

PSYCHOLOGICAL AND SOCIOLOGICAL EFFECTS OF
NUCLEAR ATTACKS ON THE UNITED STATES

1 May 1957

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COLONEL BARRETT: General Calhoun and Class of 1957: The talk this morning is another in the series of lectures provided to run concurrently with your final problem and provide background and stimulating material. On Monday you were concerned with damage to bricks and mortar and actual casualties. This morning we are going to discuss the area of the psychological and sociological effects of a nuclear attack on the United States. Happily, this is an area where we have no actual United States experience to go on. But the fact that we have no actual experience does not necessarily mean that we are dealing in the realm of conjecture.

We have had a series of studies made throughout the past several years, a great many people actively concerning themselves with this problem. Among those in the forefront of this work has been our speaker this morning, Dr. Paul Johnstone, of the Weapons Systems Evaluation Group.

It is a pleasure to welcome Dr. Johnstone to this platform and to introduce him to this audience. Dr. Johnstone.

DR. JOHNSTONE: Thank you, Colonel Barrett.

General Calhoun, Gentlemen: I want to make it clear at the outset that I am speaking the doctrine of no particular organization. I am currently associated with the Weapons Systems Evaluation Group. I have worked in this problem area for the Air Force. I have helped with the NESC. But if any of these organizations have a doctrine concerning social effects, I would be a poor speaker for that doctrine, because I am afraid that we don't know enough about the subject to have a doctrine. We do know a lot more, I think, than some people give us credit for knowing. But the problems are immense and they are difficult; and if we are not ready to change our minds rapidly in the face of new evidence, we are likely to find ourselves completely out of tune.

Now, before starting more directly on the question, or before trying to answer any of the problems, I would like to talk just a little bit about the nature of the question.

You begin, as I believe you have begun, by specifying certain physical details about the nature of the attack. You talk about the number of the bombs, their size, where they fall, and how long the attack lasts. On the basis of this you compute how much damage was done, in terms perhaps of the percentage capacity of industry destroyed, the number of people killed and wounded, and so on. You then ask, "What is the effect of all this?"

I would like to suggest that this process starts us off with a tendency to overlook one of the main problems. That is the problem of understanding the events. It would take many weeks to get a good approximation of the number of casualties. If this is not the case, then all past experience is misleading. It would take much longer than that, I am reasonably sure, to make even a gross inventory of resources of a kind that would be adequate for national planning of resource use. There would have to be some kind of a determination, that I am not sure you could make completely in advance, concerning what kinds of allocations you would want to make to produce what kinds of goods. If you will look back to the last war, you will recall that we had some considerable difficulty when we shifted priorities from airplanes to landing craft or from bombers to fighters or from tanks to artillery or vice versa. These things are not done overnight. It takes knowledge, and this knowledge has to be gathered in detail.

Another difficulty that is inherent in the problem is that we always talk in terms of a hypothetical series of events imposed upon a hypothetical situation; and the hypothetical situation is one which you generally cover pretty largely by imagination without specifying any of the kinds of details that might be controlling.

Perhaps you want to know better what I mean by that. The course of social and political developments that might follow could very possibly be determined in large measure, on a short-term basis, by certain particularities of detail which you must confess cannot be forecast. In a particular city the number of worker casualties might depend on whether on that particular day you had an east wind or a west wind. It might depend upon whether your bomb was in one part or another of the range of your expected CEP.

The life or death of particular individuals could, on a short-term basis, have an immense effect. Let us consider just as an example of this sort of thing what might have been the difference in the course of the last war if the plot against Hitler had been successful and he had been killed on the first attempt. Certainly the political and social effects

would have been quite different in Germany if this one individual had gone with the wind.

If we talk in terms of estimating casualties, I should guess that particularities such as excessive rain or excessive cold, even such a rain as occurred during Operation Alert of last year, might keep an awful lot of people out of shelters that would otherwise be in shelters.

Now, the social and political and psychological effects might be very different depending upon the political circumstances in which war broke out. I think that this ought to be self-evident. If the war broke out overnight, with practically no popular alerting, certainly people would feel differently and react differently than they would if there had been a long period of tension in which they had had some chance to get an understanding of the issues involved.

