National Academies
Workshop of the Committee on Disaster Research in the Social Sciences
Washington, D.C.
August 23-24, 2004

The following are notes taken by Eric Holdeman when he was attending the above workshop. Do not consider these as anything close to a transcript, or being comprehensive in nature. Use what you like, ignore the rest!

Note: The room the meeting was held in had a feature I'd never seen before. The lighting in the ceiling had two sets of lights. One for general lighting (indirect) and another was reset into the ceiling which was "tilted" away from the projection screens located in front of the room. This second set was turned on for presentations.

Insurance Panel

Howard Kunreuther, University of Pennsylvania: Looking at risk factors. What is the potential loss, and measured against the probability. Looking at natural, technological and biological risks. For setting premiums there are different measures, ambiguity being one of them. Technological is easier if it involves equipment. Terrorism and earthquakes are harder to do. Long term and severe losses are possible. Difficult to assess quantitatively.

As people look at hazards they are considering the perceived probability of the event the threshold of probability, perceived loss from the event, what is the threshold for loss. Example: Before 9/11 all policies included terrorism insurance. Previous losses did not prompt any action. Many insured did not know that they had the insurance. Most of the time it was not excluded, therefore it is included. After 9/11 now terrorism is a named peril. Insurers are forced to offer coverage. Premiums are not set by the feds. Charge high premiums due to ambiguity aversion, and do not actively market terrorism coverage. Most firms do not want coverage.

Lessons from Disasters. People don't buy insurance until after the disaster. We cancel policies after several years of no use. Insurance is viewed as an investment not a protective activity. It cannot happen to me, I live from pay day to pay day, there are high upfront costs. Examples were given of how insurers all want to pull out of risk insurance immediately following major disasters, floods, earthquakes, floods, terrorism.

There is an expectation of government aid. Interdependencies due to crisis management. Impact of shutting down the whole commercial airline network on

9/11? Business interruption and indirect losses following a disaster may not be covered by insurance.

What are the private and public responsibilities in encouraging, and/or requiring individuals to purchase insurance?

James Ament, State Farm Insurance**:** Most insurance is purchased due to requirements from third parties, for example fire insurance requirements by mortgage companies. For Hurricane Charlie they are seeing many people without home insurance because people purchased their homes outright after selling their residence, some where up north, and then buying a home in Florida (on the coast that does not have hurricanes). Flood and earthquake insurance is not purchased as often as other perils like hail, windstorm, etc.

Why do stakeholders assume the risk? Two drivers exist for cost. Average expected loss, and ability to attract capital to cover the potential loss. He used an example of a 100 year loss. Insurers must have the revenues available to cover the loss in year two of collecting the premiums.

Joseph Coughlin, FEMA, National Flood Insurance Program: What has been learned? "Perception of Risk" and the need to protect it varies. The nature of the risk is one element. People tend to understand the structural fire risk. Wind is basically understood. Earthquakes are only seen as a west coast issue. Frequency and magnitude of the event differ. Risk is being measured by every level of government, private business and individuals. Risk can differ from group to group. In California people build right on top of fault lines. People build as close to the beach as possible. People move to the mountains and the woods for nature's beauty. Even if you are on the edges of a disaster, the perception of risk can still be low.

The nation has built up a welfare mentality concerning disasters. Government has created the "perception" of a total bailout by government. It makes great politics to promise bailouts. What are the knowledge gaps? How should risk perception be defined? Should messaging be tailored based on the group being addresses? Why is there so little perception of risk? Why do some feel they have risk and others do not have the same perception? Why do people resist purchasing insurance? What role does the avoidance of personal responsibility play? Even with all the refinancing boom of the past few years, the rate of flood insurance has not increased? They can't figure it out? Risk is perceived differently by various groups. Why are people not insured or underinsured? Generally insurance coverage disappears when the mortgage is paid off. What are the incentives to cause people to implement mitigation measures to lower their risk?

