

ARTICLES

DISASTER'S LITTLE KNOWN PIONEER: CANADA'S SAMUEL HENRY PRINCE

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December 6, 1917, Halifax, Nova Scotia, Canada, was hit by an explosion so devastating it was later studied by those developing the atomic bomb. A French munitions ship, the Mont Blanc, en route to Europe from New York, blew up after a collision in the inner harbor.

Trees were torn from the ground. Poles were snapped like toothpicks. Trains were stopped dead. Cars were left in twisted masses. Pedestrians were thrown violently into the air, houses collapsed on all sides. Streamers were slammed against the docks. Then followed an incredible air-raid, when the sky rained iron fragments upon the helpless city (Prince 1920, p. 29).

The blast killed 1,963 and injured 9,000, 22 percent of the city's population. Two man-made explosions are comparable: Hiroshima - 60 percent killed or injured; Nagasaki - 35 percent killed or injured (Janis 1951, p. 209).

*The biographical material on Prince is drawn from his personal papers - including his handwritten sermons - and from interviews with his biographer, Bishop Leonard Hatfield. Bishop Hatfield knew, worked and studied with Prince. His M.A. in Sociology was supervised by Dr. Prince. Additional research was done by Gillian Osborne, Carleton graduate, Director of Emergency Planning for Dartmouth and long-time member of Carleton University's Emergency Communications Research Unit (ECRU).

Just 16 months later, May, 1919, Samuel Henry Prince began a Ph.D. in Sociology at Columbia University. A professor, F.H. Giddings (1924), suggested he use the Halifax explosion as the basis for a thesis. The result was *Catastrophe and Social Change* (Prince 1920), the first systematic study of disaster (Anderson 1978).

Prince's pioneer status is often reported (Drabek 1986, pp. 1-2, Dynes 1987, p. 15); but little has been written about him. Since Columbia is in New York and since he participated in relief in Halifax (Prince 1920, p. 24) it was assumed he came there with the group from Boston.

PRINCE'S CAREER

In fact, Prince's ancestors came to Canada in 1783 as United Empire Loyalists, leaving the rebellious American colonies to remain loyal to the Crown. They were a mixture of French Huguenot and German. Prince was born on a farm at Hammond River, New Brunswick, and educated at St. John (later Saint John) High School where he was a gold medalist. He then completed a B.A. (first class honors) and M.A. in Psychology at the University of Toronto as well as divinity at Wycliffe College. He was then ordained a priest.

In 1910, after a year as Chaplain at Ridley College (a private boys school) in St. Catharines, Ontario, Prince came to Halifax as curate (assistant rector) at St. Paul's Church (a church which began Sunday schools in North America). The morning of the explosion, he was at breakfast; so he escaped injury. A little later, he would have been at his desk by an upstairs glass window. (The windows of St. Paul's were shattered by the blast but the church still stands, debris still embedded in its walls. A stained glass window is dedicated "To the Glory of God and in Grateful Memory of Samuel Henry Prince, Priest, 1886-1960").

Like other priests, Prince helped look after the dead, the dying, and the survivors. Unlike some, he had done it before: in 1912 he had gone to sea twice on the S.S. Montmagny to search for and help bury victims of the Titanic (Prince 1950a, p. 32; Prince 1912; "Montmagny Is Returning to Port" 1912).

Catastrophe and Social Change was Prince's only disaster research (though he repeated his theories in a book in 1958), but not his only interest or published work. While teaching at Columbia, at King's (an

Anglican college of Dalhousie) and as first director of the Maritime School of Social Work, Prince was active in housing, corrections and mental health. He was also a keen student of astronomy, and he remained an active priest; for 35 years (starting in 1921) he was in New York each summer as preacher at St. Stephen's Protestant Episcopal Church. He also took his share of morning prayers at King's.

He wrote four other books - on Sociology and Astronomy, on housing, on religion, on rural life. His interests included Rural Sociology.

