

University of Delaware
Disaster Research Center

PRELIMINARY PAPER #347

THE INVISIBLE DEAD IN THE
WORLD TRADE CENTER ATTACK:
ANOTHER CASE STUDY OF HOW
SOCIAL FACTORS AFFECT AND
DISTORT DISASTER STATISTICS

B. E. Aguirre
E. L. Quarantelli

2005

**The Invisible Dead in the World Trade Center Attack: Another Case Study of How
Social Factors Affect and Distort Disaster Statistics**

B. E. Aguirre[♠]

And

E. L. Quarantelli

**Disaster Research Center
University of Delaware
Newark, Delaware 19716**

[♠] The authors would like to acknowledge, with thanks, Joel Best's comments and suggestions to improve the manuscript. All remaining shortcomings are their own. All correspondence should be addressed to Aguirre at Aguirre@

The Invisible Dead in the World Trade Center Attack: Another Case Study of How Social Factors Affect and Distort Disaster Statistics

Abstract

This essay uses information from Latino immigrants who were victims in the World Trade Center (WTC) to illustrate the operation of counting as a central, theoretical issue. It examines the present day emphases on the operation of organizations, their lack of coordination, and fraud, which are used to explain the lack of validity of disaster mortality statistics. It complements these explanations with Alfred Schutz's phenomenological perspective, examining the social categories and understandings that were used to create the official list of the dead by the City of New York, the link of the official list with receipt of money from charities, and the work of Asociación Tepeyac de New York in developing an unofficial list of Latino victims some of whom were excluded from the official list. Results show that the Mexican mass media exaggerated the numbers of Mexican dead by a ratio of 15 to 1. Contrary to mass media reports, the Asociación also assisted people who were included in the official count of the dead. The list of the Asociación is overwhelmingly a list of male names, but neither gender has a greater proportion of exclusion from the official list. Exclusion from the official list occurs more often to Mexican men recently arrived in the country and earning a living in the underground economy of Lower Manhattan. A significantly greater proportion of Mexican victims are excluded from the official list if compared to Dominicans and Puerto Ricans. The social invisibility of some of the Latino victims is not caused solely by structural factors such as the operation of bureaucracies and systemic discrimination, nor is solely the effect of the categories used to organize the count of the dead; it is also a function of the social behavior of Latino immigrants and of their surviving kin during the course of their immigration and incorporation into the United States. The paper concludes with some suggestions about how statistics on disaster deaths can be improved.

The Invisible Dead in the World Trade Center Attack: Another Case Study of How Social Factors Affect and Distort Disaster Statistics

Preliminaries

How many people die in a specific disaster? At one level, it might seem simple enough to get an accurate count given the usual presence of dead bodies and body parts. However, this paper shows that pre-impact social factors, as well as post impact technical and social organizational arrangements insure that any fatalities statistics that can be calculated will be very proximate at best. Disaster related statistics--even death figures--are inevitably subject to inaccuracies. In part, this is due to the chaos of any disaster, the difficulties of collecting data, the counting practices, and the deliberate biases intending to maximize or minimize the effects. It is also the result of the social invisibility of marginalized communities that are often victims of disasters. Alfred Schutz's insights about the logic of daily life (1970; Natanson, 1970; 1973, XXX-XLVII) reminds us that to be counted as a victim a person must be noticed, often as a result of membership in the community and with access to the instrumentalities of membership in it; this phenomenological standing is often absent in strangers, newly arrived people who occupy marginal and quasi legal statuses (Schutz, 1970:79-95). Invisibility is both caused by power differentials and discriminatory practices that impact these categories of people as well as the doubts and self exclusions that are inherent in the process of social incorporation in which some newcomers and minority members must adapt to the myriad aspects of a new way of life---even as those constituting it perceive it as normal, as not requiring notice or change, part of their "world of the natural attitude."

Statistics as Social Constructions

Statistics are cultural objects made up of unquestioned, taken for granted assumptions about the social world they measure, freezing it as it were in the shape of numbers. To understand and improve them it is necessary to examine their social construction, which does not imply in all instances the detection of conscious distortions on the part of researchers or government officials, but rather the much more sociologically interesting problem of understanding the different assumptions and decisions or lack thereof taken by different categories of people

such as officials and in-group and out-group members regarding what is going on, how to adjust to it, and whether or not to enact the social actions that would increase the probability of being included in the count of whatever it is that is being counted. It is also necessary to understand the development of the relevant definitions of entities to be measured and the appropriate methodologies used to acquire and tabulate the information (Quarantelli, 2001). Until now, research on the validity of disaster mortality statistics has not considered these phenomenological issues, a matter we wish to illustrate with the uncounted Latino dead in the World Trade Center attack.¹

The phenomenological perspective helps us bring together many findings from a number of different studies that until now have not been brought together. The index of recorded victims of the 1900 hurricane that devastated Galveston, Texas contains 5,132 names (www.gthcenter.org). This figure is most certainly an undercount of close to 3,000 victims of the storm. At the time Galveston was a major vacation spot, and an unknown number of out-of-town vacationers stayed

¹ Whether the same factors (technical, social, organizational) are operative for injury and economic statistics as are applicable for deaths is unknown. What is fairly certain, however, is that the validity of statistics on disaster injuries, economic losses, and mental health are more problematic than for fatalities (Cochrane and Howe, 1993; Munich Re., 1982). This is the case because there is much greater agreement on what constitutes death than on these other outcomes, or as Kitsuse and Cicourel (1963) phrased it, agreement on the “social conduct which produces the behavior.” There are no accurate counts of the injured in the WTC attack. The Centers for Disease Control and Prevention (Boodran et al., 2002) reported data from emergency departments and inpatient medical records in four hospitals closest to the WTC and another hospital with a burn treatment center in Manhattan. Of those that came to the hospitals, 790 were treated within 48 hours; approximately 50% were treated within 7 hours of the attack. From September 11 to the 13th, 1,688 emergency department patients received care in the five hospitals; 1,103 (65%) were survivors treated for injuries or illnesses related to the attack. There was no information for 96 patients. While valuable, these numbers are underestimates of the true morbidity associated with the WTC event, for they are limited to a few nearby hospitals, for a very short period of time. Indeed, the widespread respiratory illnesses among those exposed to the air pollution caused by the attack constitute a long-term sequel that is still unfolding (Centers for Disease Control and Prevention, 2002). Here as elsewhere in large-scale disasters, there is a recurrent pattern for victims coming to hospitals for treatment: first come those who have minor injuries, followed by those who are more severely injured, who in turn are followed by those who are rescued, with injured rescue workers coming last. What constitutes an injury is not easy to answer, for there are major differences between those that need to be hospitalized and those that need emergency room treatment or are treated by private physicians, in clinics, or at home, and there is always the problem of whether those injured in the aftermath of a disaster while undertaking response and recovery activities should be counted as being “injured” from the disaster as well as its long term health consequences (Pollander and Rand, 1989). Drabek (1968), in an earlier DRC study of the October 31, 1963 explosion at the Coliseum of the Indiana State Fairgrounds, found that many of the 374 people who received hospital treatment for their injuries drove for many miles outside the metropolitan area before receiving aid in hospitals because they assumed that the local hospitals would be overwhelmed by those more severely injured by the explosion.