There is a lack of understanding of need for mitigation all levels of government. Only about half of states have flood mitigation programs. States take the attitude

that it is a federal problem. The perception of the lack of adequate funding. View of property owners that someone else needs to pay (lack of responsibility). Adequacy of incentives to either purchase insurance or implement mitigation measures. The shelves of universities are full of reports and studies already written. We need research that can be put towards public policy and framed in such a manner that influences public policy.

Session Earthquake Engineering Research Centers Panel

Michael Bruneau, Multidisciplinary Center for Earthquake Engineering Research: Way over my head! It is a good thing there are people like him, otherwise we'd have no research done! Basically, there is a need for engineers to have more of a marriage with social sciences in order to make the engineering efforts more effective. You need large coordinated and integrated projects.

Steve French, Georgia Institute of technology: They are working on consequence based engineering. The integration and linkages between interdisciplinary groups. Looking at entire systems, not just portions of systems. Multi-disciplinary research is not inherently easy. There is less geology and seismology done in the Mid-America consortium.

They are trying to better understand the social and economic impacts on systems from earthquakes. We need a better way to communicate concepts of risk to decision makers who are not scientists. We need to better understand the influence of political and organizational structure on decision making.

There has been numerous studies on the economic and organizational impacts done already. The issue of "perception" has come up numerous times during the presentations already held today. In this presentation it included Risk Perception and Communication.

Jack Moehle, Pacific Earthquake Engineering Research Center: Trying to expand the traditional engineering approach. Looking at building elasticity, building occupancy issues for being able to reoccupy buildings as a performance based effort. He thinks that better numbers would be what the cost is projected to be in people and money impacts.

He noted that cost benefit ratios do not drive life line retrofit decisions. Much more of a culture and demand from various sectors.

Research with coordination and collaboration is more effective. It was noted that in some instances there is about a 12-25% collaboration between engineering and social sciences. There is a commitment to improve that ratio. The issue is trying to better understand each other's paradigm. Political scientists and economists are in short supply for some of the studies. Some people think of geography and transportation engineers as social scientists.

Session on Discussion on USC Homeland Security Center of Excellence:
Rae Zimmerman, New York University: www.nyu.edu/icis as a resource. This is the Institute for Civil Infrastructure Systems. They are looking at critical infrastructure. Looking at critical infrastructure and the interdependencies and how they magnify impacts. There is attention by Federal Policy attention to the subject with Presidential Decision Directives. Their focus is totally on terrorism.

Looking at risk analysis. For interdependencies, looking at macro and level for economic sector analyses and want to do more on the micro level for individual effects. Half of the water used in the United States is used for energy purposes.

It was noted that water main failures affect other infrastructure to a greater extent than other infrastructure failures affect them. Cyber failures initiated the great blackout in 2003 in the Northeast. It was stated that there was going to be a focus on cyber and man-pads (dirty bombs?) as a focus area based on emphasis from DHS. Attacks on ports being another focus area.

The question was raised about how does this new center avoid duplicating work being done by other centers working on natural hazard events.

Risk and probability and the differences were discussed. The probability of terrorism is harder to determine.

Panel by Emergency Management Professionals:

Frances Edwards, San Jose, California Emergency Management Director:
Emergency manager practitioners and responders are not the same. She spoke of her personal experience of talking to people following the Northridge Earthquake. She noted that people impacted by a disaster have their opinions and feelings change over time. The thought being to get social researchers into the disaster scene sooner versus later.

Plans are made at the local level without consulting research documents. She noted that little information on social science research reaches the average emergency manager. There has to be some opportunities for this interface to happen.

The language of science needs to be translated for users. Eric's note: It has to be dummied down for users to put into language that fits people in the field. She put some emphasis on providing information in bit sized chunks. How is this information accessed? The internet is one source, are there others?