PRINCE'S THEORY

Catastrophe and Social Change includes now outdated theories. It includes quotes from an unpublished and unreliable manuscript of a Dartmouth journalist. It reflects attitudes about relief that now seem unpalatable. But it is also the first documentation of convergence, scapegoating, and emergent behavior, and offers the first evidence against the theory of role abandonment. It is also the first well-documented account of community recovery, the first to describe conflict during relief.

It also elaborates a theory of Collective Behavior, a term Prince uses, and disaster (Klapp 1972; Perry and Pugh 1978; Turner and Killian 1972). With crises comes chaos then "the establishment of a species of collective behavior, and the organization of relationships of a quite different character" (Prince 1920, p. 17). Prince said change, "...seems to vary directly as the shock and extent of the catastrophe" (Prince 1920, p. 21).¹

SOURCES

Prince wrote well before most of the current literature on Sociology, Collective Behavior and obviously Disaster was available. The first text covering Collective Behavior (Park and Burgess 1964) was published a

¹ Prince Dealt with many of the things which are now regarded as critical to Collective Behavior. He alluded to disaster subculture, he discussed the possibility of both internal and external strains, he referred to the structure of society. Drawing on the work of Edward Alsworth Ross, he wrote about Collective Behavior being sparked by a precipitating factor. He also argued that the first organized response might be by those groups who had been organized before the disaster though he perceived they might perform new tasks (See Scanlon 1988).

year later. Prince is cited in the bibliography. He wrote 18 years before LaPiere, 21 years before Sorokin, 26 years before Blumer. Systematic study of disaster was still three decades away.

The one theorist available to Prince was Le Bon, the French scholar, who, influenced by the French revolution, described man - in a crisis - as reverting to his animal state (LeBon 1965, p. 27). Prince cites Le Bon.

On relief, he turned to the works of Byron J. Deacon (1917) and Edward T. Devine (1910) and to the views of his supervisor, F.H. Giddings. All were concerned relief be carefully organized and victims supervised.

Finally, though he, himself, had been present during the explosion, he draws material from Dwight Johnstone, a man he describes as a Dartmouth journalist (Dartmouth is across the harbor for Halifax). Johnstone's manuscript has not been located.

MAN AS A SAVAGE

Like Le Bon, Prince portrays man reverting to the savagery. Instinctive tendencies are buried beneath barriers of civilization, but they are buried alive.... a very thin veneer over the primitive tendencies which held sway for ages.... Catastrophe shatters the unsubstantial veneer... (Prince 1920, p. 50).

Men clambered over the bodies of the dead to get beer in the shattered breweries. Men taking advantage of the flight from the city because of the possibility of another explosion, went into houses and shops and took whatever their thieving figures could lay hold of. Then there were the nightly prowlers among the ruins, who rifled the pockets of the dead and dying, and snatched rings from their fingers... (Prince 1920, p. 50).

Human phenomena which many knew of only hidden away in books stood out so clearly.... there was abundant illustration of hallucination, delusion, primitive instincts... (Prince 1920, pp. 35-36).

There was disintegration of the home and the family - the reproductive system of society - its members helpless to prevent

it. There was the disintegration of the regulation system - government was in perplexity and streets were without patrol.... There was a time when the city ceased to be a city, its citizens a mass of unorganized units - struggling for safety, shelter, covering and bread (Prince 1920, p. 31).

Though Prince was in Halifax, the above material is largely from Johnstone. Perhaps Prince, like others he describes later, was cleaning up the debris at his home, not realizing things were much worse elsewhere. Prince apparently accepted these views. In 1958, in *The Social System*, he again described flight in Halifax.

When rumor spread that another explosion was imminent, the flight impulse reached its zenith.... With blanched faces and bleeding bodies, men, women and children fled from the spectral death they thought was coming (Prince 1958b, p. 120).

