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CIVIL DEFENSE FROM THE COMMUNITY VIEWPOINT

25 January 1952

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Dr. Walter L. Cronin, Director of Civil Defense, City of Cambridge, Massachusetts, was graduated from Harvard University, and in private life is a practicing dentist. He served in World War I and was civil defense director of Cambridge during World War II. He is well known both nationally and internationally for his work and writings on civil defense. He has published many magazine articles on the subject as well as a book entitled "Setting Up a Local Civil Defense Organization." Over 2,000 copies of his book have been distributed (solely on request) throughout the United States and six foreign countries. Many communities have adopted this book as the basis for their civil defense programs. He has testified before the Joint Congressional Atomic Energy Committee on the need for civil defense (March 1950) and also served as a consultant with the National Security Resources Board during the time that agency was developing the National Civil Defense Plan (United States Civil Defense). He is an Honorary Fellow, Institute of Civil Defense, London, England; Governor's representative Massachusetts Legislative Special Commission on Civil Defense; and an officer of Civil Defense Research Associates, Inc. The latter organization is a nonprofit group which carries on extensive studies on the problems of civil defense.

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## CIVIL DEFENSE FROM THE COMMUNITY VIEWPOINT

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COLONEL VAN WAY: Gentlemen, you heard last week from Mr. James J. Wadsworth about civil defense organizational arrangements and planning at the national level. You will no doubt recall that he emphasized throughout his lecture the importance of community civil defense matters, of local action by voluntary citizens' groups.

We are very fortunate this morning in being able to hear Dr. Walter L. Cronin speak on this vital field of civil defense, because of his long and active experience in this area. In addition to having had practical experience in World Wars I and II on civil defense matters, he is nationally known for his writings and is a widely sought consultant on civil defense matters in general.

It is a distinct pleasure to be able to introduce to this audience a speaker of such eminence in his field. It is therefore with great pleasure that I introduce to you Dr. Walter L. Cronin, who will speak to you on "Civil Defense from the Community Viewpoint."

DR. CRONIN: Colonel Van Way, General Holman, faculty, and members of the Industrial College of the Armed Forces: The matters which I will speak of this morning, while they apply largely to the state of Massachusetts and the city of Cambridge, in many instances do apply as well to the communities throughout the Nation and the various states of the Union.

You have been given, I understand, a brief description of the setup in Massachusetts. Unfortunately, in spite of the fact that they were forwarded by railway mail express the first of this week, the brief summary of the setup in Cambridge, Massachusetts, has not arrived as yet. But you will receive it; and when you do, you may have a better picture of how a local civil defense organization sets itself up.

Civil defense, as you know from the statements of Jerry Wadsworth, stems first from the individual. From the individual it goes into the family, from the family to the street or the block, from the street or block to the city itself, from the city to the state, from the state to interstate and intrastate, and then to the Federal Government. But the entire nucleus of civil defense is in the individual and as such we try to set it up.

We do require some assistance, not only financial but assistance psychologically, to sell the people at home the need of civil defense. And I come to the crux of the matter now when I say that psychologically the citizens at home have not been sold on civil defense. why?

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Number one, because of the fact that during World War II, when we built up an expert civil defense organization for what was needed at that particular time, there never was any need for that organization. People said we wasted our time. Therefore when we hear from the newspapers, the radio, or the individual that there is a need for civil defense, the attitude is a tongue-in-cheek attitude toward those who are trying to sell it. This is especially true when you find that those even in the Pentagon can't seem to agree as to whether there will be or will not be a war in the future, and especially when we find in the halls of Congress a total lack of interest in civil defense in all its various forms.

In August 1951 I appeared before the House Appropriations Committee for the purpose of trying to aid and assist the passage of the proposed Civil Defense budget. As a representative of a city and also representing the rest of the cities throughout the country, we were particularly interested in the 78 million dollar proposal for mutual assistance, for matching funds. In testimony before that committee I tried to explain why we needed those funds, not only to aid and assist the communities, but psychologically, to show that the Federal Government was behind the individual communities.

The chairman of the committee said to me: "With all the billions of dollars that we are turning over to the armed forces, we are not going to need civil defense, because in the future wars are going to be fought in Europe. They are not going to be fought here." However, in his second breath he said words to this effect: "Suppose we do have to lose a few cities and a few of those people, what does it matter?"

Well, that gentleman comes from the farm lands of the Midwest. He is not going to be in a big city, a target city. And on that committee were other men from farming lands, who weren't interested in the problems of target cities. One of the gentlemen, a congressman from New Hampshire, said: "I am your neighbor from next door. Why don't you act in your own communities to get your own money by taxing the people there?" He said: "I could walk down the streets of South Boston and find more taxable property than there is in the entire state of New Hampshire. A great many of it is war industries. Make them pay for your civil defense."

My answer to that gentleman was as follows: "Sir, one of the reasons that the city of Cambridge is a target city is because it has, among other things, within its confines the Massachusetts Institute of Technology, but the Massachusetts Institute of Technology doesn't pay taxes to the city of Cambridge. Furthermore, Massachusetts and Cambridge pay a higher proportion of the Federal taxes than some of the cities and some of the states that are opposing this proposal. We would like to have some of our money back. Third, if one man is killed on Cape Cod as a result of enemy action, Amarillo, Texas, has been attacked, because this is the United States of America and not a collection of villages." But they cut that 78 million to 7 million dollars for matching funds. That 7 million is for the entire country.

