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PANIC BEHAVIOR: SOME
EMPIRICAL OBSERVATIONS*

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ABSTRACT

This paper, part of a series of reports on
studies of human behavior under very extreme
stress that have been carried on for the last
25 years, describes general findings on panic
bahavior.

The characteristics of the behavior are dis-
cussed in detail, and contrasted with prevail-
ing misconceptions.

Three covert features of the behavior are exam-
ined: its anticipatory nature, its focus on a
specific referent point, and the acute fear re-
action involved.

Three overt features of the behavior are also
looked at: its flight nature and accompanying
non-social and non-rational aspects.

Some passing indications are also given of the
absolute and relative frequency of panic be-
havior and the kinds of contextual and immedi-
ate conditions that facilitate its appearance.

INTRODUCTION

While my interest is in depicting panic behavior, the phenome-
non cannot be understood unless it is seen in a balanced perspective.
That is, the behavior must be seen in the larger context of how human
beings react under stress.   I will try to show that there is a very
widespread misconception about behavior under stress.   Unless there is
a recognition of this, the problem of panic behavior and what to do
about it cannot be addressed.

Planning can reduce human casualties, personal losses, property
damage and the general social disruptions which occur as a result of
natural catastrophes or technological accidents.[1]

Whether it is overall community disaster planning or whether
the plans involve management or designing of space use in emergencies

in a specific high-rise building, the planner must proceed with accurate knowledge and understanding if any success is to be achieved. Thus, plans based on major incorrect assumptions or faulty suppositions about human behavior in the situation for which planning is developed will be useless.

Much thinking about human behavior in extreme stress situations is wrong. It is wrong in the sense that it does not agree with what has been established by systematic and wide ranging studies by social scientists doing research in the United States and elsewhere around the world. However, the prevalence of mythologies about human responses in disasters is understandable. The empirically-based knowledge developed in the last several decades by sociologists, social psychologists and other behavioral scientists[2] does not yet have wide currency. The existing base of knowledge has not generally entered into the mainstream of either popular thought or the non-social science and engineering worlds.

Misconceptions About Disaster Behavior. The general view that prevails is that human beings are very likely to do badly in the face of extreme danger or threat. Behavior in disasters is thought to be characterized by illogical actions, irrational decisions, personal and group disorganization culminating in the worst of situations in widespread "hysteria" and "panic." The imagery that is conjured up is clear and can be evoked by asking the average person to freely associate what comes to mind when one thinks of disaster behavior.

Actually the evidence for what can be said to be prevailing general beliefs rests on something more than personal illustrations. For instance, two recent large-scale population surveys, one in Delaware[3] and another in Ohio,[4] found that a large majority of those interviewed agreed with the following statement. "A major problem community officials confront when faced with a natural disaster is controlling the panic of people fleeing from the disaster area." About 84 percent of each sample agreed with the statement. Most people have little faith in the abilities of others to react well in an extreme crisis. It is not an insignificant matter that people in general are so dubious of the abilities of others to bear up well under extreme stress. On the other hand, the existence of a belief does not mean that it necessarily has an overt behavioral counterpart, in this instance that human beings will actually react poorly in severe crisis situations. But the view is widely held and with considerable tenacity.

Part of the tenaciousness of the belief that people will not behave well when facing danger is rooted in literary and journalistic accounts of the actions of people in major emergencies. The current wave of "disaster movies," be it Earthquake, The Poseidon Adventure, Tidal Wave, The Towering Inferno, Airport, etc., are simply recent expressions of a genus that has long standing in the area of art. It is part of a general class of story that depicts the cracking up or the

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breaking down of large numbers of human beings when under pressure.
Scenes of hysteria or frantic flight are almost mandatory in such
literary or cinematic accounts. In fact, the heart of the drama in
most such depictions is the hero or heroine almost single-handedly
attempting to stem the tide of panic or hysteria which is engulfing most
others. Recent artistic depictions differ from the past only in that
the black and white portrayals of behavior in past artistic productions
are currently vivified by technicolor.

Journalistic accounts of supposedly real (as opposed to fic-
tional) responses to disasters do little to counter the general imagery.
Press or news accounts, while they may occasionally spotlight heroic
acts, tend to stress the "panic" in the situation presumably manifested
in wild flight or hysterical actions; or if wild behavior is not pro-
jected, the emphasis then is on the "shock" or "stun" reaction or peo-
ple who are so overwhelmed by danger that they are immobilized from
"panicking." Elsewhere I have characterized this as a Dr. Jekyll-Mr.
Hyde assumption about the nature of human beings.[5] The implicit notion
is that the latter -- the darker, impulsive, irrational, more animal-
like side of the human creature -- will break through in highly stress-
ful situations. The imagery again is clear -- human beings are not
reeds that bend easily with the wind; instead they are even more fragile
saplings that will break and snap under the surge of a very threatening
event.

The press, be it radio, television, newspapers or magazines,
also have succeeded in implanting in the thinking of many people certain
images of particular news events. Thus, to mention to almost anyone
the Orson Wells' "Invasion from Mars" broadcast, the Iroquois theater or
Cocoanut Grove night club fire, or more recent high-rise hotel or office
building fires in Brazil or Korea is to evoke an image of stressful
human behavior that is not exactly edifying or laudable. A frequent
accompanying notion is that while the reports mirror admittedly extreme
cases, it is implicitly assumed that other stressful events are on the
same continuum insofar as behavioral responses are concerned.