Then, after mentioning Le Bon, he described the mob:

Maddened by racial, religious and other irritant, and seized by the tenacious grip of rumor and suggestion, an angry throng may become devoid of all inhibition and, bent on destruction, pillage or slay without hesitation (Prince 1958b, p. 121).

ACCURATE OBSERVATIONS

Once Prince gets to his own observations, he describes quite accurately much of what we now know about disasters. He reports the development from what appeared to be confusion to an organized response.

At first all was confusion (Prince 1920, p. 4).

...the earliest leadership that could be called social, arising from the public itself, was on the part of those who had no family ties.... The others as a rule ran first to their homes to discover if their own families were in danger. From this body in a short while

however many came forward to join the activities of relief (Prince 1920, p. 61).

As already said many of those with no social, family or property ties were among the first to begin relief work. But many of them started early because they were present when the need arose. Many indeed of the uninjured folk at a distance seemed unable to realize the terrible need of the stricken area. In fact owing to the collapse of communication they did not for an appreciable time discover there was an area more stricken than their own and devoted themselves to cleaning up glass and the like (Prince 1920, p. 61).

It was early afternoon, perhaps five hours after the catastrophe, when semblance of cooperative action in rescue work began. Previous to this work had been done in a rapid and random fashion, a single ruin being dug through a second and even a third time.... Thereafter the searchers become parties each of which was detailed to go over a particular area. When a particular section had been covered it was so recorded (Prince 1920, p. 52).

There had been no preparedness. The city possessed not even a paper organization for such a contingency as a sudden disaster... It was late afternoon on the day of the disaster when a tentative plan had been formulated in the City Hall (Prince 1920, p. 64).

He describes convergence.

Catastrophe becomes also the excitant for an unparalleled opening of the springs of generosity.... Halifax specials were on every railroad. Ships brought relief by sea (Prince 1920, p. 57).

Glaziers, drivers, repair men and carpenters came by the train-load, bring their tools, their food and their wages with them. The city's population was increased by thirty-five hundred workmen... (Prince 1920, p. 114).

Seven million, five hundred thousand feet of lumber were soon available.... Food and clothing were soon stacked high... (Prince 1920, p. 114).

He reports flight behavior and continuing rumors.

Scarce was the catastrophe an hour old when the news was flashed that a second explosion was approaching.... Through the crowded streets raced the heralds like prophets of wrath to come. "Flee! Flee! Get into open ground," was the cry.... all instantly joined the precipitant throng like animals before a prairie fire (Prince 1920, p. 30).

The instinct of flight for self preservation was reflected in the reactions of thousands (Prince 1920, p. 40).

People 'lived on edge' for a long period after the disaster. There was a readiness...to respond to rumor.... Twice at least the schools were emptied precipitously and citizens went forth into pell-mell flight (Prince 1920, p. 4).

He reports precautions against looting.

The military placed troops on patrol. Sentries were posted preventing entrance to the ruins to those who were not supplied with a special pass. Orders were issued to shoot any looter trying to escape (Prince 1920, p. 51).

He reports blame and scapegoating.

In Halifax one idea seemed to dominate most minds and clothe itself in the semblance of reality - the expected Germans.... It is no wonder eyes looked upward when there came the crash, and when seeing the strange unusual cloud beheld the Zeppelin of fancy (Prince 1920, p. 37).

German residents of the city were immediately placed under arrest when the disaster occurred (Prince 1920, p. 77).

The clamor for arrests, for the fixing of responsibility for the disaster, and for the meting out of punishment was for a long time in evidence, but never received complete satisfaction (Prince 1920, p. 76).

RECOVERY

He provides a detailed account of recovery.

The telephone system suffered the loss of the entire northern exchange and the harbor cable - broken through ships dragging anchor.... telephone service...resumed... the day after the disaster... (Prince 1920, p. 71).

...wire communication...had been demolished....one was reconstructed within an hour and by the evening of the day of the disaster six direct multiple wires to Montreal, three to St. John and one each to Boston and New York had been established (Prince 1920, p. 71).

