

University of Delaware  
Disaster Research Center

RESEARCH NOTE  
#12

THE 1965 MONTREAL CANADA APARTMENT HOUSE  
EXPLOSION: SOME NOTES AND  
COMPARISONS WITH THE INDIANAPOLIS,  
INDIANA COLISEUM EXPLOSION

David Adams

July 15, 1965  
(Revised January 1967)

Much of the material in this preliminary report has been derived using funds from the Office of Civil Defense, Office of the Secretary of the Army, under Contract N. OCD-PS -64-46, Subtask 2651A. The report has not, however, yet been reviewed formally by the Department of Defense nor issued officially by OCD to the general public.

THE DISASTER RESEARCH CENTER  
THE OHIO STATE UNIVERSITY  
COLUMBUS, OHIO 43210

Research Note #12

The 1965 Montreal Canada Apartment House Explosion:  
Some Notes and Comparisons with the Indianapolis,  
Indiana Coliseum Explosion.

By  
David Adams

Department of Sociology  
July 15, 1965

Much of the material in this preliminary report has been derived using funds from the Office of Civil Defense, Office of the Secretary of the Army, under Contract No. OCD-PS-64-46, Subtask 2651A. The report has not, however, yet been reviewed formally by the Department of Defense nor issued officially by OCD to the general public.

57.4211

On March 1, 1965, an explosion occurred in an apartment house in Ville LaSalle, a municipality of 41,000 people seven miles southwest of Montreal, Canada. The blast and subsequent fire caused extensive property damage, almost completely destroying the twenty-four apartments located in one of the three-story, U-shaped buildings, damaging the other structures in the project complex, forcing the residents to evacuate, and blowing out windows in the buildings in the surrounding blocks. The blast left a crater some twenty feet deep; the explosion was heard a mile away. Twenty-seven persons were killed with twenty-nine out of forty-eight injured being hospitalized. Fifteen of those killed were children.

The same day two DRC staff members left for Montreal to conduct a general study of organizational response to this disaster. Although not a community disaster by the center's criteria, two characteristics of the Montreal explosion suggested possible implications for disaster research: first, since the explosion occurred in Canada, there was the possibility of making general cross-cultural comparisons with typical responses in the United States; and secondly, because the Montreal disaster was comparable in some respects to the 1963 Coliseum explosion in Indianapolis, limited but more specific analyses of similar organizations under similar conditions were possible.<sup>1</sup>

Agency documents as well as tape recordings and transcripts of interviews with members of seven public and quasi public groups involved in the disaster--the LaSalle Police-Fire Department, General Hospital and Mayor, and the Montreal Civil Protection, Red Cross, Salvation Army and

St. John's Ambulance Service--have provided the basis for a chronological reconstruction of organizational responses to the Montreal explosion, and a comparative analysis of these responses with those of similar agencies in Indianapolis.

### Chronology

The explosion occurred Monday morning, March 1, at approximately 8:15, shortly after the majority of men had left for work and shortly before most of the children had left for school, the time of the accident accounting for the large number of children directly involved. A radio helicopter broadcasting traffic conditions was nearby and provided an eye-witness account of the explosion. This account was heard by the Coordinator and the Welfare Officer of the Montreal Civil Protection, both of whom were driving to work. They were in immediate communication with each other by radio. The Coordinator determined to proceed directly to LaSalle. He arrived at 8:30 a.m., about the same time as members of the LaSalle Police-Fire Department. Initially, that organization had received a report of an explosion at the Sherwin-Williams Paint Company plant, a half-mile from the housing project, but the police had proceeded directly to the site of the blast when their cars dispatched on the call discovered the error. Members of the police and fire departments from Lachine, a bordering municipality, and the fire department from the Naval Depot located in LaSalle arrived a few minutes later. Altogether some 200 workers and volunteers were present shortly after 8:30 a.m. Rescue work was begun immediately. The first of the injured reached the LaSalle General Hospital,

about 2.4 miles from the explosion site, at 8:35 a.m. Emergency operations had already been initiated there with physicians awaiting victims. At 8:50 a.m. the Mayor of Montreal gave his permission for the Montreal Civil Protection to aid Ville LaSalle. By that time an official call for aid had been received from the Mayor of Ville LaSalle.

