

196-1

INVOICE CHECK LIST

MCULERA Subproject

At Date of Original Authorization	Period Covered	Time Extended To	Allotment Number	Amount of Obligation
15 Sep 1960			1525-1089-1902	4,225.00

Additional Authorizations	Period Covered	Time Extended To	Allotment Number	Amount of Obligation

Invoice Number	Date	Amount	Balance
1	21 Sep 1960	4,225.00	- 0 -
REMARKS:			

[Redacted]

TO: TSS/OC

1. Date of Obligation: N/A

2. Purpose of Project: Disaster Study

at

B

3. Progress to Date: Project being initiated.

4. Expiration Date: N/A

A

5. Project Monitor:

FROM: TSS/CD

Room B-10, Ext.

G

Purpose: To support, in part, the Disaster Study, [REDACTED] Specifically, to study the more constructive behavior of individuals during periods of extreme stress (MCULTRA 126).

Initiated: September 1960

Contractor: [REDACTED] as a grantee of [REDACTED]

Cost: \$4,225.00

Status: Unknown

B

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[REDACTED]



126-4




15 September 1960

MEMORANDUM FOR: COMPTROLLER

ATTENTION : Finance Division

SUBJECT : WULTRA, Subproject 126

Under the authority granted in the memorandum dated 13 April 1953 from the DCI to the DD/A, and the extension of this authority in subsequent memoranda, Subproject 126 has been approved and \$4,225.00 of the over-all WULTRA project funds has been obligated to cover the subproject's expenses. This obligation of funds should be charged to Allotment 1525-1009-1902.

 **A**  
 Chief  
 TSD/Research Branch

APPROVED FOR OBLIGATION OF FUNDS:  
 **A**

I CERTIFY THAT FUNDS ARE AVAILABLE:  
 OBLIGATION REFERENCE NO. 511  
 CHARGE TO ALLOTMENT NO. \_\_\_\_\_  
 17 SEP 1960

Research Director

AUTHORIZING OFFICER

Date: 17 SEP 1960

Distribution:  
 Orig. & 2 - Addressee

- 1 - TSD/CC
- 1 - TSD/FASS



176-5

27 September 1960

MEMORANDUM FOR: CHIEF, FINANCE DIVISION

VIA : TSD/Budget Officer *file*

SUBJECT : MKULTRA, Subproject 126, Invoice No. 1  
 Allotment 1125-1009-1902

1. Invoice No. 1 is attached covering the above subproject.  
 Payment should be made as follows:

Cashier's check in the amount of \$4,225.00  
 drawn on [REDACTED] payable to [REDACTED] **B**

2. The check should be forwarded to Chief, TSD/Research Branch,  
 through TSD/Budget Officer, no later than Tuesday, 11 October 1960.

3. This is a final invoice. However, since it is anticipated  
 that additional funds will be obligated for this project, the files  
 should not be closed.

[REDACTED] **A**  
 Chief  
 TSD/Research Branch

Attached:  
 Invoice & Certifications

Distribution:  
 Orig & 2 - Addressee

\*  
 1 - TSD/FASS

I CERTIFY THAT FUNDS ARE AVAILABLE: 29 SEP 1960  
 OBLIGATION NUMBER: 547  
 CHARGE TO A/C NUMBER: 1125-1009-1902  
 AUTHORIZING OFFICER

**E** [REDACTED]

CHECK # 209-441969

RECEIVED [REDACTED] DEPARTMENT OF S

**A** [REDACTED]

11 OCT 1960

1286

April 16, 1962

Summary Accounting of grant to [redacted] C

Salaries	\$3,908.26
Travel	160.65
Equipment	21.65
Material and Supplies	134.44
Total expended	\$4,225.00

This is a true statement of the expenses of [redacted] Project as reported to me from [redacted] B

I have examined and approved the submitted expenditures.

A [redacted signature]

Chief  
TSS/Chemical Division

Date: 4/23/62

126-7

D

126

RECEIPT

Receipt is hereby acknowledged of the following check:

Official Check No. 209-441969, dated October 5, 1960,  
in the amount of \$4,225.00, drawn on [REDACTED]  
payable to [REDACTED]

[REDACTED]

B

[REDACTED]

C

Date: 10-14-60



126-8

27 September 1960

MEMORANDUM FOR: CHIEF, FINANCE DIVISION

VIA : TSD/Budget Officer

SUBJECT : MULTRA, Subproject 126, Invoice No. 1  
Allotment 1125-1009-1902

1. Invoice No. 1 is attached covering the above subproject.  
Payment should be made as follows:

Cashier's check in the amount of \$4,225.00  
drawn on [redacted] payable to [redacted]

B

2. The check should be forwarded to Chief, TSD/Research Branch,  
through TSD/Budget Officer, no later than Tuesday, 11 October 1960.

3. This is a final invoice. However, since it is anticipated  
that additional funds will be obligated for this project, the files  
should not be closed.

[redacted] A  
Chief  
TSD/Research Branch

Attached:  
Invoice & Certifications

Distribution:  
Orig & 2 - Addressee

- 1 - TSD/FASS
- 2 - TSD/RB

TSD/RB/ [redacted] (27 Sept 60)

A

[redacted]

126-8

[REDACTED]

INVOICE

For Services

\$4,225.00

B [REDACTED]

CERTIFICATIONS

(1) It is hereby certified that this is Invoice No. 1 applying to Subproject No. 126 of MKULTRA, that performance is satisfactory, that services are being accomplished in accordance with mutual agreements, that a detailed agenda of the payments and receipts is on file in TSD/RB, that this bill is just and correct and that payment thereof has not yet been made.

Chief, TSD/Research Branch

Date: \_\_\_\_\_

(2) It is hereby certified that this invoice applies to Subproject No. 126 of MKULTRA which was duly approved, and that the project is being carried out in accordance with the memorandum of 13 April 1953 from the DCI to the DD/A, and the extension of this authority in subsequent memoranda.

Research Director

Date: \_\_\_\_\_

[REDACTED]

126-9

DRAFT  
15 September 1960

A

MEMORANDUM FOR: THE RECORD

SUBJECT : MKULTRA, Subproject 126

1. It is requested that Subproject 126 be approved to support in part the Disaster Study, [REDACTED]

[REDACTED] in accordance with the attached proposal.

Funds requested will be used to pay the salary of a principal investigator, [REDACTED] for three months and the salary of a secretary for one year. Expenditure of funds for partial payment of [REDACTED] salary commits [REDACTED] to providing salary from [REDACTED] funds for the balance of one year.

2. The Disaster Study focuses primarily upon the more constructive behavior of individuals during periods of extreme stress. The results could contribute to increasing the sophistication of the [REDACTED] mission as well as those government agencies concerned with aiding during disaster either in the U.S. or abroad.