...the illumination service was quickly restored. The company was able to give partial light and some service by noon (Prince 1920, p. 71).

...three miles of the main (rail)road were buried in debris, the station wrecked, equipment damaged.... In spite of this...a hospital train was sent out in the early afternoon of disaster day.... On the evening of the day following the first regular train for Montreal left the city (Prince 1920, p. 72).

The banks were open for business the morning following the catastrophe, just as soon as the doors and windows were put in.... all business in the banks went on as usual the day after the explosion (Prince 1920, p. 73).

Gas service was off until December ninth.... On the tenth the services resumed. On the fourteenth, the gas and electric light service became normal (Prince 1920, p. 72).

Prince also reports that though theatres, halls and other buildings were used, church services did not begin for a week. Church attendance was also down. The schools also had problems.

The school system was badly disorganized.... The members of the staff were given over to relief committees, registration, nursing and clothing services. Early in March...nearly all the children in the city could attend classes (Prince 1920, p. 75).

CONFLICT IN RELIEF

Finally, Prince, who states he was active in relief (he is not listed on any relief committee), describes emergent organization, both home grown and imported, and conflict. The first activity was, inevitably, local.

One or two here and one or two there began to prepare the big church halls and other roomy institutional buildings for occupancy, hastily the windows were patched up, the glass swept out, and no sooner had the danger of a second explosion passed, and the rumor of a possible roof reaching the homeless than they began to repair thither. At first each improvised shelter became a miniature clothing and food depot. Then the idea began to spread of taking refugees into such private homes as had fared less badly... It became the thing to do.... Many sheltered upwards of a dozen for weeks or more (Prince 1920, p. 63).

This informal system - major centres in church halls and other public buildings, private relief - did not last. The day after the explosion a relief train arrived from Boston and the Americans took over (they had fortuitously met Canada's prime minister, Sir Robert Borden, in the train yard and went with him to City Hall).

...when Mr. Ratshesky of the Public Safety Committee of the State of Massachusetts came into the room...it was the coming of a friend in need.... Only nine hours later, the Citizens' Relief Committee was ready, and a working plan adopted, and from it came a wonderful system worthy of study by all students of emergency relief. With the coming of the American unit...the systematic relief work may be said to have in reality to begun (Prince 1920, p. 82).

The new system involved very careful checking of individuals, a system which did not sit well with those in need.

...accurate information regarding the present and previous income of cash...previous occupation, amount of losses, resources in savings, insurance...interviews with members of the family...reference calls by social workers upon those who can shed further light on the family situation (Deacon 1917, p. 309).

Prince reported objections to the "detailed investigations...cross examination methods of expert social diagnosticians" (Prince 1920, p. 92). There were also too many volunteers; and resentment against strangers taking over. Prince said better use could have been made of local people who "knew and could interpret the local point of view and method of doing things" (Prince 1920, p. 84). There was also conflict among religions.

The Protestant and the Roman Catholic clergy agreed to cooperate in the registration plans (Prince 1920, p. 84).

...not until January...that the Roman Catholic clergy agreed to cooperate in the registration plans (Prince 1920, p. 83).

There was also lack of cooperation among official committees themselves. Friction and crises arose from time to time which were only stopped short of scandal (Prince 1920, p. 84).

On January 21, the "wonderful system worthy of study" was replaced by a Canadian appointed Federal Relief Commission. People were to be reimbursed for their losses rather than helped on the basis of need. Prince was critical.

Victrolas, L.C. Silk shirts and furbelows multiplied. Merchants' trade grew brisk with 'explosion money'. There seemed to be a temporary exchange of positions by the social classes (Prince 1920, p. 96).

He finally rationalized it as legitimized by war.

What in ordinary times might be condemned might conceivably under these abnormal conditions of war be less morally dangerous (Prince 1920, p. 97).