Furthermore, it is not impossible to see the same image assumed
in the thinking and behavior of officials and others who have planning,
operational or policy positions of responsibility at times of large-
scale emergencies. This can be seen in what planners, officials and
administrators sometimes actually do and decide about disaster problems.
Let me give some illustrations both from my studies[6] or, when specif-
ically cited, the research of others.

Indicative of the image held is the occasional failure of respon-
sible officials to take appropriate actions during pre-impact periods
of possible catastrophes because of their concern about generating
panic. For example, city officials and the state police refused to order
the evacuation of an ocean resort town, despite strong urgings by the
Weather Bureau and the Coast Guard, because they thought such action on

their part might precipitate a panicky flight. They preferred to chance
the danger of inaction, even though they knew that the only two evacua-
tion routes would become impassible if the hurricane heading for their
low-lying area was as intense as predicted.

Very recently, local and other officials argued behind the scenes
about evacuating some or most of a large American city because of the
possible threat of a chlorine gas leak from a grounded barge. A reason
advanced for having no public evacuation at all was the fear of starting
a panic. The response of some local officials to the earthquake predic-
tion capability currently being developed is that they would hesitate
to order evacuation because it might generate a wild flight from the area.

Concern over evoking panicky reactions sometimes hinders even
alerting people to possible dangers. Thus, during floods on the Rio
Grande, some Mexican and American officials felt that they had to play
down warnings, otherwise people would panic.[7] Italian officials with
knowledge of the flood threat facing Florence refused to issue warnings
because of their concern that the ensuing disorderly flight that was
envisioned would be more destructive than the flood waters could possibly
be. Because of a similar concern, forecasts of tornado conditions were
not issued prior to a tornado in New England a few years ago. In the
very recent 1974 Xenia disaster, a television station, showing on the
screen the radar indicators of a tornado cloud about to hit the area,
failed to activate the emergency broadcasting system because "that thing
has been built up into a serious type warning and I'm afraid if people
heard it come on, there might be panic."[8] In a much more circumscribed
crisis situation, but because of this same fear of initiating panic, alarm
bells were not rung on the collision-doomed ship, Andrea Doria.

Until there was an absorption of the results of much social science
research put out by the Disaster Research Center at Ohio State University,[9]
civil defense planning in this country also assumed that not only was
flight withdrawal inevitable in the case of enemy attack, but that it was
going to be markedly maladaptive, unthinking, and contagious behavior.
For years the major control problem was seen as one of stopping a panicky
exodus from a threatened area. In the last five years or so, the official
civil preparedness agency has swung 180 degrees away from this position,
but this old image still exists in the thinking of many other government
officials.[10]

The imagery involved, of course, as we have already implied, is
neither peculiarly American nor is it a new idea. For example, British
planners prior to World War II assumed that in the event of war...

> ...a large exodus from London and other cities was inevita-
> ble; panic would send the people out and unless the Govern-
> ment took firm control...chaos and confusion were bound to
> ensue...In its deliberations, the question was viewed not as
> a problem of getting people away, but as a problem of pre-
> venting panic flight. This led...to the suggestion that the

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(police) force should be enlarged and a cordon thrown round
London. So convinced was the committee...that a "disorderly
general flight" would take place that it felt it could not
carry its study further until a decision had been reached on
"how control of the population was to be exercised."[11]

The general picture of how people are expected to behave in di-
sasters could be detailed further using examples and illustrations in-
volving different types of disaster agents and different kinds of social
settings. But the additional details would not alter the picture of di-
saster behavior that we know exists in the minds of most people. There
is a high degree of expectation that behavior under extreme stress is
impulsive and not controlled, that it is irrational in that means are
not appropriately adjusted to ends, and that it is disorganized with per-
sonal and social chaos always threatening to engulf the situation.

I have briefly sketched the general image of behavior expected
in disasters to emphasize that it is widely believed and accepted as
being a true picture of what occurs, that examples -- real or imagined
-- of the behavior can be pointed to, and that the acceptance of such
an image has definite implications for planning, policies, and practices.
If the image is a true one, then it carries certain implications of
how one even thinks of behavior in disaster. One implication is that
the study of panic behavior becomes equivalent to the study of, if not
the most frequent, at least the ever present and most prevalent possible
human response under extreme stress.

However, as already said, the empirical evidence clearly indicates
that the general belief is fundamentally incorrect. The popular image
of human behavior under stress is widely at variance with the scientif-
ically-based picture developed in sociological and other social and
behavioral science research into the area of disaster response. The
empirical evidence and systematic studies simply do not support the
widely believed, acted upon, and probably to many people, the "obvious"
conception or image. But this is another instance in which research has
shown that what "everybody knows" is just not true when carefully exam-
ined by social scientists.