3. This project will be funded through [REDACTED] [REDACTED] for security and cover purposes. Accounting for funds expended shall conform to the established procedures of that organization. No permanent equipment has been budgeted for the project.

4. The total cost of this project for a period of one year will be \$4,225.00 as indicated in the attached budget. Charges should be made against Allotment 1525-1009-1902.

[REDACTED]

[REDACTED]

126-9

C

5.

[REDACTED]  
[REDACTED]  
[REDACTED] is cleared and witting of true sponsorship. No other  
cleared and/or witting individuals will be concerned with the  
conduct of the study.

*Asbury Pittel*  
[REDACTED] A  
Chief  
TSD/Research Branch

Attached:  
Proposal

Distribution:  
Original Only

APPROVED FOR OBLIGATION  
OF FUNDS:

[REDACTED] A

Research Director

Date: 1955

[REDACTED]

[REDACTED]

GRANT APPLICATION TO [REDACTED]

B

1. NATURE OF REQUEST:

A. APPLICATION IS HEREBY MADE FOR A GRANT IN THE AMOUNT OF \$4,225.00 FOR THE PURPOSE OF COMPLETING A RESEARCH PROJECT ON THE FOLLOWING SUBJECT:

DISASTER AND THE THERAPEUTIC SOCIAL SYSTEM: A MODEL OF SOCIAL ADAPTATION TO DISASTER

B. THE FUNDS REQUESTED, IF GRANTED, WILL BE USED TO COMPLETE RESEARCH ALREADY IN PROGRESS AND TO PRODUCE A FINAL MANUSCRIPT WHICH WILL (A) SATISFY THE APPLICANT'S PH.D. DISSERTATION REQUIREMENTS IN THE DEPARTMENT OF SOCIOLOGY, UNIVERSITY OF [REDACTED] AND (B) SERVE AS THE BASE FOR A SUBSTANTIAL PUBLICATION WITHIN THE NEAR FUTURE.

2. RESEARCH PLAN:

A. GENERAL AIM: THIS PROJECT IS AIMED AT THE ANALYTIC SYNTHESIS OF A LARGE BODY OF RESEARCH DATA AND OBSERVATIONS REGARDING HUMAN BEHAVIOR IN DISASTERS--WITH PARTICULAR EMPHASIS ON THE POSITIVE, THERAPEUTIC MECHANISMS WHICH HUMAN SOCIETIES DEVELOP TO OVERCOME THE SUFFERING, LOSSES, AND PRIVATION OF DISASTER AND TO REGENERATE AND REVITALIZE THEIR SOCIAL LIFE.

ONE OF THE SIGNIFICANT FACTS THAT EMERGES FROM AN INTENSIVE AND EXTENSIVE STUDY OF LARGE-SCALE DISASTERS IS THAT THEY PRODUCE NATURAL SOCIAL ADAPTATIONS WHICH PREVENT, RESOLVE, OR AMELIORATE MANY OF THE PATHOLOGICAL BEHAVIORS NORMALLY EXPECTED UNDER CONDITIONS OF GREAT STRESS AND CRISIS. THESE NATURAL ADAPTIVE MECHANISMS ARE USUALLY SUBSUMED UNDER SUCH BROAD RUBRICS AS "MORALE" AND "SOLIDARITY", BUT THESE TERMS OFTEN OBSCURE MORE THAN THEY REVEAL. THE PRESENT RESEARCH WILL ATTEMPT TO EXPLICATE IN CONSIDERABLE DETAIL THE COMMON PROCESSES AND MECHANISMS OF POSITIVE SOCIAL ADAPTATION TO DISASTER, THEIR EFFECTS ON INDIVIDUAL AND SMALL-GROUP BEHAVIOR, AND THEIR IMPLICATIONS

[REDACTED]

FOR THE STUDY OF CRISES AND STRESSES OCCURRING UNDER MORE NORMAL CONDITIONS OF SOCIAL FUNCTIONING.

B. SPECIFIC AIMS: THE MORE SPECIFIC AIMS OF THIS RESEARCH ARE SPECIFIED IN DETAIL IN ATTACHMENT "A". BRIEFLY OUTLINED, THEY ARE:

1. TO DEVELOP AN EMPIRICALLY-BASED FRAMEWORK OR MODEL FOR THE STUDY OF COMMON OR UNIVERSAL MODES OF SOCIAL ADAPTATION TO DISASTER. THIS MODEL WILL ATTEMPT TO SPECIFY THE SITUATIONAL FEATURES OF DISASTER AND THE TYPICAL ADJUSTMENTS TO DISASTER WHICH CONTRIBUTE TO THE DEVELOPMENT OF A THERAPEUTIC SOCIAL MILIEU.

2. TO DOCUMENT, ELABORATE, AND REFINE THE SALIENT ELEMENTS OF THIS MODEL BY A DETAILED ANALYSIS OF DISASTER RESEARCH DATA.

3. TO APPLY THE MODEL AND ITS DERIVED HYPOTHESES TO CURRENTLY AVAILABLE DISASTER DATA TO TEST GENERAL CONSISTENCY AND "GOODNESS OF FIT".

4. TO DEVELOP THE IMPLICATIONS OF THE MODEL FOR FURTHER RESEARCH IN DISASTERS AND OTHER FORMS OF CRISIS, AND FOR THEORETICAL FORMULATIONS REGARDING THE RELATIONSHIP BETWEEN PERSONAL AND SOCIAL STRESS; THE EFFECTS OF SOCIAL ISOLATION AND ALIENATION IN CONTRIBUTING TO MENTAL ILLNESS; POSITIVE CONCEPTIONS OF "MENTAL HEALTH"; THE NATURE OF "THERAPEUTIC COMMUNITIES"; AND OTHER SOCIOLOGICAL AND SOCIAL-PSYCHOLOGICAL PROBLEMS ENCOMPASSED OR TOUCHED BY THE MODEL FORMULATION.