Need to have science people enter into venues where emergency managers are at conferences and open to learning experiences. Critical incident management

being one great example where social science has impacted local response operations.

How to put knowledge into practice is another challenge that practitioners have to overcome.

Eric Holdeman, King County Washington, Director Office of Emergency Management:

Copy of the presentation follows:

National Academies Workshop Presentation
Eric E. Holdeman, Director
King County OEM
August 24, 2004

DBPP (Death by PowerPoint)

You are always welcomed in King County following a disaster.

I would like to talk about three topical areas that are very user centered:

- Getting information into the hands of emergency managers
- Politicilization of Emergency Management
- Issue of “perception” ruling our social thinking and decision making.

Number 1: Information sharing and being able to use the research that is being done in the field of disasters so that it is applied by practitioners in the field.

Challenge:

- Amount of research being done
- Explosion of interest in emergency management topics and funding that is available
- Good news is that with colleges and universities developing degree programs, there is a population of students available to be taught current and new bodies of information
- The problem comes with people like myself (Frances Edwards), working daily within the field of emergency management who are having difficulty in keeping up with the deluge of material being presented to them
- Examples: NIMS, NRP, 9/11 Commission Report, Critical Infrastructure planning, lesson’s learned, best practices, our own Homeland Strategic Plan!!!

Current state of affairs:

- Small offices
- HLS grant focus
- More professional staff (Retired colonel - sitting in the courthouse basement waiting for the next disaster is gone)
- 17 years of experience makes me a senior person in the field of emergency management.
- Body of day-to-day work exceeds the capacity to have an all-hazards approach, supplanting of normal emergency management functions by HLS
- Continuing pressure to do more with less—cuts in operational funds (KC OEM to take $75K reduction in 2005)

Research community:

- Find new ways to make the information available—articles in professional journals and conferences.
- Internet has helped
- Emergency managers have typically been generalists, but the amount of information is becoming too great to know it all
- Probably not going to have someone who knows everything about a topic in the job
- This will lead to specialization of the type you may already have seen at Federal and State emergency management
- But, there won't be the number of staff to specialize at the local level
- So, information needs to be obtained in an "on demand" basis as the need arises to do projects and tasks
- Continuing education credits and training for certifications can help—not much of a demand yet
- What else can be done? There is a need to be creative and think outside the box!

<u>Number 2: The politicalization of emergency management and Homeland Security:</u>

- Emergency management at the local level has not typically been tainted by politics except during or immediately following a major disaster when recovery operations are under way.
- The King County experience.
    - Move from state to county (why go into the maelstrom?) Everybody hates the county!
    - The politics of that era (eight years ago) was more at the operational level
    - Generally emergency management was left in the care of the professionals

- With the advent of HLS funding
  - The amounts of funding is thousands of times greater ($56M for all grants in the King County region)
  - Elected officials have been mobilized to ensure their community gets what they deserve
  - The apportionment of funding is hotly contested—We use an extensive committee structure to provide process. An RFP format is used for competitive grants. Use of our KC OEM web site to make the process transparent
  - On the national level this has been played out in the clamor by big cities to have urban areas get the majority of HLS funding
  - Political appointments seen as a political chip and in some cases the establishment of HLS offices separate from the emergency management function
  - Police organizations making plays for emergency management offices/functions—More on this later
  - This has happened concurrently with the "neutering of FEMA" and the ascendancy of Office of Domestic Preparedness (ODP) which came from the Department of Justice

- Collaboration and partnering are what will make the nation and our communities safer, not billions in funding.
- Need for and lack of Regional HLS Offices to foster the coordination between federal agencies and between state and local governments. Example being TOPOFF 2.