Before 9:00 a.m. the Civil Protection Coordinator and the LaSalle Police-Fire Director had established a control center in the housing project rental office located in one of the undamaged buildings. Approximately 700 unsolicited workers from nearby communities and volunteers from the immediate area had converged on the site of the explosion. In addition, the Mayor of LaSalle had arrived and a representative from the Quebec Provincial Red Cross had begun to appraise the extent of the disaster to determine the number of volunteers required from his organization. Fifteen minutes later, Civil Protection equipment trucks had been dispatched from Montreal headquarters together with welfare volunteers alerted by the Welfare Officer. They arrived about 9:45 a.m. The welfare workers set up their operations in the disaster control center, in which the telephone company had installed four emergency lines.

A temporary morgue was established by the coroner at the indoor hockey rink of the LaSalle Recreational Center. The LaSalle General Hospital which received 45 casualties requested blood from the Red Cross and as a result of these requests the Red Cross Blood Center in Montreal, usually opened at noon, was prepared at 10:30 a.m. to accept donors. An appeal for blood donors was broadcast over the radio and television stations in Montreal. By

3:00 p. m. that afternoon donors had responded in such numbers that these requests had to be rescinded. Blood contributors were asked to wait until the following day. The control center at the site of the disaster had by 10:00 a. m. become so over-crowded that the Civil Protection Coordinator called the Superintendent of Schools to request additional space. At 11:30 a. m., the welfare center was transferred a half mile away to St. Clement School. Subsequently, the telephone company installed emergency lines at St. Clement's and the army sent and set up four stoves.

At noon the Deputy Commissioner of the St. John's Ambulance Service arrived at the explosion site. Some fifty volunteer members of that organization were already there, providing, with the police and civilian volunteers, ambulance transportation and first aid for the injured. At about the same time the commander of the Quebec division of the Salvation Army called from Ottawa where he had gone on business--he had only just heard of the explosion--to determine the extent of his organization's involvement in welfare operations. Satisfied that "they had the situation in hand", he remained in Ottawa. At 5:00 p. m., convinced by subsequent reports that the disaster had been of greater scope than he had realized, the commander left Ottawa and arrived in Montreal about 8:30 p. m. He remained at the scene of the explosion until 5:30 Tuesday morning.

At 12:30 p. m. the Civil Protection Welfare Officer called a conference of the heads of all the organizations participating in the welfare operations at St. Clement's--the Red Cross, the Salvation Army, St. John's Service, a number of Boy Scouts and Girl Guides, and the Vincent dePaul Society--

to set up a division of labor and to detail specific jobs.

By 1:00 p. m. the Coordinator of Civil Protection reported that rescue actions "for all intents and purposes were terminated". All of the injured had been removed; although all fatalities had not been recovered, the emergency characteristic of the first hours of operations had passed. Rescue operations were, accordingly, turned over to the LaSalle municipal authorities. By 2:00 p. m. the contingent of Red Cross volunteers, food and clothing had arrived at the St. Clement's Welfare Center. By 3:00 p. m. the kitchens were in operation, prepared, with additional hot meals sent from the Queen Elizabeth Hotel in Montreal, to feed both evacuees and emergency workers.

When it became apparent that the residents of the other buildings in the housing project were not to be allowed to return to their homes Monday night, a second welfare center was set up at the Henri Forest School. By 8:00 p. m. housing arrangements for these evacuees were being made from this center. Emergency workers remained at the site of the explosion all Monday night, but the crisis had passed. LaSalle General Hospital returned to its normal schedule at 7:30 Tuesday morning.

#### General Comparisons: Montreal and Indianapolis

Before considering in more detail the responses of the several Montreal organizations and their counterparts in Indianapolis, a very brief comparison of the nature of the two disasters themselves may be useful in providing a context for these activities. A note on the French-English setting of the

Montreal disaster may also be helpful. Problems of coordination and organizational boundaries, communication, convergence and disaster plans will be discussed as they are relevant to specific organizations.