C. SOURCE OF DATA: SINCE 1950, OVER 140 FIELD STUDIES OF DISASTER HAVE BEEN CONDUCTED BY SOCIAL SCIENTISTS IN THE UNITED STATES AND SEVERAL FOREIGN COUNTRIES. THESE INCLUDE STUDIES OF EARTHQUAKES, EPIDEMICS, EXPLOSIONS, FIRES, FLOODS, HURRICANES, NINE DISASTERS, SNOWSTORMS, TORNADOES, TOXICOLOGICAL EVENTS, AND MISCELLANEOUS OTHER ACCIDENTS AND DISASTERS. THE PUBLISHED AND UNPUBLISHED DOCUMENTS RELATING TO THESE STUDIES ARE DETAILED IN ATTACHMENT

"B" ( [REDACTED]

C

126-9

**[REDACTED]** THESE DOCUMENTS, TOGETHER WITH THE PRIMARY DATA ON WHICH THEY ARE BASED, WILL SERVE AS THE MAJOR SOURCE OF DATA FOR THIS ANALYSIS. THEY WILL BE SUPPLEMENTED BY DATA FROM THE U. S. STRATEGIC BOMBING SURVEY STUDIES IN WORLD WAR II AND FROM SOME OF THE MORE CAREFULLY-DOCUMENTED SOCIAL HISTORIES OF DISASTER. THE APPLICANT HAS MOST OF THESE DOCUMENTS IN HIS PERSONAL FILE. OTHER RELEVANT DATA CAN BE OBTAINED FROM THE DISASTER RESEARCH GROUP, NATIONAL ACADEMY OF SCIENCES-NATIONAL RESEARCH COUNCIL, WASHINGTON, D.C., AND FROM INDIVIDUAL RESEARCH GROUPS OR AGENCIES.

**d. METHOD OF PROCEDURE:** MANY OF THE CENTRAL IDEAS TO BE INCORPORATED HERE HAVE ALREADY BEEN DEVELOPED BY THE APPLICANT IN PREVIOUS PAPERS. THE ESSENTIAL TASK REMAINING IS TO REFINE, ELABORATE, AND SYSTEMATIZE THESE IDEAS AND TO RELATE THEM BOTH TO THE EMPIRICAL DATA OF DISASTER STUDIES AND TO RELEVANT THEORIES AND EMPIRICAL STUDIES IN SOCIOLOGY, SOCIAL PSYCHOLOGY, AND SOCIAL PSYCHIATRY. THIS WILL REQUIRE THE ASSEMBLY, COLLATION, AND COMPARISON OF A LARGE BODY OF DATA FROM THE DISASTER RESEARCH LITERATURE AND FROM THE THEORETICAL AND EMPIRICAL LITERATURE ON STRESS AND CRISIS. INsofar AS TIME AND RESOURCES PERMIT, DATA FROM PREVIOUSLY-CONDUCTED DISASTER STUDIES MAY ALSO BE RECORDED AND RETADULATED IN ORDER TO DEVELOP ADDITIONAL DATA RELEVANT TO THE MODEL OR PROVIDE PRELIMINARY TESTS OF DERIVED HYPOTHESES.

**e. PREVIOUS WORK DONE ON THIS PROJECT:** IN A GENERAL SENSE, THE APPLICANT HAS BEEN WORKING ON THIS PROJECT SINCE JUNE, 1950, WHEN HE BEGAN ACTIVE RESEARCH ON PROBLEMS OF HUMAN BEHAVIOR **[REDACTED]** SINCE THAT DATE UNTIL THE PRESENT TIME, MY ENTIRE PROFESSIONAL CAREER HAS BEEN DEVOTED TO RESEARCH

**[REDACTED]** IN THE FOLLOWING POSITIONS: (1) **[REDACTED]**

**[REDACTED]**

**[REDACTED]** (2) **[REDACTED]**

(C) [REDACTED] (3) [REDACTED]; AND (4) [REDACTED]

IN THESE POSITIONS, I HAVE BEEN INTIMATELY ASSOCIATED WITH MOST OF THE [REDACTED] RESEARCH WORK CONDUCTED DURING THE PAST TEN YEARS.

THE PRESENT RESEARCH PROJECT WAS PARTIALLY ADUMBRATED IN A PAPER DELIVERED AT [REDACTED]

[REDACTED]

3. PUBLICATIONS

PUBLISHED REPORTS & PAPERS

(C) [REDACTED]





[REDACTED]

C

UNPUBLISHED REPORTS & PAPERS

[REDACTED]

[REDACTED]

[REDACTED]

C

SEARCHED  
SERIALIZED  
INDEXED  
FILED

126-9

[REDACTED]

4. PROPOSED BUDGET:

TWO-THIRDS OF PRINCIPAL INVESTIGATOR'S SALARY FOR JUNE, JULY, AUGUST, 1960	\$1,575.00
SALARY OF SECRETARY FOR 12 MONTHS	\$2,650.00
TOTAL	\$4,225.00

[REDACTED]

126  
126-10

26 August 1960

MEMORANDUM FOR: THE RECORD

SUBJECT : Approval of Funds to Support Disaster Study

ATTENDANCE : Drs. [redacted] Gottlieb, [redacted]

A

SUMMARY: 1. Request for \$4,225.00 to support partially the salary of [redacted], principal investigator, and that of a secretary was approved. Support for [redacted] salary will keep him working on the [redacted] until fall when a State salary can be obtained for him.

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2. The disaster study specifically looks at the more constructive behavior of individuals during extreme stress. The results conceivably could contribute to increasing the sophistication of CIA's CA mission as well as help guide those government agencies concerned with aiding during disaster either at home or abroad.

3. Funding will be effected through the [redacted] mechanism. Project participants will remain unwitting or true sponsor.

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[redacted]  
TSD/Research Branch

A

Distribution:  
Orig & 3 - TSD/RB

[redacted]

126-11

[Redacted]  
[Redacted]  
[Redacted]

A

B June 17, 1960

Airmail

C [Redacted]  
B [Redacted]

Dear [Redacted]

B

You will recall our several discussions about the prospects of [Redacted] lending some support to our developing [Redacted]. It now appears that we could very definitely use some such support to carry us through a transition period. You may recall my explaining to you the arrangements we had made with [Redacted]. The original plan was for him to come here for the first year and to spend two-thirds of his time completing his work on the [Redacted]. [Redacted] agreed to support him for two-thirds of his salary during that time. We made arrangements to utilize him only one-third of the time during the first year and to support him accordingly. It was our feeling that during this year he could begin building up his [Redacted] while completing his [Redacted], and, also while completing his thesis for his Ph.D.

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B/C

As is sometimes the case with governmental organizations, the signals have changed. [Redacted] told him, rather belatedly, that their grant would run out the 31st of May, 1960, and that they would not be able to continue to pay him for the balance of the year as promised. [Redacted] figures that he must spend about three months more working at his present rate in order to complete the [Redacted]. [Redacted] as originally outlined for [Redacted] and to put him into position for beginning his second phase of data analysis from which he eventually hopes to produce a book. Naturally this work will be completed, whether anyone helps us pick-up the tab or not. I think that everyone agrees as to

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[REDACTED]

June 17, 1960

Page -2-

its worth. It would help us during this transition period if we could obtain some outside support.