in the small beach cottages that were destroyed; likewise, the Black community in the area south of Broadway was totally destroyed. Strangers and marginalized members of the community accounted for a very large proportion of the dead that are excluded from the register (Greene, personal communication). During decades, the death toll from the San Francisco earthquake of 1906 was almost always stated to be around 750. However, in a very careful reanalysis done eight decades later, Hansen and Condon (1989) found that the death total was very likely to have been more than 3,000. Minority group members who died such as Chinese immigrants appear to have been undercounted. In Canada, the 1917 massive explosion in Halifax Harbor destroyed whole areas of the towns of Halifax and Dartmouth, Nova Scotia, among them the Mi'kmaq aborigine community, which totally disappeared afterwards. Due to its marginalized status and faulty census information about them, it has never been known how many members of this community died in the explosion (Burke, 1994: 51). Yet another case in point is the Florida hurricane of 1928 that impacted the Everglades towns of Belle Glade, Pahokee, and South Bay. Approximately 2,400 to 3,000 people died, rendering it one of the deadliest disasters on record. Many of the victims were foreign born agricultural workers without social connections who were not counted; Mykle writes (2002: 212) that "officials worked very hard to keep the death count as low as possible" so as not to scare the tourists and spoil the land speculation then going on in the state. In another context, one of the authors (Quarantelli), in a discussion with researchers about the worst disaster ever to hit Australia, was told that a typhoon occurring many years ago was probably the best candidate, although the severity of the event was underestimated because statistics excluded the losses of Aboriginal communities in the impacted area; at the time aborigines were not counted in censuses---they were only given Australian citizenship in 1967. Elsewhere, in Guadalajara, Mexico, the gasoline explosion of 1993 impacted the bus station and other areas in the city peopled by transient rural workers. They were mostly unrecognized as dead (Aguirre et al., 1995). For almost the same reasons, to this day the death toll in Hiroshima is estimated to have been 70,000 or 200,000 or even more. More recently, the economic and social impact of the WTC terrorist attack on the family system of

the Asian and primarily Chinese community of lower Manhattan has gone largely unrecognized and unstudied.

Disasters that wipe out not only persons but also others who would report on their disappearance also bring about the social invisibility of victims, a matter that should weigh heavily in any attempt to ascertain the number of deaths caused by the December 26, 2004 tsunami in southern Asia. There is reason to think that the Western tourists who were killed were much more accurately counted than the natives, a matter that should call for further examination; while they were strangers they were also, relative to natives, elite strangers with powerful constituencies claiming for their identification. Srey Sharp (<http://www.mekong.net/cambodia>) opines on the genocide conducted by the Pol Pot regime in Cambodia, that “the number will (n)ever be established with any degree of certainty”--- an excess of death of 1.7 million that is most probably an underestimation, based on “applying death rates for various groups to the population as a whole...calculated by interviewing survivors and determining the number of family members who died during the period in question.” Mortality, when heavily clustered within particular families, renders "random" samples of survivors unrepresentative of the population as it existed before the disaster, for “families with more survivors are likely to be over-represented in the surveys” (Sharp, personal communication). Victims who are members of small communities may in fact become invisible to the counters of the dead in the aftermath of major catastrophes if their families and other social ties to their communities are also destroyed. At the extreme, the communities themselves disappear.

In these and many other disasters that could be mentioned, despite widespread agreement on what constitutes death whole categories of people in a real sense do not exist in the records. This is also true of some victims in the September 11, 2001 World Trade Center attack, a matter we examine next. But first, we review the state of our knowledge regarding the lack of reliability of disaster statistics, reflecting a public administration approach that emphasizes the operation of organizations, the lack of procedural agreements among them, and dishonest practices. This is followed by what is known about the counting of the

dead in the WTC disaster, in which we try to indicate the value of Schutz's insights.

State of Our Knowledge.

The development of society and the modern state has increased the ability to prepare, respond, and mitigate the effects of disasters. With it have come more complex and powerful bureaucracies managing the societal response and thus the potential for more accurate counts of the effects of disasters. It is thus unsurprising that statistics abound with respect to disasters generally and/or for specific disasters such as the WTC terrorist incidents. It is almost unheard of in the reporting of a major disaster not to be presented with numbers on deaths, casualties, and property and economic losses as well as figures on mental ill health produced by the trauma. Similarly, there are many quantitative summaries of losses created by disasters in general (e.g. the annual World Disasters Report, International Federation of Red Cross and Crescent Societies, 2000) and for specific types of disaster agents (see, chapters in Ingleton, 1999). Numerical estimates abound in the research, policy (see for example Subcommittee on Disaster Reduction, 2003, 5-9), professional and operational literature, as well as in journalistic news reports. The push for numbers is understandable, for there is considerable pressure to quantify data in the aftermath of disasters. The mass media demands numbers and figures to construct the events for the public (Best, 2001; 2004), and under the dominant aegis of rational principles and quantifiable models legislators and lending agencies overwhelmingly peopled by economists and financial experts ask how any proposed program fits into a cost-benefits framework (FEMA, 1997, p. 2; Gilbert and Kreimer, 1999, p. 3). The unexamined and false assumption that is often made is that the data is reasonably valid.

There are many reasons for the lack of reliability of statistics on death in disasters (Kitsuse and Cicourel, 1963). The problem has been recognized for many years by scientists and health practitioners (see the reports of the committee of the Division of Medical Sciences of the National Academy of the Sciences, Commission on Emergency Medical Services, 1966, p. 29; the U.S. National Committee for the Decade for Natural Disaster Reduction of the National Academy of Sciences, 1991, p. 4; the Board on Natural Disasters, 1999a, 1999b).