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Gentlemen, there was the death knoll, almost, of civil defense, because we have a hard enough job as it is to try to enlist the personnel that is necessary for civil defense. How can we do that when we need in civil defense 15 percent of the population? In the city of Cambridge we have 120,000 population, but of that we will only have 40,000 to draw from. If you eliminate the children up to 18 years of age, cut out the people who are old and infirm, take out those who are crippled or otherwise unavailable, those who are in prison or in tubercular or arthritis hospitals, take out those who are or may be in the armed forces, take out those who have to go long distances to their jobs, and the increase in the defense industries, we find that we have only about 40,000 people that we can draw from. And of that 40,000 we need 20,000 in civil defense, which means that one out of every two able-bodied persons must be in civil defense.

We are not getting them, gentlemen, no more in Cambridge than we are in Chicago, Milwaukee, San Francisco, Pittsburgh, Philadelphia, New York, or Washington. The people just are not interested.

We in Massachusetts are fortunate, the same as some other states, in having a provision that every municipal, county, and state employee must take part in civil defense. In fact, there is a penalty of a 500-dollar fine and a year in jail or both if they don't. Most of us now are abandoning the idea of enlisting the individuals in civil defense for the present; we are building up our skeleton organization, our corporals and sergeants, from the municipal employees. We are indoctrinating them, giving them civil defense jobs, so that we can rapidly expand if and when conditions become worse.

Under the circumstances that probably is the best thing to do, because we will have those municipal employees, many of whom have skills that we can use. We will use those skills in the manner in which they can be worked into civil defense.

In like manner and in order to do an economical job, we are using the facilities that the cities and towns already have and are adapting them to civil defense. And when we are purchasing new materiel, we try to do it along the lines of using it later on for municipal purposes.

As an illustration, I find it necessary to buy some two-way radio transmitting and receiving sets for our communications division. We are purchasing a type of receiver-transmitter that can be readily adapted to the police and fire departments when Civil Defense is through with it. In many other cases we purchase things that may be used by the municipalities after the need for civil defense no longer exists.

How is the state's civil defense organized? What are its functions? The over-all purpose of the state is: to establish a state and community plan and program; to pool manpower, equipment, and facilities; to aid and

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assist local communities; and also to have interstate compacts with other contiguous states. Massachusetts, through those directives and through the laws which we have given to you, conveys to the local communities a broad plan. The communities may organize as long as they agree with or conform to that broad plan; and the local civil defense director is on his own to expedite that.

Massachusetts is divided into nine regions. Of those regions the principal one is the Greater Boston area. Those of you who are familiar with Boston will know that it has a population of around 800,000, and yet within 10 miles of the State House in Boston there are 2.25 million people, made up of 41 cities and towns.

Under the circumstances what is known as Boston politically is different from Boston geographically. Those 41 cities and towns are actually Boston in all respects except politically. It was necessary to organize them into an integral part of civil defense. We have divided them into five sectors, six with corporate Boston. Those pieces of pie are now designated as sectors 1, 2, 3, 4, and 5. The dominating city in each sector is the city in control. Therefore mutual aid and all organizational work is done through these sectors in order that the state's civil defense is organized in a workable manner. Each region will have the opportunity to and will call on the others for assistance. If their own resources are exhausted, they can call on the state for further assistance.

Highways and roads for ingress and exit have already been set up. In one month we have set aside all our main trunk routes as civil defense roads, where only civil defense and military vehicles will be permitted. Then, running parallel with those roads, we have what we call "500 roads." We take the road number, like road No. 1, and we call it "road 501." That is a parallel road that is available for civilian travel unless the military or civil defense vehicles need to use it. Road 128 would be road 628. So you know, when you see a high-numbered road, that you deduct 500 from it, and you know what it is a by-pass for, what main road it is a secondary road for.

Then in addition to that in our own local cities we have already established local highways, set aside particularly for civil defense routes. In my own city of Cambridge within a matter of 10 minutes we can tie the entire city off with 39 traffic control points, so that nothing can move out of, into, or in that city either one way or the other. That gives to the police the absolute control, they can designate a street as a one-way street, or they can close it off or open it for use. They have absolute control of that area, in conjunction with the state-approved plan and program.

Strange as it may seem, with a state population of 4.5 million, we have busses in Massachusetts that can accommodate 3.1 million persons. When we found that through a survey of the busses, it was unbelievable.

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That means that we can take 3.1 million people and move them by busses. So our evacuation plans are already pretty well in line.

Altogether, with the New England States and the western part of Massachusetts, we have already set up evacuation points where people will be fed and clothed and be kept in comfort with all the necessary things that they would need if they were evacuated. We have set up our control system for evacuation on that basis. We have our dispatching points and we have our highways already set up, so that we know what we are going to have to do in case of evacuation. All of that follows along the same lines as the state has designated with the police and the local community police cooperating. But again we have the question of a lack of numbers.

I receive correspondence from England from time to time. A recent bulletin from the Civil Defense Institute of England, which I happen to belong to as an Honorary Fellow, gave me a little laugh. It shows that the grass always looks greener on the other side of the fence. We always feel that England is the grandmother or the granddaddy of civil defense. In an editorial in that bulletin the English commented that Americans are rapidly becoming "civil defense" conscious and are being raised to a standard which will make Americans helpers rather than hinderers in emergencies, yet they weren't being so indoctrinated in England. In England they had to increase the ration in order to get the candidates to go to their Civil Defense Staff College. In that way they succeeded in getting them to go--because they wanted to eat.

