spanish-speaking citizens. It is hoped that the conceptual framework which was developed for this study would be useful in studying and comparing the more urbanized group.

The urgency of getting to the disaster site precluded the development of the present conceptual framework until after the data had been gathered. Prior to its analysis, however, a rather comprehensive review of the literature expanded the understanding of the writer to where certain variables loomed larger than others. In a constant interplay of the conclusions of previous researchers and the Villa data, this study was organized and refined; reorganized and clarified again and again. More competent social scientists will be able to designate other weaknesses if they are so disposed.

APPENDICES

## APPENDIX I

# SCHEDULE USED IN DIRECT INTERVIEW (English translation added in parenthesis)

### \* \* \* \* \* \* \*

## DISASTER RESEARCH--LOWER RIO GRANDE FLOOD

Schedule No.\_\_\_\_\_ Community \_\_\_\_\_

Interviewer	
Date -	
Place	

INTRODUCCION (Introduction)

Buenos Dias, como le va? Ha oido Ud. del reconocimiento que estan haciendo aqui sobre la reciente inundacion? Queremos saber la opinion de la gente sobre los problemas que el Rio Bravo ha causado.

(Hello, how are you? Have you heard about the inquiry being made in connection with the recent flood? We would like to ascertain people's opinion concerning the problems caused by the Rio Grande.)

# GENERAL (General)

 Cuantos Anos ha vivido Ud. por aqui?
 A. En (How many years have you lived here?)
 (In

A. En esta casa (In this house)

B. En esta region\_\_\_\_\_

- (In this region)
- C. En los EE.UU.\_\_\_\_ (In the U.S.)
- 2. Que tipo de trabajo hace el padre de la familia?(What kind of work does the father do?)
- 3. Cuantas personas viven en esta misma casa? . (How many persons live in this same hours?)
  - A. Total

(Total)

B. Chicos hasta
15 anos
(Children 14 years
old or less)

- 4. De que organizaciones es miembro Ud. (Incluvendo iglesia)? (Of what organizations are you a member (Including Church)?)
  - I. WARNING STAGE
- 5. De donde recibio las primeras noticias de la creciente?
  - (From where did you receive the first notices of the flood?)
    - 1. Radio\_
      - (Radio)
    - 2. Periodico (Newspaper)
    - 3. Miembros de la familia inmediata (Padres, hijos) (Members of the immediate family (Parents, children))
    - 4. Otros parientes (Other relatives)
    - 5. Vecinos (Neighbors)
    - 6. Amigos o conocidos (Friends or acquaintances)
    - 7. Oficiales (Officials)
    - 8. Otro: (Other)
- 6. Creyo estas noticias cuando las recibio? Si () No ()
  (When you received these notices, did you believe them?)
  Yes () No ()
- 7. Que hizo Ud. al recibir las primeras noticias? (At receiving these first notices, what did you do?)
- 8. Cuando las oyo, por quien (o quienes) temio Ud mas? (When you heard them, for whom did you fear most?)
- 9. Cuales son las dificultades mas grandes en avisar a la gente del peligro de la creciente?(What are the greatest difficulties in advising people of the danger of the flood?)
- 10. Que cree Ud. que se podria hacer para resolver estos problemas? (What do you believe could be done to resolve these problems?)

## II. EVACUATION PROCESS

- 11. Quien hizo mas para convencerle a Ud. a que se saliera de su hogar? (Who did most to convince you to leave home?)
- 12. Que medio uso para salir? (With evaluation) (What means did you use to leave?)
- 13. Salio solo o con otras familias?
   (Did you depart along or with other families?)
   \_\_\_\_\_Nuestra familia sola (Our family alone)
   \_\_\_\_\_Con otras familias (With other families)
- 14. Antes de salir, sabia Ud. a donde iba? Si No (Before departing, did you know where you were going? (Yes No)
- 15. Salio toda su familia junta? Si No
  (Did all of your family leave together?)
  (IF NO) Quien se quedo?
   (Who stayed?)
   Porque?
   (Whv?)
- 16. Cuantas cosas saco de su casa cuando la abandono? (How much did you take when you left home?)