Rubin and her colleagues (1986, pp. 5-9; see also Tubbesing, 1979; Gordon, 1982) documented similar concerns among social scientists and called for a review of data collection efforts. The lack of comparability is due in part by the way different agencies collect and aggregate disaster data, which often lack adequate conceptualizations about what is a disaster (Quarantelli, 1998) as well as consensus among researchers and others about other central categories such as “hazards,” and “risk.” For example, the Federal Emergency Management Agency (FEMA) and the American Red Cross use different definitions of disasters and different parameters for time, resulting in disparate mortality statistics: Red Cross data on death, injury and damage is collected by fiscal year while FEMA’s is collected by calendar year. A particularly egregious example is the U.S. Storm Data statistics on climate hazards, which only includes events producing estimates of damage of \$50,000 and higher; inaccurately attributes the impacts of multi hazards events to the first hazard it lists; misstates the population experiencing the hazard by using a single entry in the record and referencing it to a single county when in fact multiple counties are often impacted, and groups cost estimates into broad categories, thus limiting the type of statistical analysis that can be performed with it (see the problems this causes in Mileti, 1999, 65-104).²

As in the United States, the European databases on hazards and disasters are maintained by a number of different organizations, and they lack agreed definitions and protocols, so that “none of the existing databases currently provides a satisfactory basis for the global analysis of the occurrence and impact

² As shown in the volume edited by Mileti (1999), there are important inaccuracies, both under and over counts, in the Storm Data during the 1975 to 1994 period. Storm Data reported 26 deaths and 151 injuries from dust storms nationwide. However, a single dust storm in Fresno, California in 1991 killed 17 and injured 135 (p. 70); claimed three deaths and two injuries caused by landslides but others estimate that an average of 25 to 50 people died in landslides annually during the period of the reassessment (p. 87); that there were 1600 deaths from floods during the same time span even as the Mileti’s colleagues estimated the deaths at between 2300 and 2,310 (p. 72); counted 29 fog-related deaths during 1975-1994 even though the National Highway Traffic Safety Administration reported 6,804 fog-related deaths in traffic accidents during 1982-1991 (p. 73); reported 19 deaths and 598 injuries from hail during the period, much higher numbers than the numbers of death (6) and injuries (294) generated by the Storm Prediction Center (p. 74); that there were 674 heat-related deaths for the 20-year period, which is certainly an undercount, for just one heat event in Missouri in 1980 produced 295 deaths (p. 75); placed the number of lightning deaths and injuries during the period at 49 and 440, respectively, much lower than the 7,741 deaths and 6,158 injuries reported by the National Lightning Safety Institute and the National Climatic Data Center (p. 80). Reflecting on these and other problems with disaster statistics, the subcommittee wrote “...the truth is that losses to the United States and its people from natural and technological hazards are not really known with much certainty” (p. 102).

of the principal disaster types (Organization for Economic Co-Operation and Development , 1994, p. 47; for the best source for global statistics see Sapir and Misson, 1992).” Compounding the problem are changes in governmental definitions and community boundaries. In an example with many counterparts in the U.S. and elsewhere, Fuchs et al. (1994, p. 42) note that for Bangkok and cities in Thailand many changes have occurred between 1970 and 1990 that create significant problems of comparability across time and space. Thus, they advise “coding and tabulating urban and rural data in terms of small spatial or statistical units” so that these small units can be either added or subtracted to approximate either previous or present boundaries. As these and other scholars indicate, without meaningful baseline data it is all but impossible to estimate what might be lost and saved by appropriate measures as well as what has been lost and has to be restored.

It is also true that at times the statistics are purposefully misstated. Thus, many of the figures advanced especially for technological disasters and increasingly for natural disasters, are provided by interest and advocacy groups that are usually interested in making the situation look worse than it actually is as would be measured by less partisan-based organizations. On balance, for a variety of reasons, it is very likely that most of the quantitative figures that are produced in the U.S. will overstate deaths, injuries, economic losses, and even other presumed associated consequences of disasters, such as the amount of looting and criminal behavior that occurs, number and extent of actual volunteering, longer-run effects such as divorce rates, and persistence of psychological problems. This also occurs internationally, for governments at times overstate the impact of disasters to induce foreign assistance in the aftermath of major disasters. Albaladejo (1993, p. 41), reflecting on his long professional involvement in World Bank efforts at international development, writes:

“... Problems of background knowledge and observation may render most (disaster loss) estimates quite inaccurate ... Apart from technical deficiencies, there are also distortions introduced by the local or national government, reflecting their vested interest in profiting from foreign assistance, by magnifying all categories of loss, especially death tolls, so as to elicit a higher inflow of response resources, less pressure from international creditors, and better longer-term borrowing conditions.”

Olson et al. (1999) study of disasters in the Dominican Republic, Honduras and Nicaragua scrutinizes the statistics cited in governmental reports and concludes that despite the official claims no one will ever know how many people died in the Dominican Republic, whether it was just several hundred or several thousand. They conclude that the official casualty figures for Honduras of 6,600 dead and 8,052 missing were in all likelihood highly exaggerated if not deliberately false. Finally, for Nicaragua, the reported total of 800 deaths was probably correct, but resulted less from the direct impact of Hurricane Mitch than from a collapse in the Casitas volcano and downstream flash floods (Olson et al., 1999, p. 48).

The aforementioned emphases on the operation of organizations, their lack of coordination, and fraud, to explain the problem with disaster statistics, important as they are, do not go far enough in our view. The lack of reliability of disaster statistics is also a function of the constitution of reality for the people that create the statistics, the people that are included in them, and those that are left out. We need to understand the taken for granted features of the common sense world of these social actors and how these features get reflected in the statistical series. We turn to such an undertaking next.