Only 2.53 per thousand had joined the civil defense in London, England. The figure is a 3.66 per thousand that belonged to civil defense in the entire island of England and Wales. That means that in the city of Cambridge, where we need 20,000 persons, using the London figures we would have 303 civil defense workers. We already have in Cambridge over 4,000 of our needed 20,000. That shows the condition that they are in, in England today, where they cannot get their own population to get interested in civil defense.

About three months ago I had the opportunity of sitting down with two leaders of civil defense from England. They told me that the trouble in their local communities is that when they attempt to get them enlisted, some individual says: "We went through it before. When you need me, I will be on hand." They say these people will be embarrassing to them, because they don't understand that modern atomic warfare is entirely different from that of World War II; that they will not be able to do the work even though they will be on hand to do it. They say the need for impressing that upon the individual Englishman is vital and as yet they haven't been able to do it. Which again brings us to the following questions: Is CD needed? Must we go through the procedure of constantly defending our position? Do we need to prepare against attacks? Are we wasting our time? Are we, as some people say, just playing cops and robbers?

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That is one thing I hope we are doing. I hope we are playing cops and robbers. What if we are wasting the community, state, and Federal money? If it is true that a constant threat to the security of our people is ever present then this is an insurance policy that we must have but don't want to collect on.

The problems of the local civil defense organizations are a little bit different from what they are in civil defense on the state level. We actually have to deal with the individuals within the community. We have to deal with the individual manufacturer, with the industrialist. And how do we do it with the industrialist?

An industry should be set up exactly the same as the community organization, if the facilities of that industry are capable of being used, if the facilities are large enough. A factory of 50, 70, or 80 persons naturally can't have warden service, communications, medical aid, rescue, housing, feeding, decontamination, all these things that are necessary in civil defense. But they can set up within the factory a protection service, because they have that problem even with 80 persons.

But a factory with 100 or 1,000 or 1,500 or 5,000 is certainly a community in itself. It has nurses. It probably has a physician. It can set up a medical aid division. It has trucks and can set up a transportation division. It has expert workers, who are probably building men or electricians or steam fitters and various types of maintenance men, who can be a rescue crew. They have other individuals that can be adapted for the particular things that they can do in an emergency; as such they should be organized. The size of the organization should be limited only by the scope which it covers, by the type of installation, and by the number of employees that it has available.

One of the important points I want to stress is the question of security, not only within the organization but within the plant and industry. I have two charts in my own community for security. One is security within the civil defense organization; I most certainly need it because, as you know, Cambridge can be and has been a hotbed of communism. Right now we have a Massachusetts Institute of Technology professor who is under indictment in the state court for advocating the overthrow of the Government. You read no doubt in your Washington papers of Mr. Philbrick and his testimony, where he tells about his undercover work for the FBI and in it mentions my own community. Many of these things I have known to exist.

It is a funny thing. We have these things right here in our own land. And they are not foreigners who are doing them. They are not first- and second-generation Americans. They are frequently descendants of the Mayflower. It is a funny thing how these people can be affected so that they will sell you out and believe that they are advancing the cause of humanity. We have them; they exist here.

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I appoint security officers within my organization; nobody knows who is the security officer. They don't even know one another. I am the only one who knows who they are. They report to me, either personally or by mail. The usual method is to have a certain drop box where they sign the number of the street and I know by the number of the street who they are.

Within the police department one police officer is appointed as security officer by the police chief. I appoint a security officer; he is my chief of security in theory. The chief of police and the police security officer are the only ones who know who he is.

When I get a report that I believe is worthy of investigation, I turn it over to those two gentlemen. They evaluate it and if they think it is worth while investigating, they turn it over to the chief of police. Then the chief of police decides whether it is something for his department or whether it should be turned over to the FBI, Army or Navy intelligence, or any other intelligence agency. We do no investigating ourselves. This is a feeding method. We do nothing that could be spelled out as scandal-mongering or witch-hunting. It sounds a little bit complicated, but we can do the whole thing, if necessary, in 10 minutes.

All we want to do is use the information if it is hot. We want to utilize the information and get it into the proper places where it belongs. Our Industrial Security Plan is as follows: If the plant is under FBI protection, or if it is under Army, Navy, or Air Force protection, we don't want to know anything about it. That is up to them. But if the plant is not under them, we have our security officers in there, known only to the manager and myself. They similarly report to me individually by word of mouth things that are going on in their plant. It is then reported to the police security officer and the CD security officer who carry out the previously mentioned procedures.

In that way we believe we will have an adequate security organization without witch-hunting, not trying to do the job ourselves. It is none of our business to do the job. We send it through regular channels for information and then forget about it and the constituted authorities do the job.

Right now in industry you will find throughout the country a similar situation to what we had in the individual cities. The majority of industry was going ahead a year ago and doing a good job; but, the question of the apathy of the public came in. Various people said: "Why are we wasting our man-hours, why are we wasting our money, doing civil defense when probably the reason for it may never occur?"

Similarly we have attempted on our part to ease them along and tried to sell them on housekeeping and expanding the protection program; because by doing it that way we feel that they can see the need immediately for the protection of their employees. A great many plants have done it

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along those lines. They said: "Yes. We will proceed along the lines of general peacetime housekeeping and be ready to expand if necessary, if conditions require us to do the necessary things in the future."