Social Science Research on Disaster Behavior. A word should be said about
this body of social science research to indicate its range, depth and
directions. Unknown to most people, a steady stream of actual field
research into natural and technological disaster situations has been
going on for about two and a half decades. The work started in the early
1950s and has continued to the present. Social scientists, mainly sociol-
ogists, have been going to actual disasters, sometimes before they even
occur, as in forecasted or predicted floods and hurricanes, and have
studied in the field the actual response of people and groups to sudden
stressful situations. While the focus has more often been on large-
scale community disasters, more localized catastrophes such as explo-
sions and fires have not been totally neglected.

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The Disaster Research Center,[12] for instance, has engaged in a variety of sociological research studies on the reactions of groups and organizations in community-wide emergencies, particularly natural disasters. Since its inception, 267 different field studies have been carried out. Teams have gone to earthquakes (in Japan, Chile, Yugoslavia, Italy, Iran, El Salvador, Greece, California and Alaska), hurricanes (in the Southern and Eastern United States as well as Japan), floods (in Italy, Canada, and more than a dozen states), as well as tornadoes around the country. Large explosions and forest fires, toxic spills and lake shore erosion incidents, destructive seismic waves and major dam breaks and great blizzards have also been studied in Australia, Italy, Canada and different regions of the United States. For purposes of comparison, Center personnel have examined organizational responses to civil disturbances in about a dozen American cities as well as Curacao in the West Indies.

While we are the oldest, the most widely ranging in terms of the kinds of disaster events studied, and have the biggest field data bank as well as the most continuous social science disaster operation in the world, we are not alone. Apart from the very large-scale, extensive, interdisciplinary and applied work recently initiated at the University of Colorado,[13] and a few more localized points of disaster studies in the United States, there are some major centers of research in France, England, Japan and Italy as well as some social and behavioral scientists actively at work in Sweden, Australia, Belgium and New Zealand. In addition, Canada is in the process of developing a major research capability.[14]

Among the major centers elsewhere outside of the United States, the French center has particularly focused on human behavior in fire situations and problems relating to high-rise buildings. (However, probably the most systematic study on human behavior in fires has been undertaken in England.) The Japanese also have done studies on department store and nightclub fires.

As a result of informal linkages between the centers and other researchers, meetings and conferences,[15] the production of bibliographies on disasters[16] as well as publication series,[17] the existence of a newsletter[18] and a professional journal, Mass Emergencies,[19] the exchange of information on the social and human aspects of disasters has accelerated rapidly in the last few years. Apart from wanting to call attention to this body of knowledge, scientific workers and research locales to those who might not be aware of their existence, I mention it to emphasize the widely based nature of my initial remarks here. There is general consensus among this cluster of researchers around the world that their studies in different societies of human behavior in a variety of disasters generally support the proposition that human behavior under stress is relatively controlled, rational and adaptive. This is the general conclusion independently reached by those who have been studying disasters. Basically, human behavior under extreme stress is

controlled rather than impulsive, uses appropriate means for the per-
ceived ends, and is organized and functional for the most part.

I hasten to add that this is not a Dr. Pangloss view of the
world; it neither implies nor does it mean that there are no problems
in disasters. In actual fact, there are a great number of them, such as
the activation of disaster plans, the alerting of populations about dan-
gers, the mobilization of emergency organizations, the coordination of
response among key groups, the allocation of resources to long-run
recovery. Also, there are problems regarding specific tasks such as
search and rescue, assembling of lists of missing persons, controlling
outside convergence on impacted areas, appropriate distributing of
casualties to hospitals, and delivering mental health services. But if
most researchers were asked to rank problem areas in relation to disas-
ters, the general behavior of human beings under extreme stress situa-
tions would not be rated high, either as a practical matter or as an
issue of theoretical concern. The difficulties that exist in disaster
planning and disaster operations, and there are many such difficulties,
emanate more from other factors and aspects than from the response of
human beings as such to extreme stress.

I would be the last to deny that cases of very unusual and cer-
tainly dysfunctional behaviors can be found at times of disasters. It
would be possible for me to spend pages regaling you with dramatic and
colorful anecdotes and examples of such behavior. But to emphasize them
would be to distort the general picture, the modal responses, the sta-
tistical frequencies upon which both *disaster planning* and *disaster*
research have to focus.

Let me briefly discuss this in more concrete terms. Take the
matter of frequency of "irrational behavior." You can take practically
any category of such behaviors, and in the most extreme of cases, it
is only a very, very tiny fraction of all the range of behaviors involved.
One reason this is not understood and recognized is that many misconcep-
tions circulate about such matters. Take the "Invasion from Mars" broad-
cast alluded to a little earlier. The general belief is that this in-
volved many people being disturbed and fleeing in panic. Even very
recently, a discussion of mass communication influences observed that
the broadcast "triggered panic in hundreds of thousands of listeners
across the nation, actually sending many into physical flight."[20] How-
ever, a study conducted right after the event showed that 84 percent of
the audience of 34 million people never thought of it as anything but
a dramatic show.[21] This does not mean that the other 16 percent got
hysterical or even overtly reacted very much. In the vast majority of
these cases, the fleeting thought did occur that perhaps it was an actual
news broadcast. But the number of people who actually did anything that
could be considered "panicky" in any sense of the term was a miniscule
fraction either in absolute or relative terms.