Latinos in the WTC

Constructing the Official List. In view of the above-mentioned difficulties so common in major disasters, it should be unsurprising that there is no final answer to the question of how many persons died in the 2001 WTC terrorist attack in New York City (NYC). The WTC represented a sort of apotheosis of high-cost recovery, carried out under intense scrutiny, with efforts to identify every recovered body part. Even under these circumstances, however, there is some evidence that victims have gone uncounted despite official claims to the contrary (Feinberg, 2005). The figures have changed dramatically in the aftermath of the incident. Two weeks after the attack the figures calculated by NYC stood at 6,886. Eventually, as missing persons were located and duplications and fraudulent claims were identified, the number pared down to 2,792, then to 2,752, most recently to 2,749, but even this number is not certain, for close to 1,220 have court-issued death certificates but their remains cannot be found. Close to 80

percent of the certified dead are males; about one third are between the ages of 30 and 44; close to half (43%) were NYC residents.

Initially, the New York Police Department (NYPD), with the assistance of the Port Authority of New York and New Jersey and NYC's examiner's office, was in charge of the count. It involved the work of close to 200 police officers that tried to verify deaths using standard police procedures such as the identification of human remains. It took too long and their count did not agree with others using different methods. By the middle of November 2001 the Giuliani administration decided to include in the official count missing persons, who were then issued death certificates by the courts upon the request of their relatives (Cardwell, 2001; see also <http://www.ci.nyc.ny.us/html/doh/html/public/press02/pr19-418.html>).

Volunteers from the American Bar Association, the Association of the Bar of the City of New York, New York County Lawyers Association, and other lawyers assisted families of victims. NYPD made the death certificate forms available to the public. Once these forms were filled out, the courts would decide whether to grant the petitions. If the courts granted them, then the Chief Medical Examiner would issue the death certificates that would be officially recorded in the city's archives by the Department of Health (www.rvminc.com). Two affidavits were needed, one providing information about the missing persons; the other had to be filled out by their employers (Borakove, 2001). To fill out the first affidavit, the claimant (spouse, children, and parents) had to show proof of his or her relationship with the missing person such as marriage and birth certificates as well as their photo identification such as driving licenses and passports. The affidavit form requested information about the victim's residence, whether or not she or he had served in the U.S. armed forces, marital status, birthplace, date of birth, race, ancestry, social security, usual occupation, education, name of surviving spouse and children, and the name of the parents of the victim. The second affidavit required the employer to give the victim's social security number and to declare that the person was working at their firm in the WTC complex or environs on September 11th and was missing and could not be located.

Inclusion in the official list was thus a complex process which represented an extension, under extraordinary circumstances, in the press for time, of standard arrangements and reasoning for the handling of the dead in U.S., a set of relevancies and typifications that people used in the aftermath of the disaster (Schutz, 1970: 111-122). The official list was created through the use of these common instrumentalities for living in such society, such as photo identifications, social security numbers and an established occupational identity, as well as the appropriate stock of knowledge about the society among the families of the victims. It quickly became for these members of the society a part of the newly created taken for granted features of their social world, not worthy of questioning and examination, an example of Schutz's *époche* of the natural attitude. For most of the families of the victims it worked. They were able to obtain the death certificates that were necessary to apply for financial compensation and assistance as well as to carry out the other practical matters associated with the death of a family member in the society, such as the distribution of inheritance. We hypothesize however, that this was not the case for marginalized people such as homeless folks in the subway tunnels beneath WTC without surviving family members and organized advocates speaking for them, as well as for some of the families of undocumented non-members of the society who had recently arrived in NYC; the process was not part of their horizons of action, and it had the effect of discouraging the application for death certificates from these families of victims. Many of them resided outside the country, lacked the language skills, the required mental map of the city to get around it, the contacts, the relevant information, and many if not all of the documents that were needed; people who were unfamiliar with and fearful of the operations of mainstream institutions such as the criminal justice system and the courts.

Money. The count of the dead at the WTC very quickly became linked to the count of money, for the outpouring of sympathy and assistance from the American people for the victims and their families of this disaster was unparalleled in its scope. As this assistance came in it became important to establish the criteria that would be used to dispense it. Two main categories of funds operated side by side with federal programs such as the Federal Emergency

Management Agency's disaster programs for United States citizens and Qualified Aliens victims' assistance that required social security numbers as a criterion for receipt of federal aid (for a list of the funds that operated in the aftermath of the 9.11 WTC incident see http://www.nyc.gov/html/nypd/html/nypd_wtc_emerg.html). One category of funds was made up of general charity organizations and funds that assisted all in need irrespective of nationality and immigration status and documentation such as the American Red Cross, United Way's Displaced Workers Fund, Catholic Charities, and Safe Horizon, the main organization distributing assistance from the September 11 Fund. The second category was made up of specific objective funds, such as the Twin Towers Fund established by Rudolph W. Giuliani to "ensure that the generous outpouring of support for the families of New York's uniformed services heroes affected by the disaster of September 11, 2001 would be coordinated, responsive, and accountable" (webmaster@twintowersfund.org). Ironically, the emergence of the specific objective victim fund created difficulties with the Internal Revenue Service, which stipulates that tax-exempt charities can only help people in financial difficulties and demonstrated need. Many of the victims' families for whom they were created, particularly families of fire and police personnel that died at the WTC, had received ample financial assistance from pension and death benefits. Eventually, this was resolved by an Internal Revenue Service decision to exempt these WTC charities from the criterion of need (Knight Ridder, 2001; Henriques and Barstow, 2001).

Another important effort to compensate the families of victims was the September 11th Victim Compensation Fund of 2001 created by the U.S. Congress in December of 2001 (Feinberg, 2005; www.pbs.org/newshour/terrorism/ata/compensation_rule.html). It defined as eligible to receive compensation (paraphrase):

(I) Individuals (other than the terrorists) aboard American Airlines flights 11 and 77 and United Airlines flights 93 and 175; who were "present at" the World Trade Center, the Pentagon, or the site of the aircraft crash at Shanksville, Pennsylvania at the time or in the immediate aftermath of the crashes; or personal representatives of deceased individuals who would otherwise be eligible. Moreover, to be eligible for an award, an individual must have suffered physical harm or death as a result of one of the terrorist-related air crashes.