Really, gentlemen, to confine a civil defense lecture to half an hour or thirty-five minutes is a very difficult task. I have tried to skip over lightly the various problems of the various communities in connection with the local civil defense programs. It will require probably 6 or 12 lectures to give you the real picture of how a local civil defense organization is set up, what its problems are, and how it is attempting to solve those problems.

Perhaps I have glossed over things on which you yourselves have a big question mark. I am glad to hear that there is going to be a question period, because I feel that then you will be able to ask me pointed questions and I will bring out things that I haven't properly brought out here.

But it is a real problem. We must have people understand these things. People must know that, while it may never happen, we have to buy the idea for self-protection. We have to buy it as long as we have an enemy capable of producing what would be a disaster.

One of the officers asked me a question during the break which brought out very forcibly the fact that I had overlooked something very important.

In Massachusetts, as in a great many other states, the local civil defense director, through the powers of the governor, has the power of seizing equipment, materials, supplies, buildings, et cetera, during the time of a disaster; recompense being paid after the thing is over. If the individual who owns the materials, supplies, equipment, or facilities is not satisfied with the amount of money paid to him, he has access to the courts along certain definite lines.

Also the individual civil defense worker is protected by a law similar to the workmen's compensation law, if he is injured or killed in a test, in training, or in an actual disaster. In addition to that, he is allowed up to 50 dollars for damage to personal property.

Maine has a law that an individual can be impressed into service during a disaster. New York State has a law by which individuals can be drafted prior to a disaster for the purpose of strengthening its civil defense organization. I don't think that New York intends to use that provision unless it is absolutely forced to do so, but it is there. Several other states as well have laws that do permit them to impress, in varying degrees and under varying circumstances, individuals so that they can take care of a disaster.

In Massachusetts--a great many states don't have this provision--any disaster over and above the ability of the local community to handle with its nominal facilities comes under the Civil Defense. At that time the

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civil defense director takes over complete control of the city. The fire chief, the police chief, health, and public works--all the various departments of the municipality--come under his direction. He is responsible only to the mayor or the city manager, whichever executive holds the position.

The civil defense director has very broad powers under the circumstances. For instance, the only power I have now is the power of organization. I can only organize the civil defense units and prepare plans and train. But if a disaster should occur next week, during the period of that disaster my powers are so broad that I could practically take over the municipal government for that period of the disaster.

I should have brought that out and made it clear. It was only a question by one of the officers that showed me that I had not covered the subject properly.

QUESTION: Dr. Cronin, what provisions have you made, if any, for the protection of your local electric power stations, both from direct enemy action, such as bombing, and against sabotage? Also would you touch on the restoration of power after it has been knocked out?

DR. CRONIN: We had that point up during World War II. We have the situation in the city of Cambridge where the local power company supplies heat to Harvard-University as well as supplying power. Running along the Charles River there is an underground tunnel of sufficient size that a man can proceed through it for the purpose of repairing the steam pipes. That runs along the river to Harvard University and provides heat.

At various points along the line there were gratings that could be opened for the repairmen to go down into the tunnel. One day an individual came to me and said: "Do you know that the gratings along the boulevard, along the river, can be opened very easily? In fact, tramps go down there and sleep in the winter and cook their stews on the steam pipes."

I said, "Is that right?" He said, "Yes. Furthermore, it runs all the way to the electric light plant, and there is only a grating between the tunnel and the electric light plant. If an explosive could be obtained and placed at the grating, with a time clock, good-by electric light plant. We would never know who did it or how it was done."

That was taken care of immediately, I can assure you. But it shows that very often there are little loopholes.

At the present time our electric light plant has nothing more than the nominal guard that it would have. A good, experienced, well-trained saboteur could get to it and do a beautiful job because of the fact of having only this nominal guard who takes care of the nominal protection of the property.

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Now, our own local electric light plant is a municipal one; that is, it is not owned by the municipality, but I mean its activities are confined geographically to the limits of our city. The Boston Edison Company's plants cover most of the rest of Greater Boston, if they or ourselves were hit, we have by-passes. Some of our current is brought from a distance and comes to us from as far away as Vermont and New Hampshire. It comes via various routes and is purchased by the local electric light companies if they need it to supplement their own or to take the place of their regular current.

So we have a very complicated and very effective system of by-passes. All that would be necessary would be to cut off the part of the city that was damaged so that those people wouldn't be blowing fuzes and throwing out the automatic switches. Then we could cut into the various channels that we have and we would have current, I would say, safely within an hour.

QUESTION: Have you any alert plan to augment the local security provided by the employees of the power company?

DR. CRONIN: We have this: We now have 365 auxiliary police, who will be in uniform by the first of February. Cambridge has a police force of something around 200 but doesn't have the normal compliment of police auxiliaries that it should have. In other words, it should have about 800; we now have 365.

But we are not worried about that particular thing. We can turn out, I would say, 50 or 60 auxiliary policemen within a period of 20 or 25 minutes, day or night. That would be in addition to our regular police force. In addition to that, we could probably have in an hour or an hour and a half all our 365 officers. So that we would have the opportunity of throwing in that additional protection for any emergency.