If possible, I would like to obtain support to finance that portion of his salary which [REDACTED] was to have paid for June, July, and August. Based on the earlier agreement, we had put him on full [REDACTED] salary beginning in September, 1960. Also, I would like to request support for a secretary to assist him in getting the material completed and to work with him in the initial phase of setting up [REDACTED] division. If we can secure support for such a secretary for this period, and including the balance of the fiscal year, we can stabilize the position by establishing a [REDACTED] salary to begin with the next biennium. In order to provide this support, we would need \$4,225.00 (that would be \$1,575. to finance [REDACTED] salary for the balance of the original year and \$2,650. to provide the secretarial services I mentioned above). As I mentioned previously, it would be best for us, if this request is favorably considered, to have the money either paid directly to [REDACTED]

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[REDACTED] we would want to avoid having the grant paid through [REDACTED].

B

I think that the material enclosed is sufficiently detailed to describe the work, but if you have any questions let me know. I shall look forward to hearing from you regarding this request.

The handwriting survey arrived today, for which I thank you. I will return it in accordance with your request. I am wondering whether you intend to produce additional copies at some later date?

Best regards.

Sincerely,

C [REDACTED]

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Enclosures

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Thematic ProspectusPurpose

1. Much of the talk among behavioral scientists working with disaster materials has concerned itself with the need for applying existing theories and concepts from the social and psychological sciences to the disaster materials. The emphasis here will be placed on the obverse side of this two - sided coin: what the empirical study of disaster materials suggests for a revision of some existing conceptualizations and theories. In particular it will attempt to develop and partially test an empirically - derived model of human adaptation to disaster - a model which focuses attention on the broad social responses to disaster and their effects on the social system and small - group responses to disaster.

2. The present paper is simply a prolegomenon, designed to trace in broad outline some of the central thematic elements to be incorporated in the model and to suggest in embryonic form some of the ideas that will be developed in greater detail in the final product.

Background: The Need for Fresh Conceptualization

3. At some levels of analysis and for some types of problems existing theories concerning human response to stress and crisis may be adequate for explaining the behavioral phenomena of disaster. During the course of almost ten years of continuous work with disaster research materials, however, I have concluded that most current theories and hypotheses (a) have little or no predictive or control value at the social system level; (b) lead to the selection of non - representative, atypical, or unique social facts from the stream of behavioral phenomena in disaster; and (c) correspondingly, leave much of the total behavior in the social field as an unexplained residue. There appears to be a definite need to develop fresh conceptualizations or models which are more representational of the repeatedly - observed phenomena of disaster, rather than attempting to force the disaster data into existing conceptual molds borrowed from other contexts. We will lose the unique values of disaster studies in contributing to the social and psychological sciences if we view such studies simply as a testing ground for pre - existent theories. They also provide an exceptional opportunity to reformulate our basic thought structure about the nature of human behavior.

Background: The Deficiencies of Present Models

4. The final paper will detail many of the specific deficiencies of current explanatory models for understanding social system responses to disaster. Here we will simply suggest some of the major biases that occur when presently - available models are applied to disaster materials:

4.1 The Pathological Bias: This might be called the "disaster is hell" bias and it takes many forms in social and psychological theory. Like the commonsense conceptions of disaster, it assumes that the death, destruction, and disorder caused by disaster are inevitably "bad" and productive of social or personal pathology in the survivors. The focus on pathology tends to obscure the fact that disasters may also have positive, adaptive effects in the social system.

4.2 The Homeostasis Bias: The pre - disaster, "normal" state or equilibrium is viewed as the standard by which all behaviors are judged. Any change or deviation from this (hypothetical) standard is viewed as pathological, dysfunctional, irrational, etc. This bias also takes numerous subtle sub - forms:

4.21 The "Love thy Culture" Bias: It is assumed that man's sense of integrity and stability is totally rooted in the uniform and patterned life styles that can be abstracted from the heterogeneity of individual and small group behaviors in an ongoing social system. Any loss of this standard pattern leads to gross disorganization of personality and a strong desire to return to things exactly as they were before. We cry because we see our culture going down the drain of history. Particularly when applied to urban, mass societies, this thematic emphases tends to obscure the many implicit and explicit sources of dissatisfaction and conflict that exist within a complex social system and to minimize the divergence of individual and small - group norms and values from those characterizing the total social system.

4.22 The "Persistence of Culture" Bias: All behavior during and following the disaster is explained in terms of the continuity of the pre - existing social and cultural system; or, "the more things change, the more they remain the same." It leads not only to a distortion in the characterization of the pre - existing social and cultural system but also to an ignoring of significant changes in social relationships and interactions that occur as a result of disaster.

4.23 The "Vested Interest" Bias: Formal authorities and people with a strong vested interest in the pre - existing system of power and control often view their loss of control of the situation or changes in the expected patterns of behavior as threats to their status and, hence, tend to perceive and describe the different or unexpected behaviors that they see in pathological terms. The classic example is the Army's concept of "panic" -- invented by colonels to rationalize and explain to superiors why their men acted reasonably and rationally in the face of inadequate leadership, training, battle plans, and logistics.





There are many more subtle examples, however: the tendency of the Red Cross and other formal relief agencies to attribute "helplessness" to disaster victims in order to justify a form of organization which emphasizes dependence on outside aid; a common tendency to use words like "shock" or "stun" to explain why disaster victims prefer to develop their own informal solutions rather than accept assistance of formal agencies, the tendency for police and other control authorities to give gross exaggerations of the threat and incidence of looting and other forms of anti - social behavior to justify the continuation of a form of organization and method of operation which has little reality orientation under the changed circumstances of disaster, etc. This bias especially intrudes into studies which are concerned with the maintenance of formal organizational structures in disaster and which have relied primarily on formal agency informants for their data on behavior in disasters. A common specific form in which this bias manifests itself is the tendency to project the conflict and scapegoating activity among formal authorities into the total social field as a representative form of behavior.

4.24 The "Outsider" Bias: The outside observer usually comes to the scene of disaster with a mental image of "normal" behavior. Since the total social field looks confused and the behavior he observes does not fit his standard preconceptions of order, he often tends to perceive and describe the behavior as pathological. There is a common tendency to perceive the disorder but overlook the emergent order, to see the dramatic deviation but to overlook the repetitive and obvious elements of behavior. The disaster reports of experts or specialists in various fields are often as biased in this sense as those of laymen, and, in addition, frequently distort the broad social patterns of behavior even more by virtue of a highly selective focus of attention of behavioral "problems."