- Is HLS a Republican piece of propaganda?
  - Antidotal information
    - Town Hall meeting-Iraq, Patriot Act, Guantanimo Bay, HLS associated with George W. Bush and all things Republican Party
    - NYC/D.C. warning by Ridge, seen as a ploy to minimize Democratic Convention bounce for Kerry
    - Survey work to be done in King County
      - Focus groups
      - Surveys
      - People with disabilities
      - How best to present the message (humor?)
    - More later on the trust issue

- The "so what?" of this dynamic:
  - Harder to achieve collaboration because politics are at play—not just an operations level issue

- Inexperienced personnel meddling in operational issues and driving decisions that do not serve a broader good
- Law enforcement taking on emergency management offices and:
  - Filling positions with commissioned officers
  - General focus towards terrorism
  - Mitigation becomes prevention, which has a "stop the attack from happening by catching the bad guys" approach
  - Less of a broad based approach to working with other disciplines and an unwillingness to share information outside of law enforcement (law enforcement sensitive) agencies (NWWARN.gov) is an exception to this trend by our local FBI Office

<u>Page 3: The "age of perception" has arrived! What the facts are on issues matter little. Personal belief systems trump reality. All of this is happening in an era of mistrust, perhaps spurring it on!</u>

I would like to address this last point first:

- Trust is the shortest commodity we have available today. People do not trust government or other institutions.
  - All levels of government
  - Religious institutions
  - Business, etc.
  - Personal relationships
- Post Modern thinking predominates our culture
  - Such thinking values feelings and perception over facts
  - We get our information from many sources, not recognized authorities in the field
  - In this world we mix and match belief systems colored by the way we are thinking at the moment, not by long held belief systems
- The presentation of information and facts is being colored by these the phenomenon above
- Given what I have said is true:
  - The selection of anchors for TV media—models being selected
  - Look at the way the news of today is covered by the media-the mixture of entertainment and news
  - The blending of sports and entertainment
    - Wrestle Mania being an extreme example
  - How political campaigns are being waged
  - The selection of "credible" spokes persons for disaster

- What is the impact on how we communicate with the general public?
  - Risk communications
    - Before a disaster
    - Warnings, evacuation orders

        - And during disasters
    - Recognize that the public is looking for credible information—at least they are “after the disaster”
    - Increasing diversity in the nation. 50 years, 50% non-Caucasian. Language barriers, will the melting pot continue in the future, or will we be multiple language society (most severe East and West coasts)
    - Overcome our fear of the media—A major perception driver!

- Some things we are going to try in King County:
    - Use of media to keep disaster topics in front of the public
    - Focus and Survey work described earlier
    - Figuring out what the message is suppose to be and how best to present it (TV, radio, internet)
    - Partnering with the media
        - Always being available to the media
        - Made the King County Regional Communications and Emergency Coordination Center (RCECC) media friendly
            - Dedicated media parking
            - Direct Connect, hook ups for power and camera feeds
            - CTV Connection to go live
            - Looking at other connections and ability to pool the feed
            - Doing a Project Impact Show on how the media covers disasters

Since facts no longer matter, we have to develop a relationship with the people with whom we wish to communicate. Then it is up to us to deliver the message (facts) that become believable.

Some final tidbits:

- County-Region 6 HLS Strategic Plan—***web site***
- Regional Disaster Response Plan—124 signatories
- Critical Infrastructure Planning beginning
- Blue Cascades Exercise II in September
- Regional Mitigation Plan—15 participating jurisdictions in Group 1, another group of 15 or so to come.

Questions?

International Issues Panel

Caroline Clark, Inter-American Development Bank: Talked about disasters in Latin America and the Caribbean region. Natural disasters have had and will continue to have a significant bearing on their development prospects.

The developing countries are not managing development based on the risk of natural disasters. They are looking at how disasters affect development prospects? Is sustainable economic development achievable under conditions of disaster risk? What are the factors that generally restrain countries and decision makers at all levels from adopting adequate risk management?

They are looking to move from large national disasters that overwhelm a country's capacity to focusing on:

- Efficient use of public expenditure for managing risk
- Trade-offs between extant
  loss reduction and ex-post costs
- A consistent framework for allocating scare ex-post fund between reconstruction and development investment.