Right at this moment we have in our alerting force a chain system of telephone calls fanning-out to every division that we have, including from the top echelon down. So there are always at least three alternates on a fanning-out basis, so that someone is always responsible for making the arrangements and getting them worked out. I can within 20 minutes get at least 50 auxiliary men on the job at any hour, day or night; and in a short time we will be able to get the total of 365.

We have another plan so far as our municipal electric light plant is concerned. Although industrialists don't want to spend the money right now, and you can't convince them of the necessity, we have been able to get them to do an ordinary housekeeping job of protecting themselves to the limit of what they believe would cause ordinary trouble. But we are wide open to any good, trained, well-seasoned saboteur, not only in our own electric light plant but in other places. They could do a beautiful job--no question about it.

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QUESTION: I was interested in your evacuation plan. Last night I read your governor's executive order No. 10, with your implementing instructions. Nowhere in it does it say that you will tie in with the military services. Do you have any tie-in, so that your evacuation plan will tie in with the Army commander's emergency plan?

DR. CRONIN: All the armed forces tell us that it is not their job to engage in civil defense; that "You are on your own," unless the conditions are such that they have not been called upon to do military work. In other words if the need for evacuation is present, then there must be some military reason for it and therefore the military will be engaged in its primary objective.

If, however, the military is not engaged in the primary military objective--we will say that the planes have actually hit and have gone, and intelligence says that we are not going to get any more in the next 48 hours, the next two weeks, or what-have-you--then through the First Service Command we have our liaison who will attempt to get blankets, cots, medical assistance, and even guards if necessary.

That is all done through the state. In other words the state civil defense director has his liaison with the military. We have no right to call on the military. We have no right to call on the National Guard. We would do that through the state. In other words we step up from one echelon to the next. The executive would call the region, the region calls the state. The CD cannot act on its own initiative. There is no direct connection like that with the military. We have to go through the state.

QUESTION: What plans do you have for the utilization of the personnel in your colleges, including the women's colleges?

DR. CRONIN: We are not going to use students. We have organized Harvard, Technology, and Radcliffe just exactly as if each were a city in itself. In fact Harvard and Technology are cities in themselves. Together with the civil defense directors of those colleges, who come under my jurisdiction, they have evolved an organization chart. Harvard and Technology have their organization charts; they have their own organization.

Now, we use the faculty, the employees, the maintenance men, and all that sort of men as the nucleus for that organization. We don't use the students, because they are here today and gone tomorrow. We will depend on them in case something happens as a vast pool of manpower, but only in nontechnical jobs, with the exception, of medical and dental students. We will use the medical and dental students for a first-aid battalion station or in that type of work in hospitals. They have the primary education for that already. We will use them to the maximum extent that we can.

That is done through the instructors in the colleges. The instructors at the colleges already know that they have that pool. Each has 10 men under

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him who will assist him. They are the only ones that we will use in the technical aspects. All the others will be used only as a vast pool. We cannot use students; if you train them, you are wasting the training because they are such a fluctuating population.

QUESTION: You mentioned the general apathy of industry in general toward civil defense. Is that true of all industries?

DR. CRONIN: Oh, no. Some of them have done a beautiful job.

QUESTION: Of which ones is it true?

DR. CRONIN: Some of the larger concerns have gone ahead very fast. I would say that the bigger the concern, the more it is interested. Some of them have done a fine job of organization and are greatly concerned. Some of those organizations have sent their civil defense directors to school and wherever they can get knowledge.

I am familiar with that because I am a member of the Civil Defense Research Association, Inc., which is a group of about 150 or 200 people who are interested in civil defense and who are attempting to get all the knowledge that they can. Among that group are representatives of various organizations, including du Pont and General Motors. I would say that the larger the organizations, the more effective civil defense organization they have.

In the really big organizations, like GE, they have their own organization. I am familiar with du Pont, but I also think that all big organizations like Ford and General Motors have it. It may be that a little place employing only 1,000 or 1,500 people and not doing war work might not bother with it, any more than an individual. But most of the big industries do have an effective plant protection organization.

You don't have to be in war work to get sabotaged, because a bake-shop can be sabotaged very effectively. There are some large plants making bread. Here a saboteur can do a very effective job. It doesn't matter whether you die from actually being hit with a bomb or from poisoned food or drinking water, so far as the saboteur is concerned. It doesn't need to be war production. A saboteur working in a big bakery concern, like Ward Bakery, could do a beautiful job, and it might be difficult to detect.

QUESTION: Are the disasters that you speak of confined to military disasters or do they include disasters of Nature?

DR. CRONIN: Oh, yes. Any disaster. It could be a tremendous fire. We are not subject to floods in the Greater Boston area, although the Springfield area, the Connecticut Valley area, is.

If we had a tremendous flood in the Connecticut Valley area and the situation got beyond the capability of the local civil defense team to

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handle, the state civil defense would take over. Or if there should be a holocaust, the Civil Defense would take over.

**QUESTION:** Several years ago a catastrophe struck Boston--the Coconut Grove fire. The hospital facilities of Boston were taxed almost beyond their capacity to take care of that type of casualties--burns and so forth. Would you tell us something of your plans for handling large numbers of casualties that may result from the blast of an atomic bomb, for instance, realizing that atomic bombs have no respect for hospitals?

**DR. CRONIN:** You hit a real hot spot. I really believe that the Coconut Grove disaster--I am familiar with it--please don't take my statements as being critical--was not handled quite as efficiently as it could have been. I saw people being transported in railway express trucks, just lying on the floor, when beautiful limousine ambulances were lying idle and not being used. I saw any number of things. It was just lack of organization. And the strange part of it was that the city of Boston civil defense people were in control and they didn't know it.