Again, it would seem the most reasonable thing in the world that people's political and social and psychological reactions would depend upon what kinds of alternatives they thought confronted them. And the kinds of alternatives that they would feel confronted with would depend upon what impression they have of the course of the war. This might depend upon what damage we were doing to the enemy and upon what kind of international news we got concerning alliances--our alliances and the enemy's. If the satellites fell away from Russia and if our own allies all remained firm, I think the situation might be quite different than if the reverse happened.

I cite these only to suggest that we must properly be aware of the fact that we are dealing with an extremely complicated problem, and that there are a lot of ingredients in this problem that are sometimes not taken into account.

Any society at any time is a balance of a great many diverse forces. If you add anything of significance or take anything away, you start a lot of reverberations that extend throughout the whole range of society. If the social scientists know anything, I think they know that. If you look into historical writings--and I happen to be a historian by training-- I think you will find that a very large proportion of doctors' theses begin something like this, "The Influence of." And if you read the thesis, you will find that it is probably the influence of a single event which is traced down over a long period of time. The thesis will probably show that there was a long series of complicated ramifications; that one thing happened and that, like waves going out when a stone is thrown into a pond, the waves in effect covered the whole pond eventually.

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Now, if this is the case--and it certainly is true in principle if the social scientists have anything at all to say--we have to assume that an event as large as an extensive bombing of the United States would have very far-reaching effects. But I must say at the same time that I have never seen any convincing statement of just what those details of effects might be. In what follows I am first going to talk about certain sources of information that are available and are known, I am sure, to some of you, perhaps to most of you. Then I am going to talk about certain principles and problem areas that I think have to be taken into consideration.

The main sources of information have always been the strategic bombing surveys of Japan and Germany. This is a rather compendious collection. Most of the material that is good and usable has been incorporated in a summary that was done ultimately for FCDA, I might say, out of Lehigh University by Stanford Research Institute. This is quite an ambitious and, I should say, quite a good general summary of what is to be found in the strategic survey studies.

For several years studies of disasters have been sponsored by the Committee on Disaster Studies of the National Academy of Sciences--National Research Council. They maintain an extensive bibliographical index, and they function pretty well as a clearing house of information for all people who are working in this problem area. A recent issue, incidentally, of the annals of the Academy of Political and Social Sciences is devoted exclusively to this subject.

I might mention at least one book that many of you may be familiar with. I mention it because I think it is one of the few good things that have been written in this general area. That is Professor Irving Janis' "Air War and Emotional Stress." It's purely a psychological study, but it is a very good thing, and very little has been done since, that changes it in any way.

Fred Ikle, of Rand, has written a manuscript that I wish was published, because I think it is by all means the most compendious study of this general subject. To the best of my knowledge, it still hasn't been published. I think the title of it is "The Social Impact of Bombing Destruction of Cities." It is a very extensive sociological summary, largely of World War II experience.

Now, what is the use of all this? The disaster studies, if you look at them, are largely studies of tornadoes in Arkansas, floods in Holland--things that look pretty small. But I think it is fair to say that the disaster

studies, academic as they may seem, have their value if you use them right. I think that they are useful as an indication of the way individual people react over a very short period of time to a threat of danger. I think that they are completely inadequate if you are interested in problems of how individuals react over long periods of time or if you are talking in terms of how large groups of people as a national society react. I think the reason for this is pretty obvious.

The immediate reactions of persons to danger or emotional stress are relatively universal. This has been pretty well established by experience. It is not very subject to cultural influences and variable social situations. That is, if a person suddenly sees a terrific flash and somehow or other survives the shock wave, his immediate reaction, his immediate behavior, will probably not be much changed depending upon his political context. For a certain length of time he is going to act almost the same regardless of whether he's a Republican or a Democrat, whether he likes the administration or doesn't like the administration, and probably even whether he is a Hottentot or a resident of Manhattan. But after a period of time his cultural training is going to begin to make some difference, and at the same time his experience, his group activity, is going to be different according to his culture.

There are a lot of things that we must unlearn and these concern some of the principles. I think the gist of all the studies suggests that we have some stereotyped notions about human behavior in disaster situations that either need extensive modification or had better be changed pretty completely.