Barton has suggested a three dimensional typology of "collective stress situations" in which both the Montreal and Indianapolis explosions can be located.<sup>2</sup> Reference to his typology provides the basis for comparison in terms of (a) the scope of the disaster, (b) the time prior to the impact during which the danger is known, and (c) the degree of institutional preparedness. Seen in these dimensions the Montreal and the Indianapolis explosions fall in the same category. In each the affected area was a segment of a city--involving neither an entire community as is frequently typical of floods and hurricanes nor a larger regional or societal system often characteristic of earthquakes and major economic disasters. In each the disaster was sudden, allowing little or no time for specific preparations; in each, as a result, the degree of organizational preparedness was limited.<sup>3</sup>

Interestingly, both explosions took place in locations politically separate from the major metropolitan areas. On the one hand, the explosion occurred in LaSalle, a municipality some seven miles from Montreal, and, on the other, in the state-owned fairgrounds four miles north of downtown Indianapolis. The Globe and Mail reported that this political distinction "kept the City of Montreal police and fire departments, the island's largest, out of the disaster area until early afternoon."<sup>4</sup> A respondent from the Montreal Civil Protection believed that this resulted less from what The Globe and Mail had called an "inter-municipality squabble" than from the



simple fact "that the LaSalle authorities didn't realize they had all this help waiting for them". Permission to cross municipal lines is easily obtained under disaster conditions, he argued. In the Indianapolis explosion, only after the emergency had passed did the State Police who had official jurisdiction over state-owned property, exercise more than nominal charge of the situation. While Barton suggests that disasters of limited scope--such as these--allow those affected to draw aid from sources outside their area, it is clear that a number of other variables are involved, not the least of which is politics.<sup>5</sup> Other problems of jurisdiction which resulted from the scope and locations of the explosions will be discussed later.

Of interest from a cross-cultural perspective is the bilingual setting of the Montreal explosion. Given that most people speak both French and English in Montreal, and given that the relationships between the two ethnic groups involved are alleged to be somewhat strained at present, it might be expected that language would affect in some way the disaster responses of the various organizations. However, no untoward effects were reported. St. John's Ambulance Service, for example, has both French and English speaking divisions. Although both were involved in rescue, first-aid, and transportation activities, no conflict was reported. Indeed, the superintendent of the most active division was English speaking, but French speaking volunteers who reported for assignments were "well received... and they appreciated the way it was organized by..." /the superintendent7.

Fritz makes much of the unifying and therapeutic functions of disasters: cultural discriminations and social differences, he argues, are largely

forgotten under disaster conditions because all are affected. There is as a result "a general democratization of the social structure."<sup>6</sup> Clifford, on the other hand, in his comparative study of Mexican and Texan response to the Rio Grande flood of 1954, stresses the "persistence of social patterns". He takes the view that despite the disruptions associated with community disasters, values and relationships defined as important under "normal" conditions will persist--even if they are dysfunctional--under "abnormal" disaster conditions.<sup>7</sup> That these two post-disaster reactions are not necessarily exclusive is suggested by the publication, after the Montreal explosion, of three Gazette editorials: one praising the cooperation of rescue workers and volunteers, "Acting Like Neighbors"; Another discussing Premier Lesage's speech to the Montreal Reform Club on the move to outlaw English in Quebec; the third concerning the problem of bilingualism in the civil service.<sup>8</sup> The extent to which traditional social patterns persist or are laid aside in disasters involves a number of dimensions--the extent of the disaster, the influence and importance of the patterns, etc.--which have yet to be specified. Data from the Montreal explosion suggest that the response may not be either-or, but rather that various parts of the social structure may be differentially affected.