A recent Swedish study suggests how small the number may have
been. In 1974 there was a radio broadcast in Sweden which made reference

to a nuclear plant accident which generated a radioactive cloud drift. As in the instance of the "Invasion from Mars" broadcast, this too was purely a fictional account. News accounts described fleeing and hysterical persons. In fact, an Associated Press International wire service story, headlined "Fake nuclear disaster causes panic in Sweden," reported that "thousands panicked, running to closed fallout shelters, and it took several hours to restore calm."[22] There was a debate in the Swedish Parliament that broadcasts of such a kind should be prohibited because it was unjustified that thousands of Swedish citizens should be disturbed. that they should clog the roads in flight, etc. A team of Swedish sociologists decided to make an intensive study of the reactions of the population in the affected area.[23] They undertook an intensive interview sample of the population in the affected area, examined records, police reports and thoroughly looked into all the behavioral reactions. They found not one single case of flight in their sample. Since the study involved a sample, we cannot be certain that no one actually fled, but it is obvious, despite the press accounts and the Parliamentary debates, that very few, if any, Swedish citizens fled in panic or otherwise fled with respect to that broadcast.

Careful analyses of panic flight where it has occurred show that it is seldom if ever the modal category. Nearly 500 people did die in the Cocoanut Grove nightclub fire, and there was panic behavior in that situation without question, but it seems questionable on the basis of the available data that more than a third of those at the very most may have engaged in panicky behavior. A French study of panic behavior in a 1970 dance hall fire which killed 144 people, as well as similar Japanese studies of nightclub and department store fires, do not support the notion that panic behavior was the prevailing mode of response in those situations either. Wood, in England, in his very careful study of nearly 1,000 fire incidents similarly concluded:

> In general terms the majority of people appeared to have
> behaved in what might be considered an appropriate fashion,
> although some five percent of the people did something which
> was judged to "increase the risk." There was little evidence
> of true "panic."[24]

Overall, my point has been that in both absolute and relative terms, human behavior in disasters in modern, industrial societies is fairly good by almost any reasonable criteria one could use. There is little evidence beyond anecdotal stories, and none of a systematic, comparative and quantitative nature that suggests that behavior under stress is any more illogical, irrational or dysfunctional than everyday behavior. Part of the problem is that sometimes the behavior under stress is compared not with everyday behavior, but with an idealized conception of behavior. Of course along that line it does not come out well. But this is a match of real disaster behavior with the ideal, when the honest comparison should be between real disaster behavior and actual everyday behavior. If the last kind of match is made, there is not that much difference between the two.

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THE NATURE OF PANIC BEHAVIOR

With this as background we can now turn to a consideration of panic behavior. If it is understood, as we have emphasized in the previous pages, that panic behavior represents a statistically infrequent behavior, we can better consider what it might involve and what its distinguishing characteristics might be. If it is understood that panic is a very atypical response pattern, we can better determine the specific conditions required for its occurrence. I therefore want to turn now to a detailing of the characteristics of panic and a somewhat more general look at what seems to be associated with its occurrence.

My remarks are distilled from an analysis of two major sources of data: (1) my own studies on this topic initiated in 1950, a quarter of a century ago; and (2) the work of others not only in this country but also in France, England and Japan.[25] Thus, this is not a report on a single, empirical study, but concerns the general findings derivable from an examination of most of the focused and systematic research undertaken on this topic.[26]

Panic behavior is characterized by six features, three of a covert nature and three of an overt nature. Covertly, panic involves a very acute fear reaction of an anticipatory danger and in response to a specific threat. Overtly, panic involves flight behavior of a nonsocial and a nonrational kind. When all six features are present together, it is a clear instance of panic behavior.

Covert Features. Covertly, panic involves fear, not anxiety, a projection into the future rather than a view of the past, and a perceived place of danger rather than a generalized threat.

Panic participants invariably define the situation they are in as highly and personally dangerous. Whether this is arrived at individually or collectively, panic participants always perceive a direct threat to their own physical survival. This experiencing of extreme danger to bodily safety is illustrated in the remarks by a man who looked up and saw a flaming plane diving toward the street where he was pushing a wheelbarrow:

> This thing seemed to me as if it was coming right at me.
> I ran like a scared rabbit across the street. My pushcart --
> I abandoned that to save my neck. I was scared. This thing
> went up in a big puff of flame and gasoline. It exploded.
> All I was thinking was that this big ball of gasoline was
> coming down on top of me and I was making a run in order to
> get away from it. I was running pell-mell across the street.
> I was looking at this big ball as I was running like a scared
> rabbit for fear it was going to pounce on my head, you know.
> The only thing I was thinking as I was running across and I
> was looking up at this big ball of fire, I was thinking to
> myself, I wonder if any part of this is going to hit me?

This kind of response is unlike those situations in which there is perception of great personal threat, but the danger is not conceived of in direct bodily terms (e.g., in possibly becoming bankrupt). In panic the physical self is seen as seriously threatened.

However, it is not just personal danger per se that is involved in a panicky reaction. A person may envision a threat to self-existence, for example because of environmental pollution or cigarette smoking, but that is a perceived danger and reaction of a different order. Instead, panic participants see the potential threat to their physical existence as very immediate and survival as dependent on a very rapid reaction. A laborer caught in a plant explosion who fled in panic after recovering consciousness said: "When I came to, the dust and minerals and everything was crashing all around. My first thought was that something would fall on me and finish me. My main thought was to figure a way to get out." Thus, in panic there is a perceived immediate danger to physical self.