Muy poco o nada (Very little or nothing)
Parte (Part)
Casi todo o todo (Nearly everything or everything)

17. Si viniera otra creciente igual, sacaria Ud. mas, menos o lo mismo que saco esta vez?

(If a flood similar to this one came, would you take out more, less or the same that you took with you this time?)

Mas (More) Lo mismo (The same) Menos (Less)

18. Si viniera otra creciente igual, saldria mas pronto, mas tarde o igual que esta vez?(If a flood similar to this one came, would you leave earlier, later or at the same time that you did this time?)

	Mas pronto (earlier)	
•	Igual (Same)	
	Mas Tarde (Later)	
19.	Ayudo Ud. a otras familias a salir de sus (Did you assist other families in leaving th (IF SI) A quien ayudo? (IF YES) Whom did you help?)	cases? Si No neir homes? Yes No)
	l Familia inmediata (Immediate fam 2 Parientes (Relatives) 3 Vecinos (Neighbors) 4 Amigos (Friends) 5 Otros (Others)	ily)
	Normalmente ayuda Ud. a estas mismas f (Do you normally help these same families	amilias? Si No s? Yes No )
20	. Alguien ayudo a Ud. a salir de su propia c (Did someone help you in leaving your own	asa? Si No home? Yes No )
	l Familia inmediata (Immediate fam	ily)
	3 Vecinos (Neighbors)	
	4 Amigos (Friends)	
	5 Otros (Others)	
	Normalmente ayuda Ud. a estas mismas f (Normally do you help these same families	amilias? Si <u>No</u> s? Yes No )
	III. EVACUATION SITE	;
	21. A donde fue Ud. cuando salio de su casa? (Where did you go when you left home?) Lugar (Place)	Cuando tiempo quedo? (How long did you stay) Tiempo duro alli (Time spent there)

22.	En el lugar de evacuacion: (In the evacuation site) A. Que hizo Ud. para pasar el tiempo? (What did you do to pass the time?)
	B. Que facilidades medicas habia? (What medical facilities were there?)
23.	Durante el tiempo en el lugar de evacuacion, que le causo a Ud mas miedo? (During the time of the evacuation site, what caused you the most worry?)
24.	Que problemas encontro en el lugar de evacuation? (What problems did you meet in the evacuation site?)
25	. Que hizo Ud. para resolverlos? (What did you do to resolve them?)
(( E	<b>CODE FOR QUESTIONS</b> 26 and 28: (V) Help received; Evaluation of organization's role: $(\neq)$ positive evaluation (-) negative evaluation

- (o) evaluation non-ascertainable
- 26. Recibio ayuda de alguna organizacion en el lugar de evacuadion? (Did you receive help from any organization while at the evacuation site?)

	Ayuda obtenida (Help obtained)		
Nombre de organization	Alojamiento	comida	ropa
(Name of the organization)	(shelter)	(food)	(clothing)
	medicina (medicine)	sanitacion (sanitation)	otro (other)

27. Como supo la Gente que estas organizaciones daban ayuda? (How did the people know that these organizations gave help?)

# IV. POST EVACUATION PERIOD

28. Recibio ayuda de alguna organizacion desde que volvio a su casa? (Did you receive help from any organization since returning home?)

Nombre de Organizacion	Financial	comida	ropa
(Name of the organization)	(Financial)	(food)	(clothing)
	medicine	sanitation	other
	(medicine)	(sanitation)	(other)

29. Cree Ud. que lo que Ud. perdio fue mas, menos o igual que lo que perdieron sus vecinos?

(Do you think that you lost more, less or the same as your neighbors lost?)