4.3 The "Moment - in - Time" Bias: Many of the conceptualizations of crisis and stress focus attention on a particular segment or time phase of the total process of behavioral adaptation and make the implicit assumption that this particular segment is representative of the whole process. When applied to disasters this sometimes results in the characterization of behaviors found in a particular time phase as the disaster reaction. Unfortunately, most of the empirical research on disasters has not been focused on the continuous study of the processes of behavioral adaptation through time; hence, the currently - available data are particularly subject to this interpretative bias.

5. These biases, and the theoretical or conceptual formulations from which they are derived, are highly useful for certain purposes; but they contain inherent limitations for understanding and explaining the process by which social systems overcome the stresses and disorganization of disaster and regenerate their social life. The microscopic examination of behavioral "problems" in disaster often - times blinds us to the fact that disasters produce not only destructive, disintegrative effects, but also reconstructive, regenerative human responses. Throughout history human societies have been subjected to devastating destruction from



disaster but, with minor exceptions, they have always been reconstructed. It is difficult to find a single case in history where a relatively complex social system has been destroyed by disaster alone. Indeed there seems to be considerable evidence to support the general validity of Toynbee's "challenge and response" thesis that those societies which have experienced disaster have not only proceeded rapidly to recoup their losses, but have also achieved a higher level of integration, productivity, and creativity than they had prior to the disaster. One of the significant questions that requires more detailed exploration, therefore, is: How and why do human societies recuperate so rapidly from the destructive effects of disasters? The model to be developed will attempt to make a small contribution to this broad question. It will take an antithetical point of departure from those theoretical and conceptual formulations which emphasize the destructive and pathological processes and results of crisis and stress. It will consciously be biased by a focus on the reorganizing, regenerative, and revitalizing mechanisms of social adaptation to disaster.

The Model

General Characteristics

6. The model to be developed can be characterized by the following general terms:

6.1 Ideal type -- i.e., a hypothetical or "as if" construct which attempts to abstract a number of critical essences from the stream of behavioral flux in disaster, and which is unlikely to exist in totally pure form in any particular event.

6.2 Universal -- in the sense that unique features or outcomes will largely be neglected in favor of an emphasis on changes which are basic or common to a social category; and in the sense that it aims to cut through the differentia of cultural elaboration in its search for common behavioral phenomena.

6.3 Instrumental -- in the sense that its value is viewed purely in terms of its ability to yield testable propositions or hypotheses which improve our understanding and control over the phenomena under observation. (Or, in more down-to-earth terms: How far can you run with this model before its usefulness is exhausted?)

6.4 Social - psychological -- in the sense that its primary focus will be on the experience and meaning of disaster from the point of view of the affected actors as they relate to social phenomena.

6.5 Sociological -- in the sense that it views the behavior of the actors within the context of the larger social system and is concerned with the linkages between large-scale system components of behavior and smaller sub-system components.

Definition of "Disaster"

7. For general orientational purposes, the following definition of "disaster" will be used:

an event, concentrated in time and space, in which a society, or a relatively self-sufficient subdivision of a society, undergoes severe danger and incurs losses to its members and its physical appurtenances such that the social structure is disrupted and the fulfillment of all or some of the essential functions of the society is prevented.

8. It should be noted that this definition places emphasis on events which damage and disrupt the systems of biological survival (subsistence, shelter, health); order (social roles, cultural norms, authority patterns, division of labor, etc.); meaning (values, shared definitions of reality, communication mechanisms); and reproduction, socialization, and motivation. If an event is disrupting to individuals or small groups but does not involve these vital functions of a society, it may be considered a crisis or an accident, but it is not, in the terms used here, a disaster.

Disaster as a Form of Crisis

9. Much of the thinking about crisis and stress assumes a kind of linear continuum ranging from minor to major, small to large. W. I. Thomas, for example, defined "crisis" broadly as any interruption of habit and ranged the various types of crisis on a continuum from momentary individual interruptions of attention to widespread social catastrophes. This type of thinking is useful insofar as it encourages behavioral scientists to look for similarities and differences among the many different types of crisis or stress. It becomes misleading if the additional assumption is made that the findings derived from one form of crisis can be extrapolated without change to other forms of crisis. The direct extrapolation of findings derived from clinical studies, from small-scale experimentally-induced crises, from individual family crises, or from "accident" type situations to disasters accounts for many of the serious predictive and judgmental errors that have been made about behavior in disaster.

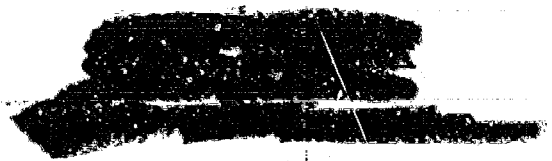
10. It appears useful to distinguish three different referential contexts within which stress or trauma can occur; (a) an intact, ongoing (undisturbed) social system; (b) an accident-struck (partially disturbed) system; and (c) a disaster-struck (totally disturbed) system. There are various dimensions along which these three contexts may be distinguished - e.g., the degree to which the pain, injury, or punishment can be viewed as originating within the system and correspond with pre-existent social distinctions and conflicts; the extent to which existing social and cultural functions can be readily applied to the situation; the extent to which the phenomena of loss and individual suffering can be hid from public scrutiny; the size of the social unit within which pain and suffering is shared; the

extent to which the larger social system recognizes the suffering of the victims by compensatory changes in the reward structure, etc. Behaviors in an accident - struck system may be expected to differ somewhat from those occurring in response to stresses and losses within an intact, every-day life, context; but for present purposes the distinctions are somewhat irrelevant because the general societal context remains essentially the same. The ensuing discussion will be concerned primarily with the contrast between the disaster context and the other two contexts.

11. There is considerable evidence to suggest that the initial, immediate, or momentary individual and small - group reactions to sudden changes in the environment are roughly comparable from one form of crisis to another. For example, the initial perceptions of disaster victims -- the tendency for attention to be narrowed, to assimilate disaster cues to a normal context, to act in terms of the immediate perceptual field -- are closely akin to those found in other forms of crises. Initial emotional responses to situations of danger and loss also seem to be roughly comparable -- e.g., the feelings of shock, numbness, and disbelief noted in family bereavement have interesting parallels with the initial responses of disaster victims. It is posited here that this commonality or likeness of response from one form of crisis to another is rooted in the fact that the basic referential framework is the framework of the normal, ongoing social system. The culture persists so long as people can continue to view the phenomena of disaster as familiar or expected phenomena which can be dealt with by pre - established behavioral patterns and which have reference only to the self and immediate ego - involved associates. As soon as the danger and destructive forces of the disaster are perceived as vastly transcending the self and the primary reference groups, however, a rapid shift in the referential and motivational framework of behavior occurs. This shift coincides with the recognition that the integrity and continuity of the society itself -- the social system which provides the underpinnings without which the many social subsystems cannot continue to exist -- is endangered. From this point on, we begin to see a step - function or generic change in responses to crisis or stress -- a change which cannot be completely understood in terms of knowledge about the pre - existing system or in terms of knowledge about reactions to stress, trauma, and privation which has been derived from non - disaster events.