Eligibility in this federal program was based on the ability of claimants to satisfy the terms "present at the site," "immediate aftermath," "physical harm," and "personal representative." None of these criteria would exclude the families of undocumented immigrants who died at the WTC. However, the program was again based on the unstated, taken for granted assumption that the victims had legally binding social identities, social histories, and documents generated in the course of unproblematic interactions with the institutions of the society, but that are inaccessible to most undocumented immigrants. To qualify for compensation, the claimants had to provide a death certificate or similar official documentation--in other words, the victim had to be in the official list of NYC; had to have proof that the victim was at the site, such as a death certificate, records of employment, contemporaneous medical records and records of federal, state, city or local government, an affidavit or declaration of the decedent's or injured claimant's employer, or other sworn statement regarding the presence of the victim; and proof of physical harm, such as medical records of hospitals, clinics, physicians, licensed medical personnel, or registries maintained by federal, state, or local government, and records of all continuing medical treatment (paraphrase). The claimants also had to, "at a minimum, submit all tax returns that were filed for the years 1998, 1999, and 2000." Given the reluctance of many employers of undocumented immigrants to become involved in the process, and their lack of other needed documentation, it is very likely that many of their families would not have received compensation from this federal program (compare to Feinberg, 2005, 81-85).

Another federal effort related to the 9.11 WTC incidents again reveals the continued relevance of these unexamined assumptions guiding the official response to the World Trade Center attack. The National Institute of Standards and Technology (NIST) was the lead federal agency in the investigation of the evacuation of the WTC. NIST's method elaborated the received wisdom; it did not challenge the official count but rather strengthened the objective facticity of its official definitions and procedures. NIST attempted to locate the likely where about of the victims in the WTC complex by using the "official list" of victims compiled by the City of New York (NYC) and supplementing it with: 300 face-to-

face interviews and 800 telephone surveys; analysis of web sites dedicated to the victims, using data included in *Portraits: 9/11/01*, a book published by the New York Times in 2003 that includes short interviews with surviving family members; information from CNN.com In-Depth Special at <http://www.cnn.com/SPECIALS/2001/memorial/index.html>), a site of tributes to the victims; examination of a badge list maintained by the Port Authority of New York and New Jersey, that includes name, employer, building and floor for all occupants with badge-access to WTC 1 or WTC 2; examination of memorial sites maintained by many other companies and organizations that lost employees; and analysis of short stories written about specific victims available from *Newsday.com*. The unquestioned basis of the NIST report was the city's official list, and the common criterion in the other information NIST collected was the occupational identity of the victims and their membership in bureaucracies of various sorts. Thus, we are told that:

“The employer and floor number were the primary modes for determining location. An employee of Cantor Fitzgerald, for example, would be assumed to have died above the floors of impact in WTC 1. Often, information about the exact nature of death was available from an aforementioned source, and that information was used to categorize individuals. The 18 documented bystanders, in particular, required additional information in order to be categorized...” (text available in http://www.nist.gov/public_affairs/releases/wtc_victims_location.htm).

As it was true of the count of the official dead, these official responses to assist the families and survivors of the WTC disaster and understand what occurred during the evacuation of the buildings reflected a set of assumptions that corresponded to the dominant features of social organization that were taken for granted by the members of the society and that they used to resolve the problems caused by their victimization. They had the effect of excluding people who died but whose kin did not know how or could not satisfy the criteria of inclusion.

Constructing the Unofficial List. Soon after the attack, major newspapers (e.g., *La Jornada*, *Milenio*, *Reforma*) and other mass media (e.g. the journal *Proceso*) in Mexico began to report that approximately 500 Mexican nationals had died in the WTC and that many of them were undocumented immigrants that would be ignored by the authorities (for some of these articles see

<http://www.tepeyac.org/notasprensa.htm>). The main source of these mass media reports was Asociación Tepeyac de New York (at <http://www.tepeyac.org>), a network of approximately forty associations of Mexicans in NYC and the northern part of the state with headquarters in NYC which started in 1997 and is involved in issues of equal employment, securing of benefits, unemployment, homelessness, English language acquisition, and other human rights and social justice issues affecting the immigrant undocumented Mexican community in the area. The founding organizations came from eight regions and each has continued representation in its board of directors. The Catholic Church Archdiocese of New York sponsors it; a Jesuit priest is the executive director. One of its religious objectives is the preservation in the New York environment of the cult to the Virgen de Guadalupe, patron of the oppressed and exploited in Mexico, through the elaborate annual commemoration of her day, December 12th, which includes street parades, Catholic masses, and the running of torches that start in the City of Puebla (see <http://www.fcny.org/scripts/usq/getpage02.pl?orgid=9808>). It is a fairly successful non-profit organization with annual funding of approximately 2.5 million dollars (more information available at NYPAS@newyork.bbb.org).

In the days following the attack, the Asociación became a very important source of information for the Mexican community not only in NYC but also elsewhere in the United States and in Mexico. It became a central depository and clearinghouse of information about the whereabouts of people, searched neighborhoods and hospitals for the disappeared, kept lists of names, cooperated and exchanged information with the Mexican Consulate and other representatives of the Mexican government, American Red Cross, and other organizations that became involved in the response effort. During this time it received close to \$120,000 community grants from AFL-CIO as well as grants and other contributions from other foundations and programs to fund its work on behalf of the families of the victims and the unemployed produced by the disaster, and gained recognition and prestige which it has subsequently used to support the passing of federal legislation benefiting Mexican undocumented immigrants.

The Asociación has published a number of lists of mostly Latinos who at one time or another were thought to be involved in the WTC. The latest list is

made up of 72 names (available at <http://www.tepeyac.org/list.htm>.) and is the version we use in this analysis. It is not a list of all people with Spanish surnames or of all undocumented workers who died in the WTC. Indeed, the official list of the dead includes many persons with Spanish surnames who are not included in the list of the Asociación. Some of them are: Jose Cardona, Jesus N. Cabezas, Victoria Alvarez Brito, Victor Daniel Barbosa, and Telmo Alvear (www.cnn.com/specials/2001/memorial/people). The presence of hundreds of foreigners among the victims in the official list who were stockbrokers, bankers, insurers, business people, and officials of foreign governments, was recognized early on by the mass media and the authorities and fitted the culturally established conceptions of NYC as a world city and of the WTC Towers as symbols of world capitalism (Miller and Iritani, 2001). There are “unknown” victims in the WTC that do not appear in either the official list of the dead or in the one done by the Asociación and used in this study. Newspapers in Mexico mentioned a number of names of WTC victims confirmed by Mexican authorities and their families in Mexico that do not appear in either list. Some of these are: Leslie Gachous and Gustavo Adolfo Lezama Fuentes (Garcia, 2001); Tomas Gallego Montoya (Arreola, 2001); Adriana Zepeda, Tomas Flores Reyes, Carlos Aquino, and Elizabeth Rarrion (Galindo, 2001).