First of all, you frequently hear talk about panic. Panic in a true sense, according to all of the best observations, is quite rare. Most people tend to do those things which amount to a rational response to the threat of danger as they understand that threat. And that is your key. It's what people understand is the threat. If they are in a position to understand, and if their knowledge is such that they understand what the events and the threat are, to a very large extent they will act rationally. Frequently they don't know what is going on. They don't have the kind of comprehensive view of the situation that we have when we impose this hypothetical event on them. Only in the terms of our own hypothetical perfect knowledge of the thing, they may react irrationally. So I think that true panic is something that you ought to talk about very little. It may happen in certain cases, but very few.

Aggressive antisocial behavior has been found to be quite rare. Looting and illegal disorder are not to be expected immediately except in exceptional cases.

A strong in-group feeling, as the sociologists say, that is, a strong feeling of identification with others in the group, is very common among people who survive in disaster situations. Charles E. Fritz, of the Disaster Studies Committee, has written a paper in which he has emphasized what he calls the "euphoria" of people in disaster situations. Most of you have probably had some experience, either in battle, in civilian disaster, or just where there was a threat, as of a tornado, showing that people who normally hardly speak to each other, if they feel in the same danger, or if they have survived the same danger, are likely to break down separations temporarily that previously kept them apart.

It has been frequently observed that those who have the in-group feeling of having survived a common threatening experience are likely, if they have much of an opportunity, to direct their antagonistic feelings toward outside groups. For instance, it has been found that outside groups that come in to administer relief are frequently looked upon with some animosity. They don't seem to understand what the local people want. This in-group feeling very frequently does develop systematic resentments against the outside.

Now, irrational precipitate flight is just about as rare as panic. True, there was an immediate flight of some people in the Hiroshima and Nagasaki areas, but there was almost as much movement toward these cities as away from them. Very shortly afterward, people were back in the ruins.

This tendency of people to congregate toward the scene where things like this happen has led Fritz and Matthewson, of the Disaster Studies Committee, to write what I think is an excellent monograph, which they call "Convergence Behavior," in which they have documented quite universally a tendency for humans to come together toward the point where these things happen. Instead of everyone flying away, you get traffic problems because people converge on the scene from outside. You get people going back to look for their families, to see what happened to their possessions, even to look for their cow. It becomes quite a problem just to take care of that sort of thing.

Now, there are three aspects of the social mechanics of this post-disaster or postbombing situation that I think ought to be looked at

more than they generally are. I can cover them by three headings: (1) change in motivation; (2) formal versus informal behavior patterns, that is, a supplanting of formal institutions and behavior patterns by informal and improvised patterns; and (3) the problems of role conflict. I would like to say just a little about each of these three points.

A widespread thermonuclear attack of massive proportions--and I presume that that's the sort of thing that you must be considering as at least a possibility--distributed widely over the length and breadth of the country, would necessarily cause a great deal of personal tragedy and grief. An awful lot of people would be impoverished overnight. A lot of people who had previously been rich would become poor. People who had never been favored by fortune would be placed in positions of comparative importance. They would get into the driver's seat. You would have an immense uprooting of people. The frame of reference of people would be very much upset. People would have needs that they never had before, desires that they never had before. All the background from which they look out at life would be, if not reversed, very substantially changed.

I would not want to suggest that all this would happen overnight. Definitely not. But there would be immense problems of personal damages, war claims insurance, taxes, and prices. Economic controls would have to be imposed and possibly labor controls. I don't know what all. But everything that would involve this helping one group would to some extent come at a cost to somebody else. This would cause ultimately a rather vast reshuffling of society, an unfolding of new issues, and a rather completely changed environment.

I don't think these effects would be felt immediately. But I do think that gradually the issues created by the war itself could become a central political force, a central political motivation. To an awful lot of people the issues created by the war itself would become more important, a more dominating motive, than any issues that existed up to the event itself.

I don't profess to say this positively, but I think it is a good guess to say that the war itself would become a central issue. I think that's a very strong guess. Whether revenge would become a central issue or neutralism, I don't want to say. The point is that the war itself would become the compelling issue. I would feel that whether this led us in one direction or in quite a different direction might depend upon that area of uncertainties that we cannot cover in our hypothetical assumption.