#### Specific Organizational Comparisons: Montreal and Indianapolis

Of the organizations directly involved in rescue and welfare operations following the Montreal explosion probably the LaSalle Police-Fire Department and the Montreal Civil Protection were among the more important. The official structure of the LaSalle Police-Fire Department, in which both the

police and fire personnel are organized under a single director, is peculiar to Quebec Province and particularly to its smaller municipalities. There are, according to the LaSalle Director, only some fifteen municipalities in the province with separate police and fire departments. At least part of the rationale suggested by the LaSalle Director is that this arrangement provides a contingent of professionally trained firemen in place of the volunteer departments often typical of smaller communities. Although all seventy-five members of the department are sworn in as police, paid on that basis and wear the police uniforms, they are trained in both police and fire work and assigned on permanent standing to either police or fire duties. Thus there are on duty, during each of the three daily shifts, sixteen men--nine for police and seven for fire duties. Only in emergencies do firemen double as police or vice versa.

The LaSalle Police-Fire Department has an emergency plan with the LaSalle General Hospital. In disasters like the apartment house explosion the hospital is immediately notified and all personnel are called on duty to receive the injured. The department also has a mutual aid agreement with Lachine, a neighboring municipality, and a "gentlemen's agreement" with the naval depot located in LaSalle. In the rescue operations at the explosion these additional workers were augmented by unsolicited police, fire and civil defense aid from other communities, primarily from Westmount, Pointe Claire, St. Laurent, Valleyfield, Longueuil, St. Lambert, Verdun, Roxboro and Ste. Genevieve de Pierrefonds, and by cadets from the naval cadet ship HMCS Hochelaga. Elements of some of the Montreal organizations,

notably the Civil Protection and St. John's Ambulance Service, were also involved in the rescue operations.

From the Montreal Civil Protection, the LaSalle Police-Fire Department received its most important assistance in welfare and rescue operations control and coordination. Members of the Civil Protection were in charge of the welfare operations following the explosion and were associated (at least) with the coordination of the immediate rescue operations. Under the Montreal Disaster Plan, which had been drawn up by a committee of representatives of the city's emergency organizations, Civil Protection officers were to assume control of all welfare operations. This portion of the plan was apparently carried out in LaSalle despite its political autonomy but with the approval of the Mayor of LaSalle. The major welfare organizations involved--the Red Cross and the Salvation Army--were in any case Montreal-based and familiar with the disaster plans.

There was, however, some inconsistency in the reports--if not in the actual rescue operations leadership. The LaSalle Director, while admitting the close cooperation of the Montreal Civil Protection, stated that the official command of these operations remained his: of the Civil Protection workers, he said:

They look after their own staff, you know, but I was... responsible for the operations. But there was no problem that way. We... got them together and said, "Well, you do this and we'll do that" and that's it.

The Coordinator of the Civil Protection, while acknowledging that legal boundaries may have been breached, suggested that he had assumed the leadership of operations:

At any disaster, no matter which one you come in contact with, this has been my experience throughout the years: a state of confusion exists, and they are all looking for a leader, no matter who he is, no matter who he belongs to. And when I say "leader", I mean an official leader--not an emergent leader from the crowd...[but] somebody who represents an official body. If he talks a little louder than everybody else or...makes decisions on the spot... people will naturally start going to him with questions. And he'll find himself gradually taking control, even though he doesn't want to. And this happens to me nearly every damn time. I think because I talk a little loud, maybe that's why.

So this is what I have found anywhere I[have] ever been on a disaster, where I have been involved in it. As I say, I don't know if it's because I speak a little loud or something like that, but... I start getting things thrown at me all the time. And I have no objections to it, but sometimes you have to be careful...like in Ville LaSalle, for instance, yesterday. I mean I'm not in my daily work, I'm there helping. My services are there to help those people that's all, so if we can do it any time at all, we relinquish the authority as soon as somebody in authority wants us [to.]

