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Situated Preparedness: The Negotiation of a Future Catastrophe in a California University

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Situated Preparedness

the negotiation of a future catastrophic earthquake in a southern California university

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Structure of Talk

Introduction

Overall Methods

Findings: structured into 3 "parts" or papers

Overall Conclusions

Future Directions

INTRODUCTION

Levels of earthquake hazard in southern California
California Geological Survey: http://www.consrv.ca.gov/cgs/rghm/psha/Pages/index.aspx
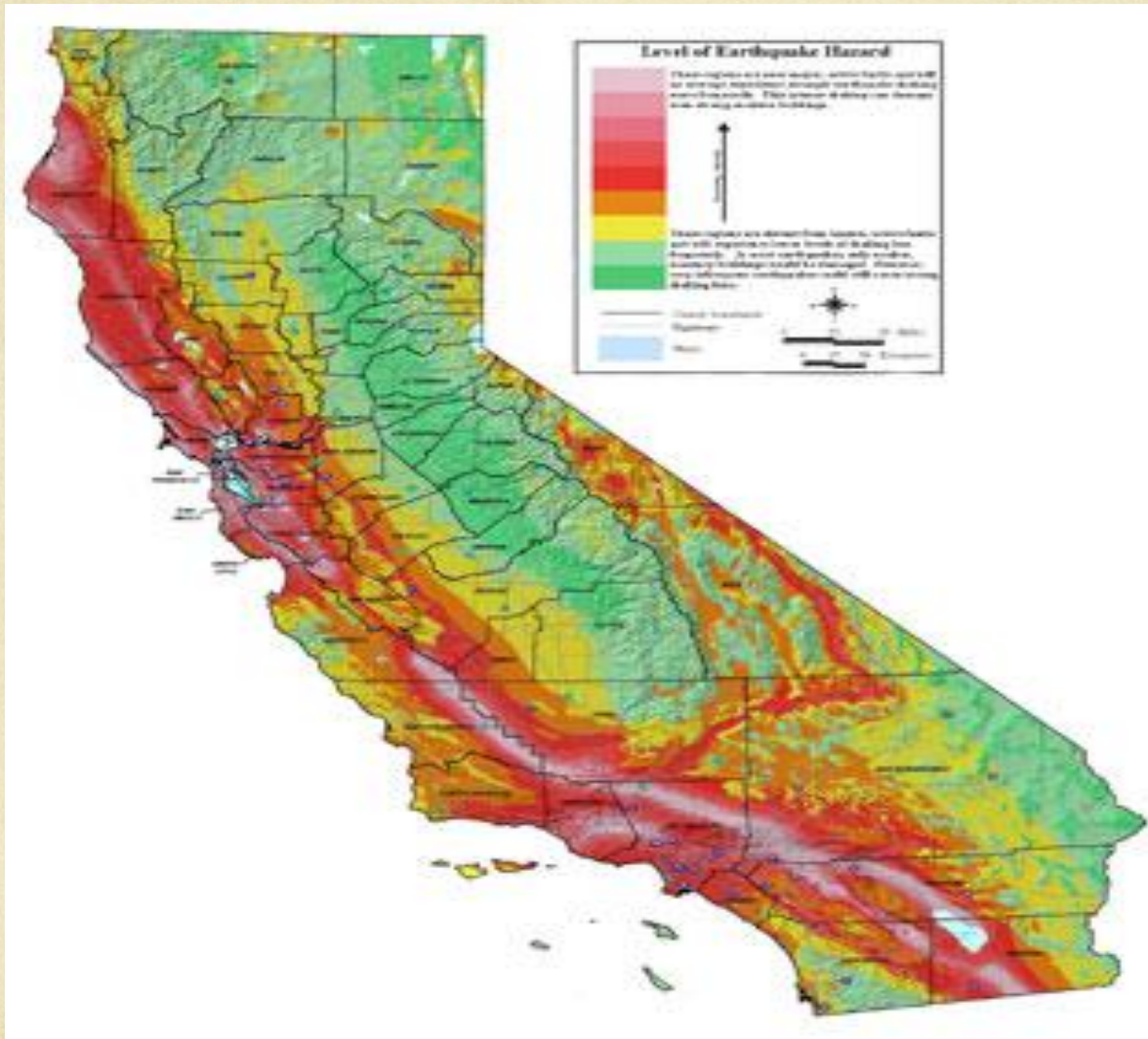
Southern California is at risk for a potentially catastrophic earthquake.

A major quake could produce multiple short- and long-term consequences for the region and nation.

Preparedness for a major earthquake is problematic.

Disaster Preparedness

There are four general phases of disaster: mitigation, **preparedness**, response, and recovery.

Preparedness is actions that decrease the risks of a disaster before an event occurs (creating plans, collecting supplies, etc.)

Level of preparedness is often directly linked to level of response.

Disaster Cycle
Adapted from J Twigg, (2004) Disaster Risk Reduction, Good Practice Review No. 9, Humanitarian Practice Network, ODI

Literature circles