Earlier lists of the Asociación included the names of persons who at some point were identified to the Asociación as missing by their relatives and others during the initial post-impact period but who were eventually located; 35 persons initially identified as missing were subsequently located and reclassified by the Asociación as persons who were alive and had not been involved in the WTC incident. None of them are included in the official list of the dead.

Mexicans in the List. 50 percent (36) of the 72 persons in the Asociación list are included in the official list of the dead. There are 33 Mexicans in this list; 12 or .33 are included in the official list of the dead. By way of contrast, there are 36 names of persons from other nationalities; 24 or .67 are included in the official list. Thus, contrary to assumptions made in Mexican mass media accounts of the activities of the Asociación, it ***did not assist mostly Mexican immigrants and relatives of victims who were eventually excluded from the official count of the***

dead. It is the case, however, that a significantly greater proportion of Mexicans were excluded from the official list (asymmetric Somer's $D = -.303$ with p value being significant at .008).

Sixteen Mexicans in the list of Asociación were from the Federal District (DF) and its environs. 12 of them were excluded from the official list of the dead. Similarly, there were 10 victims from Puebla, Mexico and its environs and eight of them were excluded from the official list. 13 of the Mexicans who were excluded from the list worked in restaurants either in the WTC complex itself or in nearby areas. There may have been relationships among these invisible Mexican dead based on their shared places of origin and places of employment that accounted for their invisibility.

It is striking to compare these small numbers to the initially 500 presumed undocumented and discriminated Mexican victims at the WTC publicized in Mexico. The gross exaggeration of the numbers of presumed Mexican dead in these mass media accounts, 500 to 33 for a ratio of 15 to 1, most probably resulted from the media over-dependence on the figures created and disseminated in part by the Asociación during the first days after the attack, which coincided with widespread public opinion in Mexico regarding the undesirable situation of Mexican immigrants in this country. It is reminiscent of what happens in other disasters and strengthens our view that the statistics on the effect of disasters are suspect for death and are certainly more suspect in other more difficult-to-measure effects such as injuries, mental ill-health, economic losses, and environmental degradation.³

Gender and Age. Sixty-nine names in the list of the Asociación can be clearly identified in terms of gender. Twelve or .17 are female names. Seven

³ Sapir (1993, 257-258), in her analysis of the injuries and deaths associated with volcanoes and earthquakes, writes that "It is rare to find systematically recorded statistics on the cause, place and characteristics of death and injury in disasters," while Noji (1993, p. 5; see also Legome et al., 1995) reminds us that in the aftermath of hurricanes, the response of the medical community is often hampered by the absence of accurate information on deaths and injuries: "the most striking feature of data from tropical cyclone epidemiology literature is its variable quality and nature." One systematic DRC field survey on the number of injured in the Xenia tornado found that the 'official' statistics of about 1,000 injuries underestimated what residents themselves reported by a magnitude of more than three. In this situation as well as in other disasters, one of the first regular organizational activities that are abandoned is record keeping (Quarantelli, 1983; Morbidity and Mortality Weekly Report, January 3, 1986, pp. 765-770).

females or .58 are not included in the official list. There are 57 males. 26, or .46 are not included in the list. *While the list of the Asociación is overwhelmingly a list of male names, neither gender has a much greater proportion of exclusion from the official list of the dead.*

The mean age of the seven non-Mexican men that were not in the official list is 38. It is 39 years for the 21 non-Mexican men that were in the list. There were 19 Mexican men in the list of the Asociación that were not in the list. Their mean age is 37. 10 Mexican men were in the official list. Their mean age was 32 years. Thus, it is not the case that Mexican men that were excluded from the official list tended to be younger than other men in the list of the Asociación. This result, however, is suspect, since much less information is proportionally available about the age of those who were excluded than for those who were included; 10 of the Mexicans who were not included in the official list had missing information about their age, and it may be that they tended to be younger, which is what we had hypothesized. We will never know from the information available to us in the list of the Asociación.

Other Sub-nationalities. Due to the activities of the Asociación as a community agency working on behalf of poor and undocumented Mexican immigrants, many of the persons included in its lists of missing were Mexican and undocumented (www.tepeyac.org/comunicado1010.htm). Nevertheless, the list of the Asociación also includes persons from other Latin American sub-nationalities, some of which had a much higher proportion of inclusion in the official list than the Mexicans. This is especially true of the Puerto Ricans and the Dominicans. There were nine Dominicans in the Asociación list, and they were all included in the official list. The same is true of the five Puerto Ricans. Puerto Ricans are American citizens and would have had a much more established social life in New York if compared to undocumented Mexicans---we only have occupational information on two of them; one worked in a bank in Tower 1, the other in an insurance company in Tower 2. The case of the Dominicans is much harder to explain, however. Again, could we understand better these patterns---of social visibility this time---if we had information on their migratory networks and the resources available to their families? Unfortunately, while circumstantial

evidence indicates the preponderance of individuals in the Asociación list who were recent arrivals to the United States, had lower blue collar occupations, and participated in the informal economy in lower Manhattan, a proportion of them undocumented immigrants, we do not have information about the migratory history, immigration status, and labor force participation of persons in the list of the Asociación that would have allowed us to ascertain with greater certainty the effects of these variables on the probability of exclusion from the official list..

Conclusion

The lack, in most disasters, of validity of statistics on deaths, is an expected and chronic problem. It is aggravated in part by the nature of the disaster itself, particularly in disasters that are diffuse in time and space, and that occur in remote areas and in societies with rudimentary state bureaucracies and record keeping traditions. But even when such organizations and traditions exist, as is the case in the United States, they often do not do a good job of counting the dead; the present day emphasis on the operation of organizations, their lack of coordination and agreement on key terms, and the absence of appropriate procedures to gather information, as well as fraud, to understand why this is the case is clearly useful. It provides a public administration view of the problem. Still, counts of various effects of disasters and the statistical modeling that they allow could be improved by the use of a phenomenological perspective, which would help us understand the taken for granted features of the social world that are reconstructed in the aftermath of disasters. The categories and instrumentalities that are used in these constructions also influence who will be included or excluded from the official counts; systems to count victims are designed to account for the “normal” cases so that the exceptional is noted and reported less often. Counting is a social process, and different procedures lead to different counts and very different conclusions and results. While there is no way of knowing for sure whether the 36 invisible victims were actually at WTC, the same can be said of the court certified 1,220 victims in the official list for whom no human remains have been found. What is different about them is the legitimacy of the claims that were made about their statuses as victims.