But people do not usually flee in panic from a dangerous situation. In fact, as we have stressed, such a response is rare. Individuals may feel themselves extremely and personally threatened, and yet engage in a variety of nonpanic behaviors including, for example, direct actions against the danger. To the extent they do so, it is because they check their fear, i.e., their impulse to run from the threatening situation (and as Young points out, "for human subjects to designate an experience as fear, the presence of an escape impulse is required").[27] Self-control is maintained.

Thus, the panicky reaction is characterized not so much by the presence of fear as by unchecked fear. Persons may feel extreme fear for their actual physical safety and yet maintain a high degree of control over their activities. This is well illustrated by soldiers involved in combat. Usually they maintain control over their fears. Conversely, in panic there is a collapse of existing curbs on the impulse to flee. The participant is the individual who has lost control over fear. One woman described her fear just before she fled in panic as follows.

> You wanted to just get away. I felt I wanted to go. I
> wanted to run. Get away. Get away. I thought if that
> house goes the one next to me is going to go too and I'd
> be in the center of it. I heard the crash, the house
> went up (i.e., exploded) and I went.

The orientation of attention of panic participants is always to the future, to what subsequently may be endangering to the physical self. Concern is not directed to what has already happened; it is focused on what may happen to self. Thus, during an earthquake a panic participant perceives (to paraphrase many) "if I stay here I will be killed." It is the anticipatory rather than retrospective perceptions of danger that accompany panic activity. Thus, a woman on a cruise ship that caught

fire noted that waking up in the middle of the night: "I smelled smoke
and I opened the door of my cabin. But the corridor was full of smoke.
You just couldn't see a thing. I smashed the porthole out with my fist.
It was the only way to get out. It was either that, or stay and die."

Furthermore, the potential threat is seen as having immediate
consequences, at most within the time span of several minutes. A rapid
reaction of some sort is viewed as necessary in order to survive the
quickly anticipated perilous effects. In fact, an almost necessary con-
comitant of the loss of self-control is that the orientation of activity
of the participant is highly self-centered, both temporally and psycho-
logically. The fleeing individual thinks only of saving oneself quickly.
Subjectively, it involves a complete focusing upon the idea of getting
one's self immediately out of the threatening situation. "All I thought
about was getting out of there," said a woman who fled in panic from a
building during an earthquake. Another person after an initial explosion
in a fireworks factory observed that she was expecting another explosion,
that she was crawling and

> I didn't think I'd ever get up and I thought that explosion
> would get me before I could get up. I just wanted to get
> out of there alive. I never wanted to be blown to pieces.
> I think that's a horrible death. I thought of that at the
> time. After I got to my feet I started running as best as
> I could.

The idea that there is an immediate threat (and not a past danger) leads
to a complete focalization upon the idea of getting oneself quickly away
from the immediate area of danger.

However, that panicky individuals react toward very immediately
rising threats rather than retrospective dangers does not mean that there
necessarily exists an objective peril. In fact, the realness or illusor-
iness of the threat is, as far as a panicky reaction is concerned, of
little import. Regardless of the objective circumstances, it is how
the persons define the situation that determines the reaction. Thus,
panicky reactions will occur in situations involving no real threat
simply because a danger is perceived as possible. This very often happens
after an explosion. Similarly, the calmness of people in certain objec-
tively threatening situations frequently stems from a discrepancy between
the objective situation and the subjective definition of it as non-
threatening.

Panic participants are not only aware of what they are immediately
afraid _for_ (which is their own physical survival) but they also know
what they are afraid _of_. The fear experienced in a panic reaction is of
something specific, of something that can be designated. The covert
response of the person in panic is never in regard to the unknown or
the incomprehensible as such. The reaction is always regarding a
specific threat, the particularization of which may be arrived at

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individually or through interaction with others. For example, a sailor caught in an explosion on an American aircraft carrier noted:

> I went down to Hanger Bay One. Then the explosion occurred, quite a blast. The heat was terrific. I got a little panicky. I was on Hanger Bay One and I started thinking of those planes going on fire. It was pretty dangerous with all those planes and gasoline around and stuff to come down on top of me. I was thinking of getting out of there as soon as possible.

Implied in the quotation is the related point that in defining the dangerousness of the situation, panic participants perceive the threat as associated with a specific place or locale.

Consequently, flight continues only to the extent people believe themselves well within a danger area. Fleeing stops when there is the belief that one is no longer exposed to the consequences of the threat as illustrated in the remark of a factory worker after an explosion: "My idea was to get away from the building because I had in mind it might fall. At the time I knew I was in danger of death, but after I got out of the building I felt I was out of danger." Outside he stopped running. Far from running until they are physically exhausted, panic participants generally stop quickly. The characteristically short duration of panic flights stems from this fact that panicky persons run only as far as necessary to get outside of the perceived zone of danger. (actually, danger in panic is not necessarily associated with being inside a building; an open area during a machine gun strafing could also be viewed as a place of danger.)

Overt Features. Overtly, panic involves directional rather than purely random flight, nonsocial rather than antisocial activities, and non-rational rather than irrational behavior.