Now, as to formal and informal behavior, it has been pretty universally observed, where there have been any studies, that in a disaster, in an unprecedented situation, the formal institutions tend to be supplanted to a very large extent in their functioning by improvisations and informal groups. What do I mean by this? First of all, I'd like to define briefly my concept of formal and informal behavior.

Formal behavior is doing things the way the book tells you to do them. Informal behavior is cutting red tape. Formal behavior is acting by the book. It's following out all the rules. It's finding that the authority is the man who is really, nominally supposed to be the authority, and not his adjutant or his secretary. It is finding that this institution that is nominally charged with doing the thing actually does it, instead of some other.

What has been observed in this kind of a situation? Formal institutions tend to have the great bulk of power. But they tend to be a bit rigid. It is frequently remarked by social philosophers that it is informal conduct that makes formal institutions work. Having been in and around the Pentagon for many years, I am inclined to subscribe to that view. If you don't have a few people around who can break the rules once in a while at critical points, the rules are likely to bog you down.

Now, what happens in all the studies is that your world is upset by some event of most violent significance impinging upon it. It has been observed, even in the Arkansas tornadoes and things of that sort, that you get an on-the-spot improvisation. It may be the janitor in a schoolhouse, it may be the elevator operator, it may be just the man who happens to know where the key to the grocery store is, who becomes the leader. You get improvised leadership and you get improvised groups. It may be that you have a Red Cross organization there, but it is kind of defunct, but you have a very active PTA, and your PTA takes over and runs the thing. The point that I am talking about is that it's very common that this institution that is supposed to do the functioning doesn't, and some other does; and the reason any particular one does is a matter of personalities and a matter of happenstance.

In disaster situations of the kind that have been studied it has turned out very commonly that these little improvised institutions develop and will handle the relief until a time comes when the larger society, so to speak, moves in. Then gradually the little institution recedes into the background and the established forces of the larger society take over.

I would not want to say that in the kind of situation you may be contemplating this would or would not happen. But I would consider that if you are talking about a situation in which the larger society itself is so extensively damaged that it is no longer a situation of just one town or one place that is damaged, that the entire society is hampered in such a fashion that a large and adequate amount of aid and direction from the outside is not forthcoming, it might offer the expedient organization a chance to consolidate, and you might have some considerable shift in your institutional and power structure resulting.

Now, finally, there is another principle that I feel is very important. It is very important due largely to the terrible importance of that primary social group, the family. That's this business of role conflict.

What I call role conflict is conflict between the social roles that are called membership groups or reference groups by some sociologists. You noticed when I started talking this morning that I said I am speaking for myself. I am not speaking for any organization. In my ordinary life I work for the Weapons Systems Evaluation Group. That is one role I play. I belong to a church. I go to church and in my church I play another role, if you please. At home I am a husband and a father, and I am playing that role.

Every so often it happens that some function that I may want to perform in one of these roles interferes in some minor way with another role. Maybe I want to work at night and that interferes with my family life. Maybe I want to go on a vacation with my family and that interferes with my work role. But I keep these roles essentially in accommodation, and that is what most people do in most circumstances.

But now consider what happens if you suddenly upset your environment. I made some calculations not too long ago about that. I wouldn't say that they are closely accurate, but I think that as an order of magnitude they give a fair impression. I have looked over some census figures and talked to a few demographers and come up with a guess that on a random average, at any time in the United States, if you pick enough random points, you will find that something like two-thirds of the people belong to families that are separated at that particular time.

Suppose that suddenly the gong went off and you had a 15-minute alert here in Washington today. You would have separated families. I am reasonably sure, on the basis of all that has been observed, that the fact that these families are separated would become a compelling motive

in the conduct of most of the individuals who are family members and who are separated. That is, instead of doing unquestionably exactly what you are supposed to do acting as a single individual, you would be motivated very strongly by the fact that Jimmie is in school and you don't know what they're going to do with him, that Suzie is at high school and you don't know what they're going to do with her, that you don't know what your wife is going to do, and so on. The dominance of the family as a source of motivation in situations of this sort has been repeatedly testified to in all the researches that have been made in disasters.