Schutz's phenomenology helps us understand these dominant cultural systems that ignore the victimizing effects of disaster on the stranger and the other, among them minority selves. However, it is incomplete in that it does not help us very much in making sense of the different outcomes for these strangers; his phenomenology is not equally useful as a scheme that would help us explain differences in the experiences of these socially and culturally marginalized categories of people. The findings presented in the previous pages document that the social invisibility of some minority victims of the WTC disaster did not occur. They were included in the official list (see also Feinberg, 2005). Social invisibility was not caused entirely by structural ethnic discrimination: many Latino and other foreigners were recognized and included in the official list. Nor was it a matter of discrimination based on lower class employment and age and gender differences: a number of Latino restaurant workers and women of all ages were included in the official list. It is necessary to go beyond the Schutzian approach to make more sense of the social invisibility of victims that impact the validity of disaster statistics (Wacquant, 1992). Invisibility or visibility, two faces of the same coin, is also a function of the extent to which surviving family members were able to access the system set up by the City of New York to count and certify the victims, which must have been a product of their social resourcefulness and skills, of their success in adaptation and incorporation to the U.S. society and culture, of their web of social relations in New York City that they used to negotiate access to state institutions. Unfortunately we do not have information on these matters. Still, it is plausible to assume that research on immigrant communities and networks would have shed light on the lived experiences of these victims and their surviving family members that eventually impacted their inclusion or exclusion in the official list of the dead of the WTC disaster.

As shown by Olson et al. (1999), it is possible to obtain better counts on deaths caused by disasters once its social construction is understood. Increasing the validity of the count would involve practicing what we would call skeptical empathy to help identify corruption and fraudulent claims in the midst of real human suffering (Feinberg, 2005). It would also involve reconciling the various organizational practices that often make official counts differ among themselves

and from unofficial counts. Thirdly, it would involve the willingness by those charged to make the count, to question the taken for granted conception of things that are reflected in the bureaucratic procedures put in place. Needed, to minimize their effects, is a rarely found appreciation of the exclusionary effects of culturally bounded definitions and categories used to count people. Fourth and finally, it would also involve understanding the networks of relations and the institutions of the people that have been victimized---or that constitute the population from which the counts are taken---and of their families, communities, and other groups to which they belong, which would help counters understand the social meaning of the behavior, in this case death.

References

- Aguirre, B.E., D. Wenger, T.A. Glass, M. Diaz-Murillo, G. Vigo. 1995 "The Social Organization of Search and Rescue: Evidence from the Guadalajara Gasoline Explosion." *International Journal of Mass Emergencies and Disasters* 13 (1):67-92.
- Albala-Bertrand, i.M. (1993), *The Political Economy of Large Natural Disasters*, Clarendon Press, Oxford.
- Arnold, D. (1988), *Famine: Social Crises and Historical Change*, Basil Blackwell, New York, NY.
- Arreola, Juan Jose. 2001. "Confirman desaparición de queretano; laboraba en WTC." *El Universal*. Miercoles 26 de Septiembre (www.eluniversal.com.mx).
- Best, Joel. 2001. *Damned Lies and Statistics: Untangling Numbers from the Media, Politicians, and Activists*. Berkeley: University of California Press.
- Best, Joel. 2004. *More Damned Lies and Statistics*. Berkeley: University of California Press.
- Board on Natural Disasters. 1999a. "Mitigation emerges as major strategy for reducing losses caused by natural disasters." *Science*, 234, 13: 1043-1953.
- Board on Natural Disasters. 1999b. *Reducing Disaster Losses Through Better Information*. Washington, D.C.: National Academy Press, National Research Council, Commission on Geosciences, Environment, and Resources.
- Boodran, B., L. Torian, P. Thomas, S. Wilt, D. Pollock, M. Bell, D. Budnitz. 2002. "Rapid Assessment of Injuries Among Survivors of the Terrorist Attack on the World Trade Center - New York City, September 2001." *Morbidity and Mortality Weekly Report*, 51, no. 01: 1-5 (Available at <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5101a1.htm>).
- Borakove, Ellen. 2001. *Expediting Death Certificates for Families Who Request Them*. NYC Department of Health, Office of Public Affairs (available at <http://www.nyc.gov/html/doh/html/public/press01/pr86-925.html>).
- Burke, Jennifer. "Turtle Grove: Dartmouth's Lost Mi'kmaq Community." Pp. 45-53 in Alan Ruffman and Colin D. Howell, 1994. *Ground Zero. A Reassessment of the 1917 Explosion in Halifax Harbour*. Halifax, NS: Nimbus Publishing Limited.

Cardwell, Diane. 2001. "The Toll: City Refines Its Counting of the Dead." New York Times, November 25.

Centers for Disease Control and Prevention. 2002. "Injuries and Illnesses Among New York City Fire Department Rescue Workers After Responding to the World Trade Center Attacks." MMWR, September 11, Vol. 51 (Special Issue)

Cochrane, H. and C. Howe. (1993), Guidelines for the Uniform Definition, Identification, and Measurement of Damages from Natural Hazard Events. Boulder, Colorado: Institute of Behavioral Science, University of Colorado.

Commission on Emergency Medical Services. 1966. Accidental Death and Disability: The Neglected Disease of Modern Society. Washington, D.C.: Division of Medical Sciences, National Academy of Sciences.

Committee for Assessing the Costs of Natural Disasters. 1999. The Impacts of Natural Disasters. Washington, D.C.: Board on Natural Disasters, Commission on Geosciences, Environment, and Resources.

Drabek, T. 1968. Disaster in Aisle 13. Columbus, Ohio: College of Administrative Science Monograph no.D1., Disaster Research Center Series.

Federal Emergency Management Agency. 1997. Report on Costs and Benefits of Natural Hazard Mitigation, Washington, DC.

Feinberg, Kenneth R. 2005. What is Life Worth? The Unprecedented Effort to Compensate The Victims of 9/11. New York: Public Affairs.

Fuchs, Roland, Ellen Brennan, Joseph Chamie, Fu-chen Lo, and Juha I. Uitto. 1994. Mega City Growth and the Future. New York: United Nations University Press.