Mas (more) Igual (same) Menos (less)

- 30. For que cree que Ud. perdio (mas) (menos) (igual) que sus vecinos? (For what reason do you feel you lost (more) (less) (the same) as your neighbors?)
- 31. Ayudo Ud. a otros a volver a sus casas? Si No (Did you help others return to their homes?) Yes No
- 32. Le ayudo alguien a Ud. a volver a sus casa? Si No (IF SI) Por que? (IF YES) For what reason?)
- 33. Que problemas tuvo Ud. al volver a su hogar? (What problems did you have at your return home?)
- 34. Que hizo para resolverlos? (What did you do to resolve these?)
- 35. A cuantos metros llego el agua en su casa? (How many meters of water entered your house?)

## V. REHABILITATION PLANS

- 6. Que son sus planes para el futuro inmediato?(What are your plans for the immediate future?)
- . Por ahora, con que recursos economicos cuenta Ud.? (What economic resources can you count on at present?)

38. Va a permanecer Ud. en este mismo lugar? Si No
(Are you going to remain in this same place? Yes No)
(IF NO) Que va a hacer? En donde?
(IF NO) What will you do? Where?)

# VI. HEALTH PROBLEMS

39. Que facilidades tienen normalmente aqui para proteger la salud? (What facilities do you normally have here to preserve your health?)

Facilidades conocidasFacilidades usadas(Facilities known of)(Facilities used)

Cent	ro de Salud
(IIea	lth Center)
Vacu	inaciones
(Vac	cinations)
Amb	ulancia
(Aml	oulance)
Enfe	rmera
(Nur	se)
Farn	nacia
(Pha	rmacy)
Rem	edios Caseros
(Hom	ne remedies)
Cura	undero <sup>**</sup>

40. Que facilidades tuvieron en el lugar de evacuacion para proteger la salud y que uso Ud.?

(What facilities did you have at the evacuation site to insure good health that you yourself used?)

Centro de Salud
(Health Center)
Vacunaciones
(Vaccinations)
Ambulancia
(Ambulance)
Enfermera
(Nurse)
Farmacia
(Pharmacy)
Remedios Caseros
(Home remedies)
$Curanderos^*$

- 41. Durante esta creciente fue Ud. vacunado o inyectado? Si No (During this flood were you vaccinated or innoculated? Yes No) (IF SI) Voluntariamente? Si No (IF YES) Voluntarily? Yes No
- 42. Que facilidades se usaron para la comodidad personal durante la creciente?

(What facilities were used for personal comfort during the flood?)

- A. Excusados (toilets)
- B. Banos (Bathing facilities)
- C. Lavanderia-ropa (Laundry)
- D. Agua potable o purificacion de agua (Drinking water or water purification?)
- E. Cocinas (kitchen)
- 43. Conoce Ud. a alguien que esta o estuvo enfermo a causa de la creciente?

(Do you know anyone who was or is ill because of the flood?)NombreDireccionTipo de enfermedad(Name)(address)(Type of sickness)

- 44. Ha habido algun miembro de su familia nervioso o trastornado a causa de la creciente?(Was any member of your family nervous or upset because of the flood?)
- 45. Que son los problemas mayores de la salud a causa de la creciente? (What are the major health problems caused by the flood?)
- 46. Que se puede hacer para resolverlos?(What can be done to resolve these problems?)

## VII. NATIONAL IMAGES

- 47. Que pueblo o ciudad sufrio mas a causa de la creciente?(What town or city suffered most because of the flood?)
- 48. En que lado del Rio Cree Ud. que sucedio mas destruccion?(On what side of the Rio Grande do you believe the most destruction occurred?)
- 49. A que cree Ud. que se debio? (What do you believe to be the reason for this?)
50. En su opinion, recibieron las victimas del otro lado del Rio mas, menos o la misma cantidad de ayuda en general?(In your opinion, did the flood victims on the other side of the river get more, less or the same amount of help in general?)

Mas (more) Lo mismo (the same) Menos (less)

51. En su opinion, cree Ud. que esta crisis creado por la creciente fue tratada mas bien o mas efficazmente en el otro lado? (In your opinion, do you believe this flood crisis was handled better or more efficiently on the other side of the river?)

52. En su opinion, cree Ud. que las victimas del otro lado recibieron mas consideracion o cuidado en sus problemas?(In your opinion, do you believe that the victims from the other side received more consideration or care in their problems?)