We must tie this together with the fact, I would say, that it undoubtedly would take a very long time for people to compile authentic and believable information concerning casualties. It has been repeatedly observed in the aftermath of some of the worse disasters that people who were in pretty much a state of shock would not believe a report that their wife or husband was still alive. They had to touch them. They were perfectly rational people, but in the emotional shock a mere verbal symbol, conveyed in a more formal fashion, was not convincing.

A few years ago I conducted a little investigation of what might be called the logistics of a disaster situation. I wouldn't want you to place too much faith in these numbers, but I went through a rule-of-thumb accounting trying to take into account what the absolutely necessary requirements for the maintenance of orderly existence might be among the survivors of a disaster. Then I tried to balance the labor component of these requirements against what would remain available. And, assuming very Spartan standards--which I find it difficult to believe we would readily accept--it generally works out that about that time when you have the kind of general destruction that would be associated with 40 percent total casualties, killed and wounded, if the wounded and killed were distributed in the same proportion as they were in Hiroshima and Nagasaki, at that point, even if you assume that you have very substantial assistance from the outside, there would be an insufficient amount of labor to take care of the needs, as they existed, in an orderly fashion.

Personally I think the 40 percent figure is too high. I think this sort of thing would probably happen below that.

Within society I think that it's pretty good basic theory that loyalty to anything beyond self depends essentially upon a system of rewards and sanctions. There are certain things which society approves. These are the things which are essentially good for the functioning of society. The individual performs these functions on the basis of certain rewards.

I don't mean money exclusively. Money is just one of them. Prestige or a feeling of approval rewards these things that the morals of society approve. On the other hand, there are certain things that society does not approve. There are generally some sanctions for these. It runs all the way from a scolding or a nod of disapproval to jail sentences.

At the time when the devastation and disorganization begin to impair the dependability or the effectiveness of the system of rewards and sanctions, loyalties beyond self are likely to be impaired and behavior is likely to become privatized. Privatized behavior I define as that behavior which is directed toward satisfying individual needs by whatever means are most expedient to the individual, as distinct from means that observe the ordinary division of labor and established social usage. I believe that all reason would suggest that at that time when the disorganization exceeded a level where it is no longer to the interest of the individual to comply, you would get a considerable amount of such privatization for a while.

There is frequently a great deal of talk--and this is frequently the phrase--about the destruction of the fabric of society. I think that such talk is misleading. I think it is misleading because the terms are so ill defined that they mean almost as many things as there are people who hear or use the words.

Under the kind of circumstances that you envisage, society would certainly change. Modern industrial society is in a process of constant change anyway. There are a few of us here who have been personal witnesses of very considerable changes. I think that practically all societies are in a state of significant change at almost any time.

All right. Institutions and societies change. They change their shapes, the political objectives shift, social elites rise and fall, and value standards change. These we know. It goes on all the time. All theory and observation suggest that under the impact of unprecedented destruction the rate of change would be vastly accelerated and substantially increased.

There is no question but what that change would be very painful. Much that you would be willing to fight for today I suggest might very soon be deserted and possibly forgotten. The political and social institutions that we now have would certainly be shaken up, and our present values would probably not look with favor upon the values and the climate of the society that would emerge a generation later. But that

society, mind you, would be judged by its own values and not by ours. But, however great the change in society, I do not think that any talk about the destruction of the fabric of society is meaningful in any meaning that I could attach to the word. Whenever you have two people, you are going to have society.

We would evolve rather than suffer complete destruction. Whatever changes occur would find their seeds in what is already in existence. Any society of today is related to society as it was yesterday. This is the sense of much of the historical research that I mentioned earlier. If we know anything, I think we know that any society tomorrow, however drastically changed, will be related in important ways to what it is today. The seeds of tomorrow's society, even after the impact of a great deal of destruction, are here today. They are probably not the seeds that would flourish without that destruction, but they are here today. That is, look for the characteristics in the future that are present today, but not necessarily dominant today.

I find it incredible to believe that we would lose our feeling of national identity as Americans. This is a personal opinion, but it seems to me quite strongly supported by what is known. But I think it's almost equally incredible that we would not change significantly some of the things that that national identification would mean to us. Our own internal institutions would be changed almost certainly. Some greatly changed relationships to the outside world would probably follow. If you doubt that, look again, as I have suggested, at the changes within the rememberable past that have occurred as a result of much lesser events than those we are talking about.