Galindo, Ignacio Juarez. 2001. "Aumenta a catorce el numero de poblanos desaparecidos por los atentados en Nueva York." La Jornada de Oriente, Miércoles 17 de Octubre (www.jornada.unam.mx).

Garcia, Fermin Alejandro. 2001. "Confirma la Asociacion Tepeyac solo dos mexicanos muertos y 21 desaparecidos." La Jornada de Oriente, Viernes 14 de Septiembre (www.jornada.unam.mx).

Gilbert, R. and Kreimer, A. (1999), Learning From the World Bank's Experience of Natural Disaster Related Assistance, The World Bank, Washington, DC.

Glickman, I., Golding, D. and Silverman, E. (1992), *Acts of God and Acts of Man: Recent Trends in Natural Disasters and Major Industrial Accidents*, Resources for the Future, Washington, DC.

Gordon, Paula D. 1982. *Special Statistical Summary: Deaths, Injuries and Property Loss by Type of Disaster, 1970-1980*. Washington, D.C.: Federal Emergency Management Agency.

Greene, Casey Edward. 2005. Personal communication, February 12. Mr. Greene is the head of special collection of the Rosenberg Library in Galveston and the co-editor of the book *Night of Horrors: Voices from the 1900 Galveston Storm*, College Station: Texas A&M University Press, 2000 in which much of the evidence is presented.

Hansen, G. and Condon, E. (1989), *Denial of Disaster: The Untold Story and Unpublished Photographs of the San Francisco Earthquake of 1906*. San Francisco, CA.: Cameron and Company.

Henriques, Diana B. and David Barstow. 2001. "Victims' Funds May Violate U.S. Tax Law." *New York Times*, November 12.

Ingleton, I. (Ed.) (1999), *Natural Disaster Management: A Presentation to Commemorate the International Decade for Natural Disaster Reduction (IDNDR) 1990-2000*, Tudor Rose,

Leicester.

International Federation of Red Cross and Red Crescent Societies. 2000. *World Disasters*

Report, Geneva.

Kitsuse, John I. and Aaron c. Cicourel. 1963. "A Note on the Uses of Official Statistics," *Social Problems*, 11: 131-39

Knight Ridder/Tribune News Service. 2001. "Heartbroken families to receive \$1 million in government benefits." *Daily News*, December 6.

Legome, E., A. Robins, A. Douglas. 1995. "Injuries Associated With Floods: The Need for an International Reporting Scheme." *Disasters*, vol. 19 (1): 50-54.

Mileti, D. 1999. *Disaster by Design: A Reassessment of Natural Hazards in the United States*, Joseph Henry Press, Washington, DC.

Miller, Marjorie and Evelyn Iritani. 2001. "Hundreds of foreigners are among Tower victims." *New York Times*, September 14.

Morbidity and Mortality Weekly Report. 1986. "Hurricanes and Hospital Emergency Room Visits. Mississippi, Rhode Island, Connecticut." *Center for Disease Control, MMWR*, vol. 34 (51, 52): 765-770.

Munich Re. 1982. *Loss Adjustment After Natural Disasters*, Munich Re, Munich.

Mykle, Robert. 2002. *Killer 'Cane*. New York: Cooper Square Press.

Natanson, Maurice. 1970. *Phenomenology and Social Reality. Essays in Memory of Alfred Schutz*. The Hague: Martinus Nijhoff.

Noji, Eric K. 1993. "Analysis of Medical Needs During Disasters Caused by Tropical Cyclones: Anticipated Injury Patterns." *Journal of Tropical Medicine and Hygiene*, vol. 96: 1-7.

Olson, R., Baird, A.B., Estrada, A., Gawronski, V. and Prieto, I. (1999), *Disaster and Institutional Response: Hurricane Georges in the Dominican Republic and Hurricane Mitch in Honduras and Nicaragua, September-October 1998*, Robert Olson Associates, Folsom, CA.

Organization for Economic Co-Operation and Development (OECD). Annex 3, *Disaster Statistics*. (available at www.oecd.org/dataoecd/37/7/1887740.pdf).

Pollander, G. and Rand, O. 1989. "Analysis of medical needs in disasters caused by earthquakes: the need for a uniform injury reporting system", *Disasters*, Vol. 13, pp. 365-9.

Quarantelli, E.L., editor. 1998. *What Is a Disaster? Perspectives on the Question*, Routledge, London.

Quarantelli, E.L. 2001. "Statistical and Conceptual Problems in the Study of Disasters." *Disaster Prevention and Management*, vol. 10 (5): 325-338.

Rubin, Claire B., A. M. Yezer, Q. Hussain, A. Webb. 1986. *Summary of Major Natural Disaster Incidents in the U.S. 1965-85*. Washington, D.C.: The

George Washington University, Graduate Program in Science, Technology and Public Policy.

Sapir, Debarati G. 1993. "Health Effects of Earthquakes and Volcanoes: Epidemiological and Policy Issues." *Disasters*, vol. 17 (5): 255-262.

Sapir, D. and C. Misson. 1992. "The Development of a Database on Disasters." *Disasters*, vol. 16 (1): 74-80.

Schutz, Alfred. 1970. *On Phenomenology and Social Relations*. Edited and with an introduction by Helmut R. Wagner. Chicago: University of Chicago Press.

Schutz, Alfred. 1973. *Collected Papers (three volumes)*. The Hague: Martinus Nijhoff.

Tierney, K. J. 1990. *Developing Multivariate Models for Earthquake Casualty Estimation*. Newark, Delaware: University of Delaware Disaster Research Center, Preliminary Paper no. 157.

Tubbesing, Susan K. Editor. 1979. *Natural Hazards Data Sources: Uses and Needs*. Boulder, Colorado: University of Colorado, Institute of Behavioral Science.

U.S. National Committee for the Decade for Natural Disaster Reduction. 1991. *Reducing the Impact of Natural Disasters*. Washington, D.C.: National Academy Press, National Research Council, Commission on Geosciences, Environment, and Resources.

Wacquant, Loic J. D. 1992. "Toward a Social Praxeology: The Structure and logic of Bourdieu's Sociology." Pp. 1-60 in Pierre Bourdieu and Loic J. D. Wacquant. *An Invitation to Reflexive Sociology*. Chicago: University of Chicago Press.