Anthony Oliver-Smith, University of Florida: He has done research on international disasters and will cover two. ENSO Disaster Risk Management in Latin America.

- Disasters are the outcome of unresolved development problems that produce a particular kind of relationship between natural or physical hazards and the organization and structure of society.
- Disaster research must be based on historical causal analysis

Improvements in forecasting have not always led to reduction in damages from El Nino associated events in Latin America. There is a need for systematic research on spatial, temporal and semantic characteristics of ENSO disaster risk accumulation and the social processes underlying that risk.

They are doing comparative research methodology. Collection and analysis of all available data sources on disaster occurrence in each country, including disaster related agencies, academic studies, NGO and other private and international organizational reports, and national and local media. It was noted that the quality of data collected in Latin America is not that good, what they have for Florida isn't much better.

They are looking to expand the availability of the information and networking between individuals and agencies. What is feasible given the situation faced by Latin American countries?

There is also a Tsunami project. Looking at Japanese context and information sharing. It is web based with a number of case studies. The issue of articulation of disaster vulnerability and development models and processes (that includes social science). The engineers learned much about how to work with social science. However, the integration that was planned did not happen, the social science side was a flop.

International projects present challenges and opportunities.

New Technologies and Methodologies Panel

Roger Tourangeau, University of Michigan and University of Maryland: There is an increasing challenge in getting people to respond to surveys. It has doubled from 1979 to 1995. Telephone surveys are only achieving a 50% response rate. Why?

- Non-contact
    - Caller ID
    - Condos
    - Answering machines
    - New developments:
        - Call Blocking
        - The do not call list
- Non-cooperation
    - Refusal rising throughout developed world
    - Why?
        - Reduced civic engagement
        - Less time
- Inability to Complete Surveys
    - Growing immigrant population
    - About one third are non-Spanish speaking

Impact on cost. More surveys offer incentives, more callbacks to increase rate of contact

Impact on Bias? Little evidence of deterioration in accuracy of survey estimates.

Technological Change and Surveys. Telephone surveys are using computer assisted telephone interviewing (1970s), and a second wave is interactive voice response.

Face to Face: computer assisted personal interviewing (1980s). Audio computer assisted self-interviewing (1990s).

Mail: Email in the 1980s and Web surveys in the 1990s.

Web data collection is incredibly low-cost means. Cost per case is .50 cents versus up to $1,000 per for face to face interviews.

There are sampling issues: Probability samples and Intercept approaches. E.g. probability samples of visitors to web sites. Web users still tend to be younger, better educated with more income. Non-response rates via the web are bad.

Having a picture of people on web sites can influence how the responders complete surveys. Web use for restricted populations, like doctors is better.

Some use of surveys to look at disasters. Kennedy assassination, post 9/11, etc.

Joshua M. Epstein, Center on Social and Economic Dynamics, The Brookings Institute: Features of Epidemic models. A highly complex, but very good presentation. Pace was too fast to take notes. He showed the effect of how small pox spreads.

Discussion on Homeland Security Scholars and Fellows Program

Laura Petonito, University Programs, Science and Technology Division, DHS:

Item in the mission is to develop science and technology for countermeasures. Critical Infrastructure and cyber security are portfolios that exist within the directorate.

Some concerns mentioned:

Aging workforce, 66% of civilian workforce at DoD will be eligible to retire by 2006. Need more USA students. Need more interdisciplinary projects and studies.

They are trying to attract students in the science and technology fields. The program features full tuition and fees for students. Graduate students receive $2,300 per month for up to 36 months. Undergraduates receive $1,000 per month for 9 months, with a 18 month limit. One ten week internship requirement during first summer following first year of funding. About 100 scholarships are awarded each year.

Global Climate Change

Sorry, no notes taken. Conducted some other emergency management business with NACO.