The Emergent "Society of Sufferers"

12. With the recognition of the transcendental quality of the disaster effects, there emerges a "society of sufferers," whose membership is recruited from the fortuitous involvement in the dangers and privations imposed by the disaster agent. This emergent society develops an interactional system uniquely its own -- a system which does not have primary reference to the pre - existing system but to the situations and experiences produced by the disaster. Both its membership and interactional pattern emerge in the process of individual and collective activity aimed at comprehending and coping with the effects of the disaster. It is this emergent unit which will be focused upon in the development of the model suggested here.



13. The emergence of this "society of sufferers" is posited as a universal feature of disasters where the survivors are permitted to make an unimpeded social adjustment to the disaster effects. Its persistence in time and total effect in changing the pre - existent social system are variables determined in large part by the scope and destructive power of the disaster, the possibility of continuing or recurrent danger of similar magnitude, and by the power of remaining societal components to superimpose either the pre - existing system or a variant system on the emergent society. In general, however, it is assumed that this society will exist in potent and active form long enough to reinstate basic societal functions and achieve at least minimal life stability among its membership. (It may and frequently does continue to exist as a less potent associational and identificational unit long after this time.)

14. The changes in structure and forms of interaction adopted by this society of sufferers are posited as both individually and societally therapeutic in nature and effect, in the sense that they:

14.1 Resolve and ameliorate pre - existing personal and social conflicts that might endanger the present and future continuity of social life.

14.2 Attenuate or prevent the usual disorganizing individual and small - group responses to danger, trauma, loss, and privation.

14.3 Reduce or prevent self - aggressive and anti - social behavior arising from the losses and privations imposed by the disaster.

14.4 Re - motivate the actors in the system to devote their energies to societally reconstructive and regenerative tasks.

Therapeutic Adaptive Mechanisms

15. The therapeutic elements of social adaptation to disaster are usually subsumed under such broad rubrics as "social solidarity" and "morale," but these terms have been used in such a global and static manner that they obscure many of the important phenomena and processes that comprise them. The development of the present model will involve an attempt to specify in some detail both the situational features of disaster and the typical adjustments to disaster that contribute to the development of a therapeutic social milieu. For present purposes, these features have been translated into mechanisms of adaptation and are broadly outlined as follows:

15.1 The source of pain and suffering is objectified and specified as something which is external to and beyond the control of any individual member of the system. It is defined as something "out there" rather than "in here." By defining the causative factors as objectively - specifiable "things" in the external environment, anxiety is converted to fear and human energy is freed to deal directly

with the feared object. (Because the threats and dangers from disaster come from outside existing social and personal systems, an integrated response of the system qua system is facilitated.)

15.2 The remedial measures needed to cope with the feared object and its effects are translated into clearly - defined, objective acts which are within the capabilities and resources of the human actors. (Because remedial needs in disaster are immediate, imperative, and clearly specifiable in the external environment, consensus on needs and requirements for need fulfillment is rapidly and readily achieved.)

15.3 There is an implicit recognition that the most efficient method of overcoming personal disorganization and achieving personal reintegration and stability involves a change of the system within which the actors perform rather than changing the actors individually. The remedial measures, in other words, are viewed as a collective responsibility, requiring change in the collectivity as a whole, rather than simply an individual or small - group responsibility. As a consequence of this recognition, the "normal," pre - crisis social system undergoes a basic transformation, involving the following changes:

15.31 Pre - existing values and norms which are discordant with present life conditions are sloughed off and viewed as irrelevant to the situation. New norms and values arise to fit the present situational imperatives. The blanking out of past and future concerns frees human energy for a concentrated attack on present problems, and permits the actor to measure his efforts against standards which are clearly adapted to present and immediate needs. This direct and immediate feedback situation produces a satisfying sense of unity of the actor with the system.

15.32 Pre - existing invidious social distinctions and constraints to social mobility are eliminated and many of the sources of such invidious distinction and constraint (e.g., inequalities in the distribution of goods, services, and other tangible rewards) are temporarily removed. There is a general "democratization" of the social structure and the development of a system of societal rewards based on achievement rather than ascription. What a person does for the present society, rather than what he represented in the pre - existing society, becomes the basis for judging human acts.

15.33 The constraints against direct emotional expression and intimate communication are removed. Forms of expressive behavior which are normally circumscribed or inhibited by cultural taboos and the etiquette of social interaction are not only tolerated but are openly discussed and sanctioned. The entire society talks much more openly and freely about intimate feelings of fear, guilt, shame, despair, hope, love, and other important concerns of human life.

15.34 Sufferers receive a massive dose of love and



reassurance from the other survivors. The society offers "proof" of its concern for individual suffering not only by symbolic acts of sympathy and kindness, but also by providing the physical aid needed to minimize the objective bases of punishment and deprivation. What people presently need, rather than who or what they represented in the pre-existing system, becomes the essential basis for the distribution of scarce societal resources and services.

15.35 A small group of the most extreme sufferers are singled out and socially recognized as a reference point for assessing and comparing one's own deprivations. The actor can always point to an objective case of someone who is much "worse off" than he. The extreme sufferers themselves are given special compensatory rewards in the form of material aid and symbols of societal recognition for their losses and sacrifices.

15.36 The event precipitating the crisis is used to make a clean break with the past. There is the development of a kind of societal *tabula rasa*, -- a wiping of the slate clean in terms of past behavior that has no relevance for present conditions. The actors are absolved from responsibility for what happened before the event and told in effect: "The rewards and sanctions for behavior are based solely on what you do from now on." There is continuing public recognition of this societal absolution in the symbolic representation of the disaster as an important juncture in human experience. Subsequent happenings are rated and dated in terms of "Before" and "After" the disaster.

16. These social mechanisms produce a highly satisfying, "utopian" form of social life rarely attained under normal conditions of social functioning. The return to elementary, primary group forms of interaction on a large scale serves to eliminate feelings of isolation, loneliness, anxiety, powerlessness, meaninglessness, normlessness, self-estrangement and other expressions of alienation and conflict and replace them with a new sense of purpose, power, meaningfulness, and unity between self and society. The net result is a vast amplification and concentration of surviving human energy around the societal goals of survival and recovery -- a concentration of energy which not only eventuates in the reconstruction of the society but also in many cases enables the society to achieve a higher level of integration, vitality, and productivity than it had prior to the disaster. This "amplified rebound" effect can be attributed to the persistence of some of the changes in values, norms, and forms of social interaction developed during the emergency period beyond the point where they are needed to reinstitute the pre-existing level of functioning -- or, in other words, to the institutionalization of some of the changes produced by the disaster.