There is, then, some difficulty in establishing exactly who was in charge of rescue operations. Some reports suggest that, at least officially, the Mayor of LaSalle and, under him, the LaSalle Police-Fire Department directed the rescue operations and that the Montreal Civil Protection directed the welfare operations. There are other indications, however, from members of the Civil Protection and the Red Cross which suggest that Civil Protection coordinated both the rescue and the welfare operations. Probably the most appropriate conclusion on coordination would be that it was fluid; its location was dependent on at least two variables, the official structure of the situation and the available resources of a given organization. In Montreal the first of these variables placed control in the municipal organizations, the Mayor and the Police-Fire Department. Given the relatively limited resources of these organizations, coordination was also a function of the Montreal Civil

Protection--an organization with a much greater range of resources. In any case, there was no evidence of major problems deriving from this variability. Indeed there appeared to be considerably more coordination and less duplication of rescue efforts than was the case in Indianapolis where police, fire and civil defense were for at least an hour after the explosion operating independently of each other.

The establishment of a control center is the crucial element in coordination for it provides the facilities for communications, both inter-and intra-organizational. At the Montreal disaster Civil Protection appeared to be most adequately prepared to set up this kind of communications center. Its members were equipped on their arrival at the scene with walkie-talkies providing the necessary link among themselves and with their headquarters in Montreal. Once emergency telephone lines had been installed in the rental office, communications coordination both at the scene and with organizational elements not present was improved. Although the communications officer of the Indianapolis Civil Defense had recommended setting up a communications center at the Coliseum, no official action was taken despite the obvious need for such a center--there were some seventeen separate police and fire cars making separate requests to the police dispatcher--until the Indianapolis Police Chief arrived an hour after the explosion. Civil Protection in Montreal, like Civil Defense in Indianapolis, appeared to possess a greater capacity to call on available resources like heavy equipment necessary in rescue work than any of the other organizations. That Civil Protection was immediately involved in rescue coordination in the Canadian operation and that Civil

Defense remained on the periphery of these operations in the Indiana city perhaps helps to explain the seeming greater efficiency of Montreal operations, although clearly there were other factors involved also.

Both Civil Protection in Montreal and Civil Defense in Indianapolis are largely volunteer organizations. The Montreal organization is directed at the municipal level by the Montreal Security Commission and at the provincial level by the Minister of Municipal Affairs and his representative in the city. The group in the city involves some fifteen full-time professional workers and forty part-time workers. The rest of the membership of the organization is made up of trained volunteers. Civil Protection had approximately 550 volunteers working in shifts at the LaSalle explosion.

Available information indicates that the Montreal Civil Protection, like its Indianapolis counterpart, had the most wide-ranging and fully operative disaster plan of any of the organizations involved. In addition to the locations of emergency equipment--air masks and tanks, oxygen masks, acetylene torches, jack hammers, and the like--the disaster plan indicated the channels of communications within the organization and with liaison officers in other organizations, particularly the police and fire departments in Montreal. An elaborate "fan-out" system of alerting the membership was also operative in meeting the apartment house emergency. Like the Indianapolis Civil Defense, the Montreal organization responds to both natural and man made emergencies. (The major reason for changing the name of the Montreal organization from "Civil Defense" to "Civil Protection" was to escape the public assumption that the organization was to operate only after

nuclear disasters.) Probably because the Montreal Police and Fire Departments were not immediately available--and because Civil Protection was--the latter organization was actively involved in the LaSalle explosion. In Indianapolis the Civil Defense organization was not so directly involved because the police and fire departments were immediately called. In any case, in Indianapolis neither the police nor the fire departments appeared to have a very clear picture of the responsibilities or potentials of Civil Defense under conditions like those surrounding the Coliseum explosion.

With the exception of one important difference in function, the Red Cross in Montreal is very similar to its counterpart in Indianapolis. Like the American Red Cross, the Canadian organization is largely volunteer. Some ninety percent of the Quebec Division being made up of non-professionals. In addition to the veteran's services, the women's work committee, the blood donor committee, the water safety service, nursing and Junior Red Cross, the Quebec organization includes a disaster relief section. In Montreal this element of the organization also includes what are called the "flying squad" and the "disaster squad". The former is made up of women volunteers who are trained in disaster services such as registration and canteen operations; the latter is composed of four groups of three men. Each group is on twenty-four hour alert for a week at a time and is prepared to proceed directly to the scene of an emergency and provide the relief services of the Red Cross. Unlike the Indianapolis Red Cross which provides for the long-range rehabilitation of victims of a disaster, the Montreal Red Cross is engaged principally in short-run aid to those affected by a disaster. It



provides food and clothing and shelter for only the period immediately following the impact. Statements in the field interviews and in the Canadian newspapers suggest that the bulk of the long-range measures would be taken by the individuals themselves insofar as they were capable or, if they were not, by the welfare agencies of the provincial and municipal governments.