SOCIAL CHANGE

Prince tried to tie all these things together with his theory of social change. His theory is that society is essentially conservative, that conservatism will go only if there is some sharp jolt (precipitating event) such as a disaster, that if that happens there is a state of fluidity opening the way to social change. Change is not necessarily positive: "the subject may 'fall up' or he may 'fall down'" (Prince 1920, p. 19). But, given catastrophe, change is inevitable.

The point is catastrophe always means social change. There is not always progress. It is well to guard against confusion here (Prince 1920, p. 21).

Halifax is an example of social change and progress.

A completely equipped health care centre has been established including ...pre-natal, pre-school-age, tuberculosis, venereal, eye, ear, nose and throat clinics (Prince 1920, p. 134).

...restaurants and all places where food is exposed for sale are being systematically inspected (Prince 1920, p. 134).

...a clinic for babies was established... The hitherto meager hospital facilities are being established by the building of a maternity hospital and the enlargement of the children's hospital (Prince 1920, p. 135).

There was also a rapid and impressive rebuilding of the harbor though this was surely, despite Prince's theory, a result of war. Halifax was an essential supply port for the war in Europe. It had to be rebuilt. Tonnage shipped from the harbor had increased seven times in the first three years of the war (Bird 1962).

Prince argued the explosion changed the social structure.

The catastrophe smashed through strong walls like cobwebs but it also smashed through fixed traditions, social divisions and old standards, making a rent which would not easily repair. Rich and poor, debutante and chambermaid, official and bell-boy met for the first time as victims of a common calamity (Prince 1920, p. 32).

But he provided evidence the changes were short term.

Then followed requests for change of location in the dormitories, and for changes of seats at the dining tables. As various shelters sprang up, the religious element appeared. Applications came for transfer from Roman Catholic institutions to Protestant...and vice versa. Even the politically congenial were only too ready to segregate when the occasion offered (Prince 1920, p. 64).

Prince cites just two real changes in folkways or mores. Because of the shortage of men, women were hired as street car conductors. Because of the disaster, strict observance of the Sabbath (preventing social, sports or business activity) was relaxed. Even some stores were open on Sunday.

Tom Drabek suggest Prince derived his theory of catastrophe and social change from his research: in short Prince was using grounded theory (Drabek 1986, p. 2). The evidence doesn't support this. Halifax is just one example of change. He also refers to the Triangle fire in New York's garment district, 146 dead, 70 seriously injured (Clevely 1958); the Chicago fire; and especially to the Titanic. All led to social change - to labor laws, to new fire regulations, to improvements in shipping safety. Prince repeated the theme in 1958b.

Under the stimulus of catastrophe, necessity becomes the mother of invention.... Thus public health in England is attributed to the cholera visitations; in America to the yellow fever epidemics. City planning took its rise from the Chicago fire; commission government from the Galveston flood; factory legislation from the Manchester fever; while the wreck of the Titanic reduced for all time the hazards of the sea (Prince 1958b, p. 110).

The underlying basis for his thesis is actually theological. He believed Christ's death on the cross showed salvation comes from suffering. He linked the idea that suffering is necessary for salvation to the thesis that catastrophe leads to social change, adversity leads to progress.

There are many lessons man never will have learned unless he be taught in the school of pain.... a world without suffering would be a world without nobility (Excerpts from Prince's "Titanic" sermon).

IMPACT

Since Prince wrote before scholars such as Park and Burgess (1964), Lapiere (1938), Smelser (1982), Lang and Lang (1969), etc. one might have thought he would have influenced their work. They were aware of his thesis but they rarely quote it.

Prince had described social change as:

...those rapid mutations which accompany sudden interferences with the equilibrium of society, break up the status-quo, dissipate mental inertia and overturn other tendencies resistant to structural modification (Prince 1920, p. 15).

He was explicit that such changes could come from within the system (internal strains) or without. And he was explicit that:

...however important the accumulation of impulses toward social transformation may be, there is often a single 'precipitating factor' which acts as the 'igniting spark'... (Prince 1920, p. 16).