17. It is postulated that these mechanisms and changes appear in societal disasters of all types, but that they achieve their maximal development in disasters which strike indiscriminantly and unexpectedly, where the threats and dangers are clearly perceivable and specifiable



in the external environment, where the dangers and destructive effects can be attacked by simple, direct, combative action by the general populace, where the accomplishment of ameliorative and reconstructive tasks does not involve obvious mortal danger to the actors, and where the process of adaptation is not interfered with by the forceful superimposition of an extraneous form of authority and organization.

Some Applications of the Model

18. For purposes of reality testing, this model and its derived implications can be applied both (a) to the comparison of disaster behavior with behavior in other forms of crises and stress; and (b) to the analysis of behavioral phenomena within a disaster framework. The following paragraphs suggest some of the hypotheses that can be used in refining and testing the model within these two frameworks.

Comparison of Disaster Responses with Responses to Other Forms of Crises and Stress

18.1 The model suggests that the behavior of members of the society of sufferers in disaster will differ from the behavior of victims who suffer comparable kinds of loss or privation in a non-disaster context. The differences suggested include the following:

- 18.11 Greater probability of spontaneous remission of pre - existent neurotic and psychosomatic symptoms.
- 18.12 Lesser tendency to deny the existence of a crises.
- 18.13 Lesser preoccupation with matters of guilt and other self - punitive mechanisms.
- 18.14 Lesser tendency to project blame on persons and groups within the society; greater tendency to assess causative factors in naturalistic terms and locate them outside the system.
- 18.15 Lesser tendency to make invidious distinctions between one's own punishment and suffering and that of others.
- 18.16 Greater tendency to underestimate own deprivations, both absolutely (i.e., in terms of pre - existent standards of value) and relatively (i.e., in terms of how others have suffered).
- 18.17 Less demanding of attention from others (including relief and control organizations), more grateful for aid received, and more acceptance of failures or inefficiencies in others.
- 18.18 Greater attention to human (interactional) needs and values, lesser attention to material values and symbols.





18.19 Greater degree of positive orientation and feeling of identification with others (reflected in greater capacity to take the roles of culturally - divergent social types).

18.20 Lesser tendency to engage in categorical rejection or acceptance of other groups in the reference society.

18.21 Lesser preoccupation with self and familial troubles, greater tendency to view own troubles and deprivation as social rather than personal problems.

18.22 Greater willingness to discuss normally taboo subjects (including negative self - evaluations) and to accept normally deviant forms of behavior.

18.23 Lesser preoccupation with past (pre - crisis) happenings and events, greater emphasis on present conditions and future prospects.

18.24 More active, outward - oriented behavior designed to secure meaning closure and behavioral stabilization.

18.25 More intense, but briefer period of mourning (accompanied by more direct and open expression of grief responses).

18.26 Greater optimism about the possibility of changing and restructuring social relationships and achieving personal aspirations.

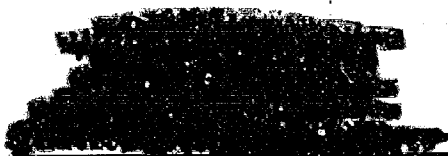
18.27 Greater tolerance for and capacity to accept social change.

18.28 Better memory recall of crisis events (lesser tendency to repress or inhibit recall of painful experiences).

18.29 Greater flexibility and adaptability in subsequent interpersonal crises (reflected in a reduction in number and disruptive quality of interpersonal crises which occur subsequent to the disaster).

Analysis of Disaster Behavior

19. By introducing additional analytic distinctions, the model can be used in various ways for analyzing behavior in actual disasters. For illustrative purposes, hypotheses relating to the following three distinctions are given below: (a) the extent to which survivors are integrated into the therapeutic society; (b) differences in the mode of operation adopted by outside authorities and agencies vis - a - vis the society of sufferers; and (c) differences in behavior in different time phases in the adaptation cycle.



Degree of Integration into Therapeutic Society

19.I The model suggests the usefulness of a distinction between disaster victims who become integrated into the therapeutic society and those who remain peripheral to it or become detached from it. It may be hypothesized that isolation or removal of individuals from the therapeutic society will delay the process of recovery and make adjustment to the losses incurred in disaster more comparable with those found in other forms of crisis -- particularly if the victim or victims are placed in an intact (non - disaster) social context where there are few or no other victims with whom they may interact. A comparison of isolated evacuees or persons withdrawn from the area of central interaction with persons who are more clearly integrated into the interactional field of sufferers on the dimensions suggested above would enable a test of this hypothesis.

19.II By virtue of physical incapacitation or other restrictions of opportunity for interaction and communication with other victims, people located within the central interactional field may have different degrees of exposure to the therapeutic society. Insofar as these restrictions adhere to certain familial or other basic social roles (e.g., wives with young dependent children; the aged; etc.), we may expect persons occupying these roles to have less exposure to the therapeutic effects of the society of sufferers and, consequently, to experience greater difficulties in assimilating the disaster experience and restabilizing their lives.

19.I2 Correspondingly, the greater the frequency of contact and communication with numerous other disaster victims, the greater the expected therapeutic effect on the actors.

Mode of Operation Adopted by Outside Control, Relief, and Rehabilitation Agencies

19.2 The change in norms and values in the society of sufferers oftentimes goes unrecognized or unevaluated by outside agencies, who attempt to administer to the emergent society in terms of values and norms rooted in the pre - existing structure. It is hypothesized that the lack of coincidence and concord between the values and norms used by outside agencies and those adopted by the society of sufferers is a major source of negative response and potential conflict found in disaster populations. Since there are usually numerous outside agencies which operate in a given disaster, and these agencies often have contrasting or different forms of organization and modes of operation (e.g., Red Cross vs. Salvation Army), there are opportunities to test the hypothesis that outside agencies will gain more rapid and widespread acceptance of their organizations and methods if they adapt their structure and mode of operation to the emergent norms and structure of the society of sufferers. More specifically, it is suggested that disaster - struck societies tend to judge the adequacy and efficiency of outside agencies by the extent to which these agencies' mode of operation:

19.21 Is flexibly designed to cover a wide range of needs, from simple acts of emotional reassurance to the replacement of material losses;

19.22 Assumes the existence of a feeling of equality and commonality of suffering and does not attempt to make fine distinctions in degrees of loss or suffering;

19.23 Ignores pre - existing social and cultural distinctions and background characteristics and is based solely on disaster - induced needs;

19.24 Is rapidly administered, with minimal delay between promise and delivery;

19.25 Places emphasis on basic survival needs and "human" (interactional) values, rather than property rights or pre - existing symbols of wealth or status;

19.26 Is delivered directly to the victims and offered indiscriminantly, rather than requiring initiative action on the part of the sufferers or "tests of eligibility";

19.27 Is administered by direct, personal contact between givers and receivers;

19.28 Is accompanied by expressions of intimate, personal sentiments, utilizing the direct, candid, emotional terminology employed by disaster sufferers;

19.29 Permits the sufferers to specify their own needs and to utilize the aid in their own way;

19.30 Is given with "no strings attached," no formalistic ritual of giving, and no obvious attempt to exploit the act of giving for outside purposes.