A unique relationship exists between the Indianapolis Red Cross and the county Civil Defense organization. By law the Civil Defense Director has the responsibility of coordinating operations at all disasters; this obligation includes both inter-organizational and intra-organizational coordination. As a result the same man holds the positions of Chairman of the Red Cross Disaster Committee and Director of the Civil Defense Emergency Welfare Services. A similar but less official arrangement exists between the Montreal Red Cross and Civil Protection. Under the Montreal Disaster Plan, the Welfare Officer of Civil Protection has charge of all welfare operations and is to coordinate the activities of other organizations such as the Red Cross and the St. John's Ambulance Service.

However, some evidence exists of inter-organizational duplication, especially among the Red Cross and other organizations. According to members of the Montreal Red Cross, one of the first duties of that organization in time of disasters is the registration of the victims--the injured, the fatalities, the missing. There was indication that this compilation was also undertaken by the LaSalle Police-Fire Department, the Coroner and Civil Protection. This was also true in the Indianapolis explosion, where lists were compiled by the hospitals, the police force, the coroner's office

as well as the Red Cross. In addition, some conflict--at least of a verbal nature--existed between the Red Cross and Civil Protection. One member of the Montreal Civil Protection indicated that the Red Cross appeared to be somewhat reluctant to accept the leadership of Civil Protection and that an informal competition in "public relations" existed between the two organizations, particularly by way of organizational symbols:

Now the decision and the agreement was that Civil Protection would control the operations through the Coordinator of Civil Protection... So this is fine. Everybody agreed to it. But we get to the scene of the disaster and the Red Cross, the first thing they do is hoist up their great big flag...and then they start elbowing everybody aside and taking over everything.

According to this member of Civil Protection, experience suggests that such reluctance may gradually disappear. With each emergency it tends to appear less frequently. Whether conflict and duplication can be avoided by agreements of a more official nature on inter-organizational leadership or by more detailed schedules of inter-organizational division of labor is a question--interesting in itself--but requiring more information than is presently available.

Within the Red Cross organization itself several problems developed, none of which were of major proportions. Despite an attempt to estimate the number of volunteers required and despite waiting until 2:00 p. m. before sending the greatest number of workers to the scene, there were still too many Red Cross personnel concentrated at the explosion site for the work that needed to be done. Consequently, about half their number were sent to the blood center and to the Montreal headquarters to assist in operations there. The problem, then, was in determining the most efficient disposition of

workers--a difficulty that also arose in Indianapolis. There was a similar problem in the dispersal of available goods. Supplies of food, for example, were not released for distribution until some time after they were needed. (It is not clear from the DRC data, however, if the authority to release the food belonged to the Red Cross or to some other organization.) Until the supplies were released the Red Cross did provide food orders which could be exchanged at grocery stores. Again, the problem was providing for the most efficient use of available resources. It should be noted nevertheless, that these problems are not peculiar to the Red Cross, but are typical of the majority of organizations involved in meeting disaster needs. They are, in fact, consequences of problems of convergence which are associated with any disaster.<sup>9</sup>

Under the Montreal Disaster Plan the Salvation Army units in Montreal, of which there are ten (the remaining thirteen which make up the Quebec and Eastern Ontario Division are located in other municipalities) are responsible for providing clothing for those affected in a disaster and canteen facilities for emergency workers. In addition to these functions, the Salvation Army also provides counseling and ministry, i. e., "personal service"--to those who were anxious for others or bereaved in the disaster.