...fluidity is fundamental to social change.... when there comes the shattering of the matrix of custom by catastrophe, then mores are broken up and scattered right and left. Fluidity is accomplished at a stroke. There comes a sudden chance for permanent social change (Prince 1920, pp. 19-20).

It sounds very like Blumer or Sorokin.

Calamities...disrupt the existing network of social relationships and make the social structure chaotic, fluid... (Sorokin 1942, p. 107).

This fluid...state affords a favorable ground for the swift transformation of social institutions - for the emergence of radically different social forms... (Sorokin 1942, pp. 120-121).

Although neither Sorokin nor others acknowledged Prince's observations, he was not entirely neglected. Lapiere credits him with "...the most exact and complete record available of prolonged and widespread panic behavior" (Lapiere 1938, p. 460). Carr (1932) draws on him in his article on social change. Form and Nosow (1958) cite him repeatedly noting that what they found had been first reported by Prince. Barton notes that the hostility to strangers first reported by Prince has been noticed repeatedly (Barton 1970, p. 298). Bates and Peacock examine his basic thesis - catastrophe leads to social change - and conclude it is still not proven (Dynes et al. 1987).

What about Prince's specific observations - on convergence, scapegoating, flight behavior, looting? He has been largely overlooked. Fritz and Mathewson (1957) don't cite Prince in their classic work. Danzig, Thayer and Galanter (1958) don't mention him in their study of "The Effects of a Threatening Rumor on a Disaster-Stricken City." Bucher (1957) doesn't mention him when she reports on blame and hostility. Velpert and Lee (1943) ignore him when they discuss scapegoating.

A few do mention him. Dynes (1970) mentions Prince in *Organized Behavior in Disaster* though he confines the reference to problems with the relief structure. Quarantelli (1953) mentions him in his thesis in reference to flight behavior and continuing alarm. Drabek (1986) starts with Prince in his overview of the literature of Sociology.

But the most detailed accounts of Prince can be found in Dacey and Kunreuther's *The Economics of Natural Disaster*.

Among the few studies discussing far-reaching changes, the Samuel H. Prince example of the Halifax explosion is perhaps the most thorough (Dacey and Kunreuther 1969, p. 169).

One place he also is mentioned - though inaccurately - is in discussion of role abandonment (Killian, 1952). It's now accepted persons in responsible positions won't leave them in time of crisis even if there are strong family ties (Quarantelli and Dynes, 1972). Prince has been cited as being in conflict with that conclusion. Barton (1970, p. 152), for example, states that Prince gives examples of "role abandonment." Janis (1951) also reports:

In the Halifax disaster, according to Prince, the only people who engaged in rescue work were visitors to the city and local residents with no social or family ties. The others generally ran first to their homes to check on safety of their families (Janis 1951, p. 217).

Mileti, Drabek and Haas (1975) appears to accept the Barton thesis as well. In reporting on the Netherlands floods they state:

The choice of most men was to be with their families rather than fulfilling the tasks which they should have done as members on another group (Mileti, Drabek and Haas 1975, p. 67).

Then they give Prince as a reference.

It is clear where Barton and Janis got this idea. Prince does report of men going first to their families, but it's not true that Prince describes role abandonment. Those who fled or checked on their families had no disaster related duties. Those who did stayed on the job.

The firemen, too, were a social group which largely remained organized....Their chief and deputy chief had been killed....in spite of the wild exodus when the alarm of a second explosion spread, these men remained at their posts (Prince 1920, p. 60).

A telegraph operator at the cost of his life stuck to his key, sent a warning message over the line and stopped an incoming train just in the nick of time (Prince 1920, p. 56).

For the flooding of the power magazine in the navel year an entire battery volunteered.... Longshoremen...fully realizing their impending danger...used what precious minutes of life remained them to protect their own ships' explosives from ignition (Prince 1920, p. 56).