$\mathbf{S}i$	(Yes)
 No	(No)

53. Tiene Ud.:

54.

(Do you have?)	Radio (Radio)
	TV (TV)
	Telefono (Telephone)
	Auto o camion (Auto or truck)
	Suscription al periodico (Newspaper sub-
	scription)
	Casa propia (Own your own home)
	Casa rentado (Rent your home)
	Labores propias (Farmland of your own)
	Labores rendadas (Rented farmland)
Quien sostiene a la	familia?
(Who maintains the	family?)
	Padre solo (Father only)
	Padre y madre (Mother and Father)
	Padre, mother e hijos (Father, Mother,

Children)

Padre e hijos (Father and Children)

55. Los nombres de adultos en esta casa de 14 anos arriba:

Nombre Sexo Edad Anos de Escuela (V) si hijos casados (Name) (Sex) (Age) (Schooling) (Check mark if children married) Padre (Father) Madre (Mother)

- 56. Gana Ud mas de \$2,000 al ano? Si No (Do you earn more than \$2,000 per year? Yes No
- 57. Gana Ud menos de \$1,000 al ano? Si No (Do you earn more than \$1,000 per year? Yes No
- 58. (Describe house construction: Rate house with others in the community)

l Better 2 Average 3 Poorer

## MISCELLANEOUS

- 59. Que cree Ud. que son las causas principales de estos desastres?(What do you believe to be the principal causes of these disasters?)
- 60. Que cree Ud. que se debe hacer para evidar desastres en el futuro? (What do you believe ought to be done in order to avoid disasters in the future?)

61. Ha estado Ud. en otra inundacion, tempestad o desastre? Si No (Have you ever been in other floods, tempests or disasters? Yes No) (IF SI) Le sirvio de algo esta vez la experiencia pasada? (IF YES) Did that past experience help you this time?)

(FINAL INTERVIEWER COMMENTS):\_\_\_\_\_

## APPENDIX II

## Detailed Explanation of Scale Construction

## The Socio-Economic Status (SES) Scale

The concept of socio-economic status is a relative concept, depending upon the temporal and spatial limits and the social setting to which it is applied. The unfortunage paucity of alternate terms has forced this writer to identify the superordinate-subordinate social standing within this Latino sub-culture by somewhat misleading terms of "high" and "low" SES level. It is readily admitted that with two possible exceptions, all of the residents of Villa would be considered as low class on nearly any Warnerian type scale used in the larger Anglo culture. However, the exigencies of this specific research necessitated a meaningful analytical distinction between those of highest social and economic placement and those less high in the hierarchical standing. Hence, in Villa where a typical five-member household might average \$1600-2000 per year with two or three families working, an annual family income of \$2800 from a single breadwinner might be considered well above average. This same annual wage in the immediate invirons when applied to Anglo families might be considered a rather low income. Thus, the "high" and "low" SES level is a relative standing to a particular place (Villa) within the specific temporal and social setting of the flood and pre-flood era.

The four criteria with the relative assigned weights in creating an additive scale are presented as follows.

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	Score	Metric
Education	1	0-6 years of formal schooling.
	2	7-11 years of formal schooling.
	3	12 years or more of formal schooling.
Income	1	Under \$1,000 annual family income.
	2	\$1,000-2,000 annual family income
	3	Over \$2,000 annual family income.
House condition	1	Below average dwelling and surroundings
(As evaluated by the	e 2	Average dwelling and surroundings
interviewer in re- lation to other Villa dwellings)	3	Above average dwelling and surroundings
Occupation	1	Too old to work, dependent on others
-	2	Agricultural laborer, truck driver or custom hauling/odd jobs
	3	Crew foreman, bus driver, mechanic, unlicensed barber
	4	Farm owner, clerical, sales
	5	School teachers, proprietors, clergy.

The SES scores range from a minimum of 4 to a maximum of 14. The following array demonstrates the groupings and selection of cutting points.