In the LaSalle explosion, the Salvation Army sent a contingent of nurses from its Montreal hospital to help in providing first aid for the victims. Interviews with the Divisional Commander of the Salvation Army and with representatives of the other emergency organizations did not provide any evidence to suggest major problems in the operations of the

Salvation Army. The same was true in the Coliseum explosion in Indianapolis. The only concerns the Montreal Commander voiced were that the details of the Montreal Disaster Plan perhaps were not as clearly understood as they might have been, and that the very generous response of the public to appeals for clothing had created something of a problem in sorting and storage.

There is no organization in Indianapolis similar to the St. John's Ambulance Service as it operated at the LaSalle explosion. The organization is national in scope and voluntary in membership. Its primary local functions are to provide first aid, home nursing and ambulance service in times of emergency and disasters and, in "normal" periods, to provide these services to those who cannot afford them from other agencies. The organization is patterned after the army with brigade headquarters in each of the provinces. Within the provinces the units are divided into areas and divisions. National and provincial officers and their staffs are the only salaried members of the organization. In Montreal there are some 800 trained volunteers in St. John's Service divided into nursing divisions for women, ambulance divisions for men, and cadet divisions--both nursing and first aid ambulance work--for boys and girls. Each division is composed of thirty to forty members.

At the LaSalle explosion members of the organization were engaged primarily in ambulance and first aid operations. They were also available for assistance in sorting and distribution of clothing and for help in providing canteen and food services. Although St. John's Service is normally less involved in overt rescue than in first aid, some members did assist the police

and Civil Protection in searching for victims of the explosion. In addition, members of the nursing divisions were available to help at the LaSalle General Hospital as nurses' aides. Communications within the organization were provided by members of the radio division. The official disaster policy of the organization is to work under the supervision of some larger organization--normally the Civil Defense--and, perhaps because of this policy, there was no indication of any inter-organizational difficulties. There were some difficulties in connection with the handling of casualties by the hospitals. In the first place, as at Indianapolis, there was no controlled distribution of victims to the available medical institutions. In Montreal, the LaSalle General Hospital received by far the bulk of the medical workload while other hospitals in the metropolitan area were not extensively utilized. Only eighteen casualties were sent to two other hospitals. Also, as at Indianapolis, there was no initial centralization of information about the whereabouts of patients. It was likewise reported that there had been no identification or tagging of victims upon their arrival at LaSalle General. This too had happened with the handling of casualties at some of the Indianapolis hospitals. Overall, however, while there were these difficulties in the Montreal situation, there is no indication that they were major problems or that they seriously affected in any way medical treatment or care.

#### Some Concluding Observations

We will conclude this report with some extensions on as well as pointing out some of the implications of the previous remarks. Matters that seem particularly worth noting are: organizational co-ordination, disaster plans,

convergence and communication, and interorganizational conflict.

1. When major disasters occur in metropolitan areas but in locations which are politically separate from the city, inter-organizational coordination is likely to be difficult to establish. In both Indianapolis and Montreal, the peculiar locations of the explosions and the inability of state organizations on the one hand or municipal organizations on the other to handle the situations necessarily involved organizations from the larger cities. Because the disaster plans of both Indianapolis and Montreal applied only within the political boundaries of their own areas, attempts to implement existing schemes of inter-organizational coordination outside these limits were in a strict technical sense illegal. Unless agreements are made before the occurrence of emergencies, coordination and control arrangements have to be ad libbed with consequent probabilities of difficulties. When these already exist, one might expect a greater degree of efficiency and a somewhat lesser degree of duplication and inter-organizational conflict.

2. Disaster plans greatly increase the capacity of organizations to respond to emergency situations. This observation in itself is hardly startling. Similarly, unless these plans involve more than statements on paper they are unlikely to be of any major use. But, in addition, the organizations participating in such plans must be informed not only of their own obligations but also of those of other organizations. In Indianapolis particularly, the potential usefulness of the Civil Defense was apparently unknown to the Police and Fire Departments. In Montreal there was some evidence of a kind of duplication which might have been avoided were the organizations involved fully aware of their own obligations and those of the others. While

the Civil Protection-Red Cross difficulties apparently involved other variables as well, at least a portion of them might have been eliminated by means of more explicit pre-planning.