All that would have been necessary--I got this in discussion with the Army afterward--would have been to sound a couple of air raid sirens and they could have shut off that area, gone to work, and done a real job.

The disaster occurred at approximately nine o'clock. It wasn't until two o'clock in the morning that a police prowler car with a microphone on it went through that section telling people to get out of this area. That was five hours after the fire started. It wasn't very well handled.

But let us get down to what actually happened. Not only was the medical end of it weak, so that with no more than 500 people injured it taxed all the facilities of all the hospitals in Greater Boston; and Boston is known as a medical center. We have per capita probably more hospitals and medical services than any other part of the country. And yet it taxed those facilities.

It also meant that we had to bring people long distances to adequately take care of them. But all the hospitals were there. All the doctors were there. Our bridges were still in existence and our roads were still there. There had been no destruction to anything except one building. And yet with 500 people injured it taxed the facilities.

Now, as of today we have plans where school buildings, dance halls, bowling alleys, auditoriums, and hotels, all that sort of thing, have been cataloged as to the number of persons that properly can be taken care of. We are not going to worry about the physical structures. We have the buildings. We may have to worry a little about blankets, cots, and mattresses; but they can be obtained. But where are we going to obtain the personnel that we do not have? We haven't got enough physicians and nurses to take care of them.

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Your dentists are going to have to perform operations that they never dreamed they would have to perform. They are going to have to act as physicians. Your nurses are going to have to do things that they never dreamed they would have to do, because it is going to be a question of the life of the individual. They will have to do these things or the person dies.

It is going to be a selective thing. The physician is going to walk down the line and look at the people and he is going to say: "Don't touch that person. Let him die." Because of the fact that he can't waste his time or his plasma or his morphine or whatever he has on a long-drawn-out case when right beside it are three people who can be saved with one shot, with the minimum use of drugs or plasma. It is going to be a selective thing, a brutal thing. We don't have the personnel anywhere in this country to do a good job. Where they are going to come from I don't know.

In Massachusetts we are training battalion first-aid stations on the basis of one for every thousand population. That means that in the city of Cambridge, with 120,000 population, we have 12 stations. The state will provide the equipment and the supplies for them, but the city has to supply the personnel.

It is a tremendous job. That is something like 200 persons just for each first aid station. So you can begin to see where we got this figure of 20,000 persons that we need. When you start multiplying the number of individuals that you need for each station, and this is only one section of one division, you can see why we need so many. We don't have a good answer to it. So far as the structures and facilities are concerned, everything is great; but where we are going to get the doctors I don't know.

QUESTION: I attended part of one of the Red Cross first-aid courses. The Red Cross has a very excellent course, but at the time it occurred to me that it was giving a lot of stuff that wouldn't be relevant or useful in a disaster situation. Has Civil Defense given any thought to giving a sort of specialized disaster first-aid course instead of sticking to the straight Red Cross deal?

DR. CRONIN: There you are bringing up something that I have taken up personally with the Red Cross, but the national officers of the Red Cross refuse to go along with me. The Red Cross has a 22-hour course; and, as you say, it contains a great many things that aren't necessary in civil defense.

I have tried to get the Red Cross to give a 4-, 6-, or 10-hour course on civil defense injuries, similar to the course that is given by the Army, Navy, and Air Force to every individual. I recall that in World War II there was a naval film on first aid. We didn't get it until near the end of the war. It was a colored film. It did in 20 or 30 minutes the same job as the Red Cross did in 20 hours. I don't know if the Navy still has it. I would like to get that film today, because it is a corking good film.

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I think--and I agree with you--that they do waste a lot of time in that course. It is all right for the individual who wants to take a first-aid course or for those who are going to be in the medical aid division. But when you take a man--a police officer, a warden, or a worker--and say to him that in addition to being a warden you want him to put in 22 hours on first aid, some of them will probably drop out and abandon it and say "What's the use?"

That is a very good point. The National Red Cross officials refuse to budge. They say: "You either take what we have or you don't take anything." They won't permit their instructors to give a shorter course.

There are some communities that have just abandoned the Red Cross course and are giving sort of an emergency or battlefield course in first aid. That is a good point.

COMMENT: I think that training film was still in existence in 1949, and I think it still is. I know I had it in my kit bag about two years ago.

QUESTION: The question that has bothered me a little bit is this: Let us take Boston, for instance. You mentioned 39 check points. How do you propose to control the mass of people that I think might rush at any disaster in every direction? How do you propose to control that? How are the check points going to stop the mass exodus of people that are going to converge on a place like the Holland Tunnel in trying to get out of New York City and scatter into the country?

DR. CRONIN: We believe the only way to do that is at the source. That is why we have in Cambridge these 39 points. But in addition to these 39 points, we will have the normal traffic control points that we have during peacetime within the city.

That means that there will be a traffic man at the corner of all the main intersections of the city. A vehicle comes down the street. This policeman identifies him as a civilian defense or military vehicle and he lets him proceed. A second one comes down the street and he is a noncivil defense vehicle; so he motions him to pull his car off on a side street and leave it there. They get no farther within the area.