Flight is the outstanding feature of panic insofar as outward manifestation is concerned. While such physical behavior is not peculiar to panic, it is nonetheless an ever present feature of the phenomenon whenever it occurs. The flight most frequently takes the form of actual physical running. However, it may also be expressed in roughly equivalent activities such as driving vehicles, swimming, crawling, riding horses, rowing, climbing, jumping, digging, etc. Varying combinations of all the possible physical actions can sometimes be seen in those rare instances of panic among military units. This variety in the expressions of flight is possible because most socially learned and ingrained motor patterns of action continue to be available to individuals in panic. Participants do not regress to acting in infantile or purely biologically patterned ways. But since the majority of situations wherein panic occurs do not lend themselves to nonrunning activities, panic flight is generally manifested in running.

The loss of control over fear and the focalization of thought on escaping does not mean a panicky person is completely unresponsive to other aspects of the situation or that there is just blind fleeing. On the contrary, a panicky individual orients the fleeing and modifies the flight behavior in terms of the perceived circumstances. Thus, a panic participant does not blindly run into objects; if possible, an attempt is made to go around obstacles in one's path. An attempt is made to go through a door before an effort is made to flee through a window, etc.

Panic flight is not a random or headlong stampede. It is directed towards the goal of getting away from the area of danger. Thus, the flight behavior is always oriented with reference to a location of danger; that is, panicky people flee from particular locales, such as a collapsing building or a gas-filled house. Usually this involves movement away from specific points of danger: panic participants thus run away from, for example, the flaming section of a building. However, if some danger lies between presumed safety and the endangered persons, the flight may be in the direction of that specific peril. Thus, panicky persons may run toward dangerous objects if escape from the threat lies in that direction (e.g., toward sheets of flame if the only known exit from a building is on the other side). Much panic fleeing which appears to an outside observer as blind fleeing into danger is of this nature. The behavior is not, as some have asserted, characterized by "blindness to reality."[28] Instead, as one person who fled in panic observed: "Since my escape through the door was cut off, I shielded my face with my hands and crashed head first through a window. It was my only hope of getting out."

At any rate, panic flight is not helter-skelter; participants do not run every which way but instead take their general orientation for flight from specific referent points. Two factors are often involved in the determination of the particular direction of flight (e.g., through which exit an individual will attempt to escape). These are (1) habitual patterns and (2) the social interactional pattern following the definition of the situation as dangerous. The former factor is exemplified in the tendency of panicky housewives to flee out of the frequently used but more distant back door, rather than the infrequently used but nearer front door of their homes. The latter factor is illustrated in the remarks of a worker after a plant explosion. He noted: "There was a gush of flame and smoke coming up the elevator shaft. I just started running. Lots of other people were running too. That's how I knew where to go." This interactional factor, however, is influential only within the confines of the actual setting participants find themselves in at the time of crisis. If there is only one apparent or known exit, people will flee in that direction.

The flight behavior in panic always takes on a nonsocial character. However, such behavior is not necessarily antisocial. This is more than a play on words. The panicky person acts in a nonsocial rather

than antisocial way by disregarding the usual social relationships and expectations. Even the strongest primary group ties may be shattered and the most socially expected behavior patterns may be ignored. Thus, there is the example of the mother who, thinking a bomb had hit her home, fled in panic, leaving her baby behind, and returned only when she re-defined the situation as an explosion across the street. As she stated it, the explosion

> shook the house. The first thing I thought of was a bomb. I just felt it was a bomb and I ran out. I was in my bath-robe. You don't think of anything save to get out -- just to get out. I ran out and the house over there was flames from the bottom to the top so I ran back and grabbed the baby out of his crib.

This illustration might be interpreted, indirectly at least, as an in-stance of antisocial behavior.

There are many situations where panic flight, in which a number of persons engage simultaneously, was not only appropriate in itself but also had no antisocial consequences. For instance, the mass fleeing of separated householders from their gas-filling houses in one disaster was no hindrance to the fleeing of any other person. There was no physical contact of a destructive sort on the part of the individuals running out of their homes. The flight behavior, as it is in many and probably most panics, was personally functional and in no way socially maladaptive to the situation. It is only in the very rare instance that panic takes the form of a mass of individuals trampling over one another in a wild stampede.

The nonsocial aspect of panic behavior tends to be short-lived, but it is this feature which, even at an overt level, distinguishes many cases of panic from controlled withdrawal behavior. In the case of the latter, there may be confused, random, ill coordinated activity, but the conventional social roles and normal interactional patterns are not totally disregarded. For example, when a plane crashed into an apart-ment house in one disaster, most families evacuated as units, neighbors were warned, alternative courses of action were discussed, etc. People acted in an erratic and partially unorganized fashion, but unlike when persons are panicky, most of their behavior was in terms of the group norms that ordinarily guided their activities. Such excited flight should not be confused with panic flight.

Panic flight represents very highly individualistic behavior. It involves completely individual as opposed to group action in coping with the problem of escape from danger. In panic there is no unity of action, no cooperation with others, no joint activity; there is a total breakdown of corporate or concerted behavior. In short, panic flight is the very antithesis of organized group behavior, it is the manifestation of nonsocial behavior at its zenith.