Now, I have talked deliberately in quite general terms--deliberately on an unclassified basis. The truth is that in this area I think one can talk as well without any wraps and in an unclassified fashion as under a top secret restricted data label. I have dealt with this field a good deal for four or five years and practically everything that I have ever learned about it I have learned in a library. I am perfectly willing in the question period that follows to talk in more specific terms if you wish, but I have tried to lay out the principles. In answering questions I will try to answer them in keeping with the principles that I have talked about.

COLONEL BARRETT: We are ready for questions.

QUESTION: This question might be rather academic. You mentioned in your estimate that if the total casualties should approach 40 percent, there would not be sufficient labor to sustain the common objectives. I

believe that is what you said. I assume from this that you mean that private motivation would take the helm and that from there on we could make the statement that the national will to resist would be pretty well shot. Is this what you intended to imply?

DR. JOHNSTONE: You have skipped a couple of steps in it, but substantially I would suggest that this is what I think. I meant to say, first of all, that I don't consider the 40 percent figure to be exact. Second, I think the figure is a bit too high. I think that this would in most cases be likely to occur before that.

What I said was that there would be a labor shortage to provide for the survivors within the established social framework and that this would then lead to privatization. I don't mean that everyone would remain in that situation indefinitely. What you would get is a reshuffling. You would get first privatization and then a regrouping in some new form.

So I would probably want to be a little more academic even than you suggest. But I think it comes out--and this is my purely personal judgment--that an effective national will to resist, one that controls human resources in a normally unified way, would tend to fail; yes.

QUESTION: I want to ask about panic and flight in perhaps a little different context than you were talking about. I think I can best ask the question by proposing a hypothetical situation. Suppose many of the cities of the country had been hit but Washington had not, or perhaps the enemy planes had been shot down, but there was no evidence to the people of the Washington area that all the enemy planes had been shot down. Would your remarks about panic still apply in that situation?

DR. JOHNSTONE: I am not sure. I can only conjecture the way you can on that one.

I will say this that bears on the subject: One of the assumptions that we make in all these problems, all the problems that I have ever seen, is that the attack begins on 1 July and ends on 4 July or something like that. All that we know about past experience with bombing disasters and anything else is that giving the people to understand that the war was over is hard even if officially you knew. It would be a very hard process to convince people of the fact that there were no more raids coming. It has been observed even in the Arkansas tornadoes that the survivors of the tornadoes went into the cyclone cellars almost immediately on the next nightfall--quite an irrational process.

I will say this much: I think that a large number of people would tend very much to act, even in spite of advice to the contrary, for a considerable length of time as if there was still danger. I am not at all sure how easy it would be following an event of this kind to get official confirmation that there might not be any more planes, when you consider the end of the last two world wars and the difficulties that we had in getting somebody responsible to deal with.

QUESTION: I would like to continue that question in a somewhat different context. If we were in a partial war or a restricted war and it was building up to where it looked like the final nuclear attack was going to be made, do you think we would be able to keep our workers in our industrial centers? Do you think there would be mass flight from the industrial centers, that is, prior to the bombing attack on the United States?

DR. JOHNSTONE: I don't know. I think that conceivably the proper kind of official conduct could guarantee a large number of workers remaining.

QUESTION: I mean, without restrictions from above or force from above.

DR. JOHNSTONE: I think we could keep an awful lot of them. It depends upon the information policy. I am reasonably sure of that. I think that this Government would have it within its power, if it adopted the kinds of policies that some people know should be adopted in that situation, to keep a large amount of its workers on hand. I am not at all sure, however, that there would be complete agreement within our Government as to whether it would be wise to keep them there.

QUESTION: You made the statement that the information you have given us is based on knowledge available to all of us from libraries. I think you were hitting at the point that I am getting at, but there is something you left out. It seems to me that we need something specific as to what, with all the knowledge that we have, we should do to survive. I think in your last answer you were getting to it, but it looks to me like you have to have leadership and some positive policy. I would like to hear your comment on that. Do you think it would work?

DR. JOHNSTONE: I am not sure I can focus exactly on your question. I don't think I can improvise a national policy right now.