Prince makes one mention of persons fleeing their place of work: the crew of the Mount Blanc "lowered away the boats, rowed like madmen to the nearest shore..and 'scattered for the woods'" (Prince 1920, p. 40).

WHY THE LACK OF IMPACT

When Prince repeated his theory of catastrophe and social change in 1958, it was 38 years since his thesis was published. Yet the field of Sociology of Disaster was still just opening up. Some research had been done in Chicago and formation of the Disaster Research Center at Ohio

State University was just five years away. But until this research in Chicago and in Columbus developed, it was not possible to tell how well Prince portrayed the reality of disaster. He was a man decades before his time. It was not surprising he did not gain wide acceptance.

Second, when Prince did his research all he had to go on was myths - from Le Bon, from the journalistic accounts of disaster. Not surprisingly, he, to some extent, accepted those myths. Even when he reported what he saw as distinct from he thought he was supposed to see, he did this without comment. Like the persons Dennis Wenger and his colleagues interviewed, (Wenger et al., 1985) he perceived his findings as atypical rather than evidence the myths were inaccurate.

There are other reasons why Prince is not well known. He was a Canadian. His career took him well away from the mainstream of Sociology in the United States. He did not stay active in the field; his second published work on Sociology was written when he was 72.

In addition, Prince's forte was recovery and relief not the emergency period. Later research focused on the emergency period. Not until Anderson (1966) studied long-term effects of disaster in Alaska did Prince's work become more relevant. And Anderson, like Dacey and Kunreuther (1969), did give Prince credit for what he had done.

Prince was aware of his limitations. In his thesis, he states he is the first and he calls for more research, indeed for more quick response research, the sort that has become the trademark of the Disaster Research Center at Delaware and the Emergency Communications Research Unit at Carleton University in Canada.

...we must learn well when the abnormal reveals itself in great tragedies and when social processes are seen magnified by a thousand diameters (Prince 1920, p. 33).

But it must be realized that the data of greatest value is left sometimes unrecorded and fades rapidly from the special memory. Investigation is needed immediately after the event (Prince 1920, p. 22).

He knew it would take time for his findings to be tested.

The whole subject...is a virgin field in Sociology. Knowledge will grow scientific only after the most faithful examination of many catastrophes.... this little volume on Halifax is offered as a beginning. It is hoped that the many inadequacies of treatment will receive the generous allowances permitted a pioneer (Prince 1920, p. 24).

REFERENCES

- Anderson, William. 1966. "Disasters and Organizational Change: A Study of Some of the Long-Term Consequences of the March 27, 1964 Alaska Earthquake" Ph.D. Dissertation. Columbus, Ohio: Department of Sociology, Ohio State University.
- _____. 1978. "Social Science Disaster Research in the United States." Paper presented at the World Congress of Sociology in Uppsala, Sweden.
- Barton, Allen H. 1970. *Communities in Disaster*. Garden City, New York: Doubleday & Company, Inc.
- Bird, Michael. 1962. *The Town That Died*. Toronto Ontario, Canada: McGraw-Hill Ryerson Limited.
- Bucher, Rue. 1957. "Blame and Hostility in Disaster." *The American Journal of Sociology* 62 (March): 467-475.
- Carr, Lowell Julliard. 1932. "Disaster and the Sequence Pattern Concept of Social Change." *American Journal of Sociology* 38: 207-210.
- Cleavelly, Hugh. 1958. *Famous Fires*. New York: The John Day Company.
- Dacey, Douglas C. and Howard Kunreuther. 1969. *The Economics of Natural Disasters*. Toronto: Collier Macmillan Canada, Ltd.
- Danzig, Elliott R., Paul M. Thayer and Lila R. Galanter. 1958. "The Effects of a Threatening Rumor on a Disaster-Stricken Community." Washington D.C.: National Academy of Sciences - National Research Council.
- Deacon, J. Byron. 1917. "When the City Burns." *Survey* (December 15): 302-310.
- Devine, Edward T. 1910. *The Principles of Relief*. New York: The Macmillan Company.
- Drabek, Thomas E. 1986. *Human System Responses to Disaster: An Inventory of Sociological Findings*. New York: Springer-Verlag.