Just as panic is nonsocial rather than antisocial, so it is non-rational rather than irrational behavior. Again this is more than a mere play on words. The panicky person retains not only the learned neuromuscular coordinations required for the carrying out of complex motor activities, but also the capacity for perceiving, remembering, thinking and all the other socially acquired processes necessary for a human being to act. There is not a regression to infantile reaction patterns, or a reverting to purely reflexive or unlearned ways of reacting. The human being remains mostly a human being even at times of panic.

To be sure, as said earlier there is a focusing of perception at times of panic behavior. However, this does not mean or imply that the participant acts only reflexively or instinctively and is totally unaware of anything else. For an individual to engage in flight at all there has to be sufficient awareness to perceive and to continue to define a situation as a highly threatening one. A certain minimal awareness is also indicated by the fact that panicky persons do not run blindly into walls; they head for doors; and they go around objects and obstacles in their path if at all possible instead of attempting to crash through them. Moreover, when fleeing in a collective panic, participants are at least partially aware of the presence of others although they do not respond to these other individuals in terms of their usual social roles.

However, to state that panic flight involves a degree of aware-ness on the part of participants is not to suggest in any way that it is a highly rational activity. It certainly does not involve the weigh-ing of alternative courses of action that might be followed in the situa-tion. As a woman who fled in panic during an earthquake said: "The first thought you have is to run. I had that thought. I ran." On the other hand, the thinking of the panicky person is not "irrational" if by that is meant anything in the way of faulty or illogical deductions from given premises. From the position of an observer with a much broader perspective of the situation this may appear to be the case. However, from a participant's viewpoint, given the necessarily more limited perspective of only certain portions of all the circumstances involved, no such interpretation or irrationality is warranted. To the panicky person the flight appears quite appropriate to the situation as perceived at that time, however it may eventually be retrospectively evaluated.

Rather than being rational or irrational, the behavior of a panic participant is nonrational. Faced with the immediate possibility of personal annihilation, a panicky person does not consider possible alternative lines of action other than flight which might be followed. In the face of a threat, the potential courses of action available range from direct attack to movement away from the endangering object. How-ever, the panicky person makes no overt attempt to deal directly with the threat itself; there is no attempt to bring the threat under control, to act towards it, or, where physically possible, to manipulate it in any way. The panicky person just thinks of escaping, making no attempt

to cope with the threat other than to flee from it. Furthermore, there is no account taken of the possible consequences of the fleeing behavior. In certain infrequent circumstances this may be even more dangerous than the panic-inciting threat itself. The behavior of the panicky person thus is nonrational in the sense of not considering alternative courses of behavior to fleeing and of not foreseeing the possible consequences of panic flight.

Because a panicky reaction is nonrational, it is not always necessarily personally or collectively inappropriate to the situation. That a panicky person flees and makes no direct attempt to cope with the threat does not make the behavior necessarily nonfunctional. It often is not. Frequently, running away is the most adaptive course of action that the person could take in the particular situation. Thus, to flee from a building where the ceiling is threatening to collapse as a result of earthquake shocks is, on most occasions, an appropriate and effective response. In such instances the panic flight is functional, if functionality under such circumstances is thought of as behavior which from an objective viewpoint is appropriate to the maintenance of the life of a threatened individual.

Likewise, the panicky person's behavior is not necessarily collectively maladaptive. There are many occasions where flight, in which a number of persons engage simultaneously, not only is appropriate in itself but also has no inappropriate consequences of a social nature. People can run out of houses or buildings without having any or very little bodily contact of a destructive sort with one another. In fact, it is only rarely, and almost always because of the presence of physical barriers, that panicky individuals may proceed to knock one another down and to trample over each other. Such collectively maladaptive activity, however, is highly atypical and is definitely not a common characteristic of the behavior of panicky persons.

The conception of panic flight as being always nonfunctional or maladaptive conceals a normative judgment the basis of which we cannot consider here. It would be actually stupid and foolish in many dangerous situations to fight or confront the threat involved. As an old, pre-Mao Chinese proverb says, "Of 36 ways to escape danger, running away is best." Suffice it to say that panic behavior sometimes is functional and adaptive and sometimes it is not. If it is the latter, it is generally because of specific physical circumstances.

In summary, panic is an acute fear reaction marked by flight behavior. Subjectively, there is an intense fear reaction, i.e., a strong impulse to flee from a threatening danger. Panic participants are seized by fear of a specific object perceived as involving an immediate and extreme threat to physical survival. Overtly, the flight behavior always involves an attempt to remove one's self physically from the endangered area. In fleeing, the participants do not weigh the social consequences of their action and are highly individualistic and self-centered in their flight with regard to one another; thus, the

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behavior is nonrational and nonsocial, although not necessarily non-functional or maladaptive. Since there is no consideration of alternative courses of action to flight, with the thought being focused on the removal of one's self from danger, usual social relationships and role patterns are ignored and there is no possibility of group action.

CONDITIONS FOR PANIC

What accounts for the behavior whose characteristics we have just described? In general terms, of course, panic occurs in a crisis situation, where the traditional socio-cultural framework is not adequate enough to guide behavior along everyday, routine lines. In such situations, technically and in sociological terms, collective behavior occurs.[29] However, panic flight is only one of the possible collective behavior outcomes in such situations. Thus, there must be more specific conditions other than a general crisis setting for panicky behavior to develop. My own view is that there are two contextual and three immediate conditions that are responsible for the phenomenon. I will merely sketch these factors.