3. The convergence response--particularly that of information--tends to increase communications difficulties within and among organizations. In Indianapolis these difficulties were compounded by the absence of a disaster communications center: the result was the diffusion of the communications network among the several participating organizations--the Indianapolis Police and Fire Departments, the Civil Defense, Red Cross, and Salvation Army. Consequently, much duplication and delay accompanied the rescue and welfare efforts of these organizations. The situation was less difficult in Montreal where a disaster control center was established shortly after the impact. Nonetheless, the convergence of outside telephone calls on both the LaSalle General Hospital and the Red Cross, and the lack of an adequate means of inter-organizational communication complicated emergency operations. The LaSalle General Hospital, for example, found it virtually impossible to communicate with any organizations at the scene of the explosion because their available telephone lines were tied up with incoming calls. Indeed, one of the suggestions which came out of their experience with the LaSalle explosion pointed up the necessity for a supplementary communications network linking the hospital with the police-fire department. The Montreal Red Cross, however, had the resources for setting up an additional communications center in one of their mobile units. Despite their emergency measures, a large proportion of their personnel were

taken up in answering these outside messages. Of the organizations involved in the Montreal disaster, Civil Protection appeared to be most adequately prepared to meet the convergence problem: their communications system was mobile and adaptable, and was operative almost immediately after the impact. In addition to the convergence of information, organizations at both the Montreal and the Indianapolis explosions experienced the personnel and material convergence typical of disaster response. The nature of these convergences has been suggested rather more implicitly than explicitly in this report.

4. Problems of overlapping or ambiguous spheres of authority among organizations appear to be aggravated by attempts to preserve organizational integrity--or by perceptions of such intents. Organizational symbols like flags, armbands, and uniforms may be defined as attempts on the part of the organization to capture public recognition for itself. There was some evidence in Montreal of this inter-organizational competition, especially among predominantly volunteer organizations like Civil Protection and the Red Cross. It would be interesting to determine the functions of these symbols and compare them with the consequences of organizational symbols among professionals like police and fire departments. One suspects that uniforms and other symbols among professional organizations--being part of the general expectations attached to these organizations--would play a less important part in producing or maintaining inter-organizational conflict. Insofar as these symbols are associated with the larger area of authority and control, they would appear to merit the attention of researchers.



## FOOTNOTES

1. For a complete description and analysis of the Indianapolis Coliseum explosion see Thomas E. Drabek, Disaster in Aisle 13: A Case Study of the Explosion at the Indiana State Fairgrounds, October 31, 1963, Research Report #2, (Columbus: The Disaster Research Center), see also Thomas E. Drabek and E. L. Quarantelli, "Blame in Disaster: Another Look", Unpublished paper, (Columbus: The Disaster Research Center, 1965).
2. Allen H. Barton, Social Organization Under Stress: A Sociological Review of Disaster Studies (Disaster Research Group, Study No. 17; Washington, D. C.: National Academy of Sciences-National Research Council, Publication 1032, 1963), pp. 3-8.
3. Together with studies of the effects of World War II bombing raids, disaster studies of this type--those involving segments of cities or small communities without an adequate period for preparation or evacuation--are most typical of disaster research in the past twenty years. Ibid., p. 5.
4. The Globe and Mail, Toronto, March 2, 1965.
5. Barton, loc. cit.
6. Charles E. Fritz, "Disaster", in Robert K. Merton and Robert A. Nisbet, editors, Contemporary Social Problems (New York: Harcourt, Brace and World, Inc., c. 1961), p. 685.
7. Roy A. Clifford, The Rio Grande Flood: A Comparative Study of Border Communities in Disaster (Committee on Disaster Studies, Study No. 7; Washington, D. C.: National Academy of Sciences-National Research Council, Publication 458, 1956), pp. 127-131.
8. The Gazette, Montreal, March 4, 1965.
9. See Charles E. Fritz and J. H. Mathewson, Convergence Behavior in Disasters: A Problem in Social Control (Committee on Disaster Studies, Study No. 9; Washington, D. C.: National Academy of Sciences-National Research Council, Publication 476, 1957).