That is being duplicated by every city in every one of these 41 cities and towns. So what we try to do is stop them at the source. If you wait for them all to get to the gate, you are going to have a jam. You have to try to leave these avenues open for the necessary vehicles. The only way you will be able to do that is for the police to stop them at their source. You have to stop them before they go more than one block or two blocks and only allow the civil defense and the military vehicles upon the highways; turn off everybody else onto the side streets and make them park their cars there.

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In the event that the police find that there is a genuine unforeseen stoppage of civilian vehicles blocking the routes and you want to get them out of there, all that is necessary is for the dispatcher in traffic control to send out over the radio to the prowl cars on the main streets a message telling them to open the highways in a westerly direction for 10 minutes on "X" number of main highways until you get rid of those civilian vehicles. We thereby get rid of these civilian vehicles that are blocking the street thereby causing the bottleneck. They then can be routed to areas for parking or sent out over non-CD roads. But in all other instances unless you stop them in their own block, they are going to get away from you and you will block your CD highways with civilian vehicles.

QUESTION: Civil defense may never be needed, but when it is, it will be needed fast. In the meantime the key personnel in the system, who will be on a part-time basis, are going to have to go about the business of living their daily lives. It leads me to wonder what kind of system you have to insure that the key personnel are available at all times; that they don't all leave the city on a holiday together. As a corollary to that, what system do you have for finding the key personnel when they will be needed in a hurry?

DR. CRONIN: I think we have a very good system. Every individual in civil defense will have three alternates. They are on the alarm list. When anything happens, the key alerting list is at the fire alarm headquarters. There we have at least two men on duty 24 hours each day. They are the ones who get the first alert, either of anything from the enemy standpoint or any type of disaster.

They have the names on the alarm list to call. Once one of the persons on the civil defense alarm list gets the alert, that is all that is necessary. He immediately starts his fan-out to get the individuals for the whole unit.

In our particular instance there is a group of young ladies that we call our communication division. All I have to do, or anyone of my chief deputies has to do, is to contact one of those girls. The minute we converse with one of them, we can forget about it, because they will take care of rounding up the CD staff and getting the job done.

We have alerted 500 people in a matter of something like 12 minutes in a test. They did a beautiful job of fanning out. Of course, we know that this was under ideal conditions. We know that under the stress of an emergency it won't be so effective as that. But we have the system set up.

It is perfectly possible that all the personnel in a certain division would be missing, such as on the fourth of July or something like that. But we at the control center would know where they are and, if necessary, would be able to contact them. We have put in an emergency project to take care of that.

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To illustrate with an example of one division: We have a technical division; it is made up of bomb reconnaissance men, radiologists, gas defense people, and so forth. The first one of the top leaders to arrive on the job takes over until one of the key people gets there; we do similarly with all other divisions. Therefore we have that possibility that you mention, but the first person in that department to arrive takes over until a key person gets there.

QUESTION: I am interested in your project for the emergency use of equipment. Let us say it is one of the necessary services for the public, like a public utility. What cooperation are you getting from private contractors and labor organizations in formulating your plans for emergency use?

DR. CRONIN: Our tentative program is as follows: For the immediate emergency the contractors and labor unions will work for nothing, that is, on the question of saving lives on the first day or the first three or four days; for the purpose of clearing away debris, so that emergency vehicles can get through; for the purpose of rescuing people who are trapped in the debris; for aiding and assisting the fire department in fighting conflagrations; for the purpose of shutting off electric wires which may be dangerous to the people; for shutting off illuminating gas pipes which may be a danger; for probably establishing a temporary water supply. For that sort of thing an agreement has been made with the contractors and the labor unions that they will work for nothing.

When we get to the stage where rehabilitation enters into the picture, where we have to actually take the debris of the emergency and transport it somewhere else, and probably pave some roads, then the contractor says: "All right. Now you have to go into the contracting basis. I have to be paid for this." But the emergency work they will take care of.

The municipality in Massachusetts doesn't sign up with contractors--for this reason--unless on a small scale: The larger contractors, with their bulldozers, tractors, and heavy equipment, are here today and somewhere else tomorrow. Their equipment is out on the job. Frequently their equipment is out of their yard, especially during the summer months, from now on--the open months. It is out of their yard continuously. They are on the job.

Therefore it is necessary for the state to make a canvass, a survey, of all the facilities that there are in the state. Frequently contractors' equipment may be in another state. I have an instance in mind where they were building a road along the Charles River and one of the companies came all the way from New Jersey with all its equipment. If that contractor is in Massachusetts at the time of a disaster, his equipment is going to be used. If one of the Massachusetts contractors happens to be in New York State at the time of an emergency, his equipment is going to be used there; so it balances up.

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The state has made a pool of this equipment. In addition to that, public utilities, such as street railways, railroads, gas companies, electric light companies, all have equipment that might be used in time of disaster; they can and will be pooled. The Public Works Department has some too.

A great deal of this equipment will be used, as I said, on a temporary basis for the protection of lives and to some extent for the protection of property for the immediate emergency. But when the immediate emergency ceases, then it is for the state and the community to hire these contractors on a contractual basis.

QUESTION: I am still bothered about your medical attention in case of disaster. As I recall, as a result of the atomic bomb against Hiroshima there were about 70,000 people died for lack of medical attention that would otherwise have lived. One of the chief reasons for the lack of medical attention was the fact that there weren't any doctors or nurses left after the bomb went off. As I understand it, out of over 500 doctors only about a dozen were left alive and able to work. It would therefore seem to me that you should have an agreement with the adjacent communities, particularly those which would be free from attack by the enemy, have a mutual arrangement so that in case of disaster you could draw on them.