Contextual Conditions. Panic seems to be particularly facilitated by the presence of two kinds of contributory factors. One is the existence of a pre-crisis definition of certain kinds of crisis settings as having high potential for evoking panic flight. People do have preconceptions of the danger of certain situations, and in particular have images of the probable behavior of others in such circumstances. The simplest example is the widely shared belief that a fire in a crowded and enclosed area is especially dangerous because, among other things, panic flight is probable. Two sociologists a long time ago wrote that individuals "become panicked in situations which have previously been linguistically defined as fearful or terrifying."[30] My point is simply an extension of their view.

Another contextual condition that facilitates panic flight is the absence of pre-crisis social ties among the potential participants. Social links or bonds to others are very powerful anchors against getting involved in panic flight. Both sides of this factor are very well illustrated in the following retrospective observations by a man with his son sitting in a large theater with only one exit down a long narrow passageway when there was a shout of fire and people started to flee. "With me was my young son. If he had not been there I think I should have been one of those scrambling, screaming madmen... But the thought held my mind that I could not bear to have my son see me as those others were; that if he did see me so, I never should be able to face him again... Also...I was responsible for him, that he came before myself...[31]

Immediate Conditions. There are three immediate conditions which seem to activate panic flight. The first is a perception of possible entrapment. The second is a sense of powerlessness or impotency in the situation. And the third is a feeling of social isolation or sole dependency upon oneself in the crisis.

A crucial and immediate factor for the occurrence and continuance of panic is the perception on the part of participants that they may be unable to escape from the impending threat. Whether this perception is individually or collectively reached, the idea of possible entrapment predominates from the initiation of panic flight. As one panicky person reported: "I didn't even think of anything except getting myself out. From the time I left my bed to the door, that's the only thing I could think of. Am I going to get out? Am I going to be trapped?"

It is very crucial to recognize that what is involved here is the perception of possible entrapment. If individuals think or believe that they are trapped absolutely and unconditionally, they will not flee. A sailor trapped in an aircraft carrier explosion interestingly describes both these different kinds of perceptions:

> I couldn't go anywhere. I couldn't run anywhere. After I
> saw I couldn't get out, I figure nothing I could do about
> it. It was my time to go. I was calm, I didn't get excited.
> I was hoping it wouldn't take too long to die because I
> didn't think we had a chance. I had given up. I figured
> there was no way of getting out... But I did get scared
> after I thought I had a chance to escape.

Panic flight only occurs when avenues of escape are evident, when being trapped is sensed or thought of as a possibility rather than an actuality.

Also important as an immediate condition for panic flight is a sense of powerlessness or helplessness in the face of the danger. Seeing themselves faced with the necessity of reacting, persons may feel that they are unable to prevent the consequences of the impending threat from occurring. This sense of impotency has nothing to do with the capability of a fear-stricken individual to flee. Panicky persons may feel helpless in bringing the threat itself under control, but the sense of impotency does not extend to their possible flight. As one woman who fled in panic said:

> When I realized the gas was escaping from the hot-water
> heater, I knew it wasn't anything to monkey with, some-
> thing not to play with. I knew that an accumulation of
> gas would blow up. I mean water you could cope with,
> dumping it out or something, but with gas I don't know
> anything. I thought my house was going to blow up. I
> was really scared. I ran out.

The third immediate condition which seems to generate panic flight is a feeling of social isolation in coping with the danger. The physical presence or absence of others around the person is not the crucial matter in this respect. It is rather whether the involved person perceives that if anything is to be done, it will have to be done by himself. In all instances of panic flight, this feeling of "solitude"

or dependency solely on one's own actions is present to some degree.
This dimension is illustrated partly in the remarks of a woman working
in a plant with a number of other women when an earthquake occurred.
She said:

> When it started shaking so bad I noticed that I was there
> by myself. I felt even more scared. When you're by your-
> self in something like that and there's nobody to depend
> on. There was nobody around. I don't know where they
> disappeared to. I didn't see nobody. I ran.

THE FUTURE

I have described the major characteristics of and alluded to the
conditions associated with a relatively infrequent but nonetheless
occasional human response to a crisis or disaster situation. Unfortu-
nately, there is no reason to anticipate anything except an increase
of such behavior in the future. The reason is simple and twofold. We
are going to have more disaster events in the future, and the more of
them the more likely there will be additional panic incidents. In addi-
tion, different developments in the future are almost certain to create
more or reinforce existing panic-producing conditions. Whether it be
high-rise and windowless buildings, nuclear plants with radioactive spill
potentials, vast underground malls or domed stadiums, or many other
technological developments that could be mentioned, they are all
raising the panic potential. There is irrationality associated with
panic, but it is not as said earlier in the behavior itself; it is
rather in the acts of human beings who are continually increasing the
probabilities of disasters and of specific panic-producing conditions.[31]

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18. As noted in footnote 14, a limited circulation quarterly newsletter, _Unscheduled Events_, is issued by the Disaster Research Center.

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