- Dynes, Russell R. 1970. *Organized Behavior in Disaster*. Lexington, Massachusetts: D.C. Heath and Company.
- Dynes, Russell R., Bruna DeMarchi and Carlo Pelanda (eds.). 1987. *Sociology of Disasters*. Milano, Italy: Franco Angelia.
- Form, William H. and Sigmund Nosow. 1958. *Community in Disaster*. New York: Harper & Brothers, Publishers.
- Fritz, Charles and T.H. Mathewson. 1957. "Convergence Behavior in Disaster." Washington D.C.: National Academy of Sciences - National Research Council.
- Giddings, Franklin Henry. 1924. *The Scientific Study of Human Society*. Chapel Hill, North Carolina: The University of North Carolina Press.
- Janis, J.L. 1951. *Air War and Emotional Stress*. New York: McGraw-Hill Book Company, Inc.
- Killian, Lewis M. 1952. "The Significance of Multiple-Group Membership in Disaster." *The American Journal of Sociology* 57 (January): 309-314.
- Klapp, Orrin B. 1972. *Currents of Unrest*. New York: Holt, Rinehart and Winston, Inc.
- Lang, Kurt and Gladys Engel Lang. 1969. *Collective Dynamics*. New York: Thomas Y. Crowell Company.
- LaPiere, Richard T. 1938. *Collective Behavior*. New York: McGraw-Hill Book Company, Inc.
- Le Bon, Gustay. 1965. *The Crowd*. New York: The Viking Press.
- Mileti, Dennis S., Thomas E. Drabek and J. Eugene Haas. 1975. *Human Systems in Extreme Environments: A Sociological Perspective*. Boulder, Colorado: The University of Colorado.
- Park, Robert E. and Ernest W. Burgess. 1964. *Introduction to the Science of Sociology*. Chicago, Illinois: The University of Chicago Press.
- Perry, Joseph B. and M.D. Pugh. 1978. *Collective Behavior*. St. Paul, Minnesota: West Publishing Company.
- Prince, Samuel Henry. 1912. "Ship's Bell Told Passing Over The Ocean Grave." *The Morning Chronicle* (May 24).
- _____. 1920. *Catastrophe and Social Change*. New York: Columbia University.
- _____. 1958a. *The Dykes of Civilization*. Toronto Ontario, Canada: Anglican Church of Canada.

- _____. 1958b. *The Social System*. Toronto Ontario, Canada: The Ryerson Press.
- Quarantelli, E.L. 1953. "A Study of Panic: Its Nature, Types and Conditions." Thesis. Chicago, Illinois: University of Chicago.
- Quarantelli, E.L. and Russell R. Dynes. 1972. "When Disaster Strikes (It Isn't Much What You've Heard and Read About)" *Psychology Today* 5 (February): 68-70.
- Scanlon, Joseph. 1988. "From the Titanic to the Stars." Paper presented to American Sociological Association, Atlanta, Georgia, August.
- Smelser, Neil. 1982. *Theory of Collective Behavior*. New York: The Free Press.
- Sorokin, Pitrim. 1942. *Man and Society in Calamity*. Westwood: Greenwood Press, Publishers.
- The Morning Chronicle. 1912. "Montmagny Is Returning To Port." (May 21).
- Turner, Ralph and Lewis Killian. 1972. *Collective Behavior*. Englewood Cliffs, New Jersey: Prentice-Hall, Inc.
- Velpert, Helene Rani and George E. Lee. 1943. "The Cocoanut Grove Fire: A Study in Scapegoating." *Journal of Abnormal and Social Psychology*: 138-152.
- Wenger, Dennis E., Thomas F. James and Charles F. Faupel. 1985. *Disaster Beliefs and Emergency Planning*. New York: Irvington Publishers, Inc.