DR. CRONIN: We have that.

QUESTION: I understood you to say that you didn't have enough doctors.

DR. CRONIN: That is right. In spite of that arrangement, we haven't enough of them. For instance, Cambridge will call on other places as far away as Ohio and Chicago. If Chicago isn't hit, it will send medical teams to Cambridge.

We realize that if a large number of people are injured, we alone are not going to be able to do the work. We are not going to have the blood plasma. We are not going to have the facilities to work with. A great many people are going to die by neglect--no question about it--who under normal conditions would be alive.

They will have to take the people on a selective basis and say: "This person has a 95 percent chance for survival. This person has only a 30 percent chance. He will be allowed to die, because there aren't enough personnel to take care of that man." There aren't enough nurses and not enough doctors.

It is a terrible situation to present to an audience. We are aware of it. We have the physical structures to do the job. We have the equipment. When I say we have the material, that isn't quite true either; right now all the manufacturing companies that are making medical supplies are

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working to capacity taking care of the defense requirements and the nominal public requirements. It is a long wait to stockpile medical equipment--it takes a long time to do it. If anything happens tomorrow, we won't have the civil defense stockpile that we need.

The Federal Government is stockpiling. States are now being permitted to stockpile as well--something they didn't do before. Now the states can stockpile with Federal Government funds.

As you say, this problem is tremendous, and you hit a very sore spot when you speak about it.

But there is another problem that presents itself. A great many states have what they call medical examiners. Some states call them coroners. In my own state a medical examiner in one county can't act in another county. Boston is in Suffolk County. It is surrounded by three other counties--Essex, Middlesex, and Norfolk. A medical examiner in one cannot work in another.

In our area there is roughly one medical examiner for every 100,000 people. That medical examiner can't appoint any assistants. They have to be appointed by the governor. In the event of a catastrophe, he can't move over from Cambridge to Boston. Not only that, but he can't take reputable physicians and make them temporary medical examiners.

In order for a man's wife to collect his insurance, or in order for his estate to be probated, you must have absolute identification of that person. The only one who can identify a person properly when he has been killed by violence is the medical examiner. That means that when a man has not been properly identified, his widow must wait seven years and have him declared legally dead.

There are tremendous complications arising but this is a problem that we propose to solve. We believe that we can get it solved within the next month. Those are problems that some states haven't even considered.

QUESTION: You mentioned earlier that the industrial plants also have their own defense. The plant is part of the community and the people working there belong to the community. I am interested from the medical viewpoint in knowing, first, who has priority--the plant or the community? Second, how do you make sure that these people who in the disaster corps at night, who will come from their homes to the plant, are not stopped by the police?

DR. CRONIN: We have a disaster corps during the time the plant is in operation. The first priority is for those employees to stay there at the plant. We also have interplant cooperation.

When I train my plant protection directors, I ask them to become familiar not only with the structures of their plant, but with neighboring plants and the product that they are putting out and the inherent danger

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of combustion and things of that sort that the plant might have. A check is made to see whether their fire-fighting equipment is uniform, standard, so that their nozzles will fit other equipment, and so forth.

They are supposed to take care of their plant first. If their plant is not involved, then they are asked to send their crew into the city for the purpose of aiding and assisting the one from the city.

If they are not on duty--and sometimes they come from a great distance--they actually remain in the community in which they are resident and act with that group. The only exception to that are key personnel, who should be at the plant. Every key person has a sticker on his automobile which will permit him to pass through civil defense lines.

I have been a strong advocate--in fact, I have had a lot of discussion--for not having a sticker but having a pennant. We have found as a result of trial and error that when a pennant is stuck on the bumper, the civil defense people can recognize it at a long distance. The pennants can be numbered so they can be properly allocated to certain individuals, and you can recognize the one who has that number. A civilian automobile has to get too close to the police officer before he can see the sticker, but you can easily see a pennant flapping in front of the headlights and see that the automobile is a legitimate user of the highway.

QUESTION: How do you send out these radio alerts without their being interfered with by the regular radio transmission?

DR. CRONIN: In Massachusetts--and I believe it is one of the few places that are doing it--right now we are using the state police wave length, 44.74 megacycles. Every city has an alerting receiving set on that wave length, at this control center.

Each receiver has an activating device and we can alert the communities by that manner. An impulse is sent out from the state police transmitter and the activating impulse sets the receiver in action. The receiver is on all the time but the speaker is not connected. But the activating device activates it, so that they hear the message from the state police.

Within a short time, just as soon as the Federal Communications Commission approves it, we are going to have another wave length, 45.42 megacycles, because the state police want their wave length for themselves.

Every important city and town in Massachusetts--not the small towns--is going to have radio receiving sets. In my own instance the receiving set is at the fire alarm headquarters. We already have it operating in Cambridge. Twice a day, I think it is--I am not sure--the state police send out a test call.

But the State doesn't depend on that one transmitting station alone, although it saves us considerable money. The state police have in addition

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to their main control center, four other transmitting stations that can be used in case of sabotage or failure of any particular station. These four other stations can send out the alert in case of an emergency.

COLONEL VAN WAY: Dr. Cronin, our time has run out. We are grateful to you for your very able and interesting presentation of so many detailed facts about community civil defense.

(20 Mar 1952--350)s/sgb

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