QUESTION: Do you think the provision of leadership to fill these gaps would maintain us in a position to carry on in such a situation?

DR. JOHNSTONE: Let me say two things that bear upon it and see if this answers your question.

I certainly think that leadership is extremely important in a situation like this. I think that knowledge on the part of people as to what you expect is extremely important. In those types of situations people are going to judge the type of situation and their leadership in very large measure concerning what they have been led by their leadership to expect.

In other words--this is my intuitive judgment, I must confess; but I think I could get some evidence to support it--I do feel right now that in spite of very serious attempts to educate the American people on the part of some groups, the American people have really no idea of what an atomic attack would amount to. In this sense an awfully large number of them would feel, among other things, that somehow or other the truth had been concealed from them; and they would feel a resentment toward the authorities. It may be that these same authorities have made statements about the horrors of atomic war, but I still think that somehow or other these have not sunk in.

Now, everyone, I think, has a right to his own opinion on this subject. But I have been interested in this problem and have talked to people both in the boon docks and elsewhere and my own impression, based on what I know about the weapons, is that most people who are outside of the inner coterie of knowledgeable people have no real appreciation of what would be involved.

QUESTION: I am wondering in line with the previous question if you have given any thought to the techniques that I understand we used in Japan late in the war, of announcing in advance what cities might be attacked, that one of the following might be attacked. What would be the situation here psychologically and moralewise if through some pretext, either by announcement, ultimatum, rumor, or otherwise, let us say, New York and Washington were aware that they were likely to be attacked in six or eight hours from now? Just what would be likely to happen?

DR. JOHNSTONE: Did you ever try to get through the Holland Tunnel at five o'clock? You perhaps know from such knowledge as you

have of the studies that have been made in Japan that the studies suggested that our announced intent to bomb one of certain Japanese cities, and, above all, the fact that we later did it, had a very strong tendency with the Japanese people to make them credit most things that we would say, whether they had to do with that or not; and at the same time it discredited their own government.

I would think that one could generalize pretty firmly on it. I am dubious about the future possibility of this sort of thing that we are talking about. I belong to that school of thought which believes that the damage that can be done in a very short time is so terrifically great that once the thing starts, you can't afford to hold back. So I am a little bit dubious about any tasks involving delay. I think you would get a very unhappy reaction on the part of the people in the towns that were threatened, if you could do it, however.

QUESTION: With regard to this inability apparently of FCDA and others to create an awareness on the part of the American people of the real danger involved, do you think that from the psychological standpoint that is attributable at least in part to the feeling that "It can't happen here"? Do you think we are going out of our way to bury our heads in the sand and not realize the situation because we don't want to?

DR. JOHNSTONE: I don't know. I don't think that Joe Doaks wants to be bothered with such things. First of all you have to develop a situation. He's worried about paying his mortgage, and how he's going to get a 1957 model car, and whether he's going to get a vacation. The tendency on the part of a lot of people is to have their hands full already with their daily concerns and why should they be worried by something else? Any organization, be it FCDA or ODM--or even the President himself--is taking on quite a bit when it tries to jar the people. You've got to have some events.

Much has been made of that false alarm in Oakland two years ago. They had the alert in substance; but few people, either official or otherwise, believed it. The reactions were generally: "Well, this alert is coming at 10:12 and they generally blow the sirens at 10 o'clock."

I don't think people were quite as stupid as it sounds. I think that the mental processes of an awful lot of people were this: They put this alarm within the context of what they knew. They did not see war clouds on the horizon. It was just not credible, in terms of all the other things they knew, that there would be a raid on Oakland at that

time. That being the case, they trusted all the other things they knew, which seemed more credible, rather than this false alert.

Now, I think part of that applies in some measure to this. I think you would have to put on terrific propaganda. I don't think any propaganda campaign by itself would convince people now that they should forget all their other worries and adopt a worry about atomic war, because you've got to have some events in the background to justify it. You get sufficient events, you get enough Russian bombers coming close, you get a few bomber bases close by and so on, and you may get a completely different reaction. Otherwise, I think it's almost impossible.

COLONEL BARRETT: Dr. Johnstone, on behalf of the Commandant and the college, I wish to thank you for coming over and talking to us this morning.

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