Time Phases in the Adaptive Cycle

19.4 It is assumed that the development of the society of sufferers reaches its fullest expression in the emergency and immediate post - emergency restorative period (a period that may last for weeks, months, or years, depending on the scope and destructive characteristics of the disaster). As the basic functions of the society become restored and as more and more victims achieve a satisfying level of stability the process of social differentiation returns and the solidarity of the society of sufferers gradually disintegrates or loses its potency. Coinciding with this shift, the basic contextual reference shifts from values and norms associated with societal survival and recovery to more individualized concerns with material symbols of status, from concerns with the present to concerns for the future. When people begin re - evaluating their losses, gains, and future prospects within a more stable or "normal" framework of reference, many of the more

common sources of anxiety, alienation, and conflict may reappear.

19.5 The democratization that occurs in disasters is, in most cases, a democratization of personal suffering and an equalization in the distribution of survival resources; it is not usually a democratization of the means of production or the real (property) wealth of the society. The relatively pure form of democratic, achievement - oriented society cannot be sustained because the pre - existent sources of social distinction and differentiation remain (latently) imbedded in the system.

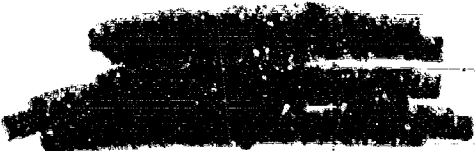
19.6 It is postulated that many of the personal and social conflicts that may emerge in the later post - disaster adaptation phase take their point of departure from the contrasting characteristics of social life in the society of sufferers and the differentiated social life which develops in the return to the norms and values of an equilibrated society. A kind of "paradise lost" disenchantment and disillusionment may set in as people realize that the satisfying gains in intergroup and interpersonal solidarity are beginning to disappear, as they see the values and norms of societal unity and cooperation increasingly replaced by values and norms which reward acts of self - aggrandizement and social competition.

19.7 It is hypothesized that the return to stabilized forms of social life will have a different effect on different groups and individuals, depending on the extent to which the benefits and rewards derived from the society of sufferers and the reward structure of post - disaster life offer sources of invidious comparison. Specifically, it is hypothesized that:

19.71 Personal and social conflicts (and their correlative subjective expressions of resentment, hostility, disillusionment, alienation, self - estrangement, etc.) increase progressively (over that characterizing the therapeutic society) in the period following general societal recovery, and are found especially among individuals and groups who achieved new and higher status, prestige, or feelings of security and personal worth in the society of sufferers, but who lose or experience a relative decline in this status, prestige, or security in the subsequent return to normal life. (At the operational level, this suggests a careful look at minority group and lower class members vis - a - vis their counterparts and, at the individual level, at cases of individuals who achieved high prestige as a result of heroic activity or great personal sacrifices in the disaster, but who do not have the kind of social role in normal life which allows them to sustain or capitalize on this prestige.)

19.72 The specific objects of negative appraisal or resentment may vary widely in any particular disaster, but one salient category of such objects will be agents of the old (pre - disaster) order (persons or groups) who have retained their relative power position, but whose present (post - disaster) position of status, power, or prestige was not validated during the emergency period by the society of sufferers.

19.73 Individuals and groups who experienced a rise in status as a consequence of their participation in the society of sufferers



and who have a substantial base for consolidating or capitalizing on this new status (in the form of professional skills, ownership of business, continuation of emergency role in normal emergency organizations, etc.) in the post - disaster society will usually be able to retain their newly - derived status or achieve "rub off" value from it. Consequently, we may expect people in this category to manifest less personal conflict, greater feelings of identity and other positive evaluative and attitudinal responses than those whose newly - gained statuses have not been secured in the post - disaster society. (At the operational level, this suggests the possible value of a comparison of young, middle - aged males who have played an active role in rescue, relief, or rehabilitation activities, in terms of their possession or non - possession of public roles which permit capitalization of disaster - achieved statuses.)

Work to be Done on Model

20. Insofar as the available time and resources permit, work on the model will involve the following (items 20.1 through 20.4 listed roughly in order of priority):

Model Building

20.1 Further elaboration and refinement of the model, including documentation of salient elements of the model from numerous disaster sources.

20.2 Further operational specification of distinctions inherent in model and of hypotheses relevant to model testing.

Model Testing

20.3 Application of model and derived hypotheses to currently - available disaster findings to test general consistency, and "goodness of fit."

20.4 More specific tests of derived hypotheses by:

20.41 Tabulation of existing coded data which are presently not tabulated in forms relevant to the model. (Emphasis here will be placed on some of the more salient or critical hypotheses and on the more systematic existing studies, especially the NCRK Arkansas study.)

20.42 Selective re - analysis of existing interview data from various field studies to develop content categories which have not been categorized or coded in existing analyses, but which can provide useful tests of hypotheses suggested by the model.

20.43 Collection of additional data to fill major gaps in content categories relevant to the model. This may take two possible forms:

20.431 Assembly and analysis of previously - collected data which are relevant to the model, but which have not been brought into a disaster research perspective (e.g., followup interviews



with Hiroshima and Nagasaki survivors collected by the Atomic Bomb Casualty Commission, miscellaneous statistical data on disaster - struck communities and societies, etc.)

20.432 Brief field trips to sites of previous disaster studies to collect follow - up data (including pertinent statistical record data and interviews with special informants who can furnish information on particular problems pertinent to the model).

Developing the Implications of the Model

20.5 The results of the work accomplished in model building and testing will be translated into:

20.51 Suggestions for further research in disaster and other forms of crisis;

20.52 A statement of theoretical implications for various sociological and social - psychological problem areas encompassed or touched by the model formulation, including:

20.521 The relationship between personal and social stress;

20.522 The effects of social isolation and alienation in contributing to mental illness;

20.523 Positive conceptions of "mental health";

20.524 Techniques of societal or communal therapy (the "therapeutic community" concept);

20.525 Processes of institutionalization and social change.

20.53 The statement of major implications for practical measures of disaster preparation, control, relief, and recovery.

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