No. of Respondents	SES Score		Meaning Given
6 1 5	13-14 12 11	ר ר	High SES level
2	10 *		
8	9	٦	
18	8		
10	7	١	Low SES level
23	6		
11	4-5	J	

In two cases, not enough information was available to assign an SES score, leaving 82 respondents categorized as high-low SES. The dividing line between a score of 9 and 10 was heavily influenced by a knowledge of the community in question and the concensus of some

influentials on the bulk of those persons who would be classified in this particular higher social category. Moreover, in order to get an SES score of 10 or more, it would be necessary to qualify as above average in at least one of the four criteria listed while maintaining an average score in the three remaining. Hence, a cumulative score of 2, 2, 2, and 3 (median scores) would not produce a high SES classification.

### Attitude Toward Organizational Help Scale

To be eligible for a scoring on this scale, a respondent must have had some contact (i.e. received or asked for help) with an aid organization as represented by questions 26 and 28 on the interview schedule in Appendix I. Moreover, they must have given some indication of having evaluated or attempted to evaluate that assistance. With such limiting restrictions, 21 of the 86 respondents could not even be considered, thereby limiting the application of the results. Through hindsight it can be noted that even persons who did not have contact with the aiding organizations might well have expressed an opinion concerning help given of the various types listed.

Six main aspects of help which were available were listed. They are: Shelter, food, clothing, medicine, sanitation, and financial. Transportation was included also when mentioned and recorded on the interview. An evaluation was called for on each item of help received utilizing a Likkert-type metric. Points given ranged from 3 for a positive evaluation to 1 for a negative evaluation. The total points were then divided by the number of items cited and evaluated to get an average evaluation. This was coded in five categories as follows:

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No of Respondents	Score	Meaning given
10	1	All assistance evaluated negatively
4	1.3-1.7	Most assistance evaluated negatively
6	2	Assistance not clearly evaluated as positive or negative
8	2.3-2.7	Most assistance evaluated positively
37	3	All assistance evaluated positively

# Attitude toward Facilities at Evacuation Site Scale

This scale is an algebraic summation of how many of the five facilities listed in question 42 of the interview schedule were considered adequate by respondents. It was developed to compare the physical adequacy of evacuation sites with the actual choice of site made when evacuation took place. Evacuees who were at Public Shelters, in vacant houses or rental units, and those who moved in with friends or relatives could be compared in their choice of evacuation site and what role if any, the physical accommodations and access to facilities played in their decision.

The five facilities mentioned were:

- A. Toilets
- B. Bath or shower
- C. Laundry
- D. Drinking water
- E. Kitchens

The results of this facilities evaluation is shown in the following array which also indicates the meaning of the score.

No. of Respondents	Score	Meaning Given
3	1	One of five facilities at evacuation site was considered adequate
5	2	Two of five mentioned facilities at evacuation site were adequate
9	3	Three of five mentioned facilities at evacuation site were adequate
15	4	Four of five listed facilities at evacuation site were adequate
40	5	All five facilities listed were deemed adequate at evacuation site.

When a facility was not available (such as drinking water at a vacant house) such facility was evaluated as inadequate. No respondent lived at a site in which none of the five listed facilities were adequate for his use, so the range of scores was from a low of 1 to a high of 5.

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Brief Biographical Sketch

Born at Garland, Utah in February 16, 1927, son of Roscoe and Mary Redford Stoddard.

Raised and attended grammar and high school in Logan, Utah.

Served in United States Coast Guard (LST 71-RM 3/c) December 1944-May 1946.

Accepted voluntary call as non-salaried representative to Argentina of The Church of Jesus Christ of Latter-Day Saints (Mormon), August 1946-September 1949.

Attended and Graduated with B. S. degree, Utah State University September 1949-June 1952.

Recalled to military duty, United States Army--2nd Lt., Artillery, September 1952-November 1953.

Attended and Graduated with M. S. degree, Brigham Young University, January 1954-August 1955.

Attended Michigan State University, working toward Ph.D. degree, September 1955-June 1959.

Appointed Assistant Professor of Sociology, Drake University September 1959-Present. ROOM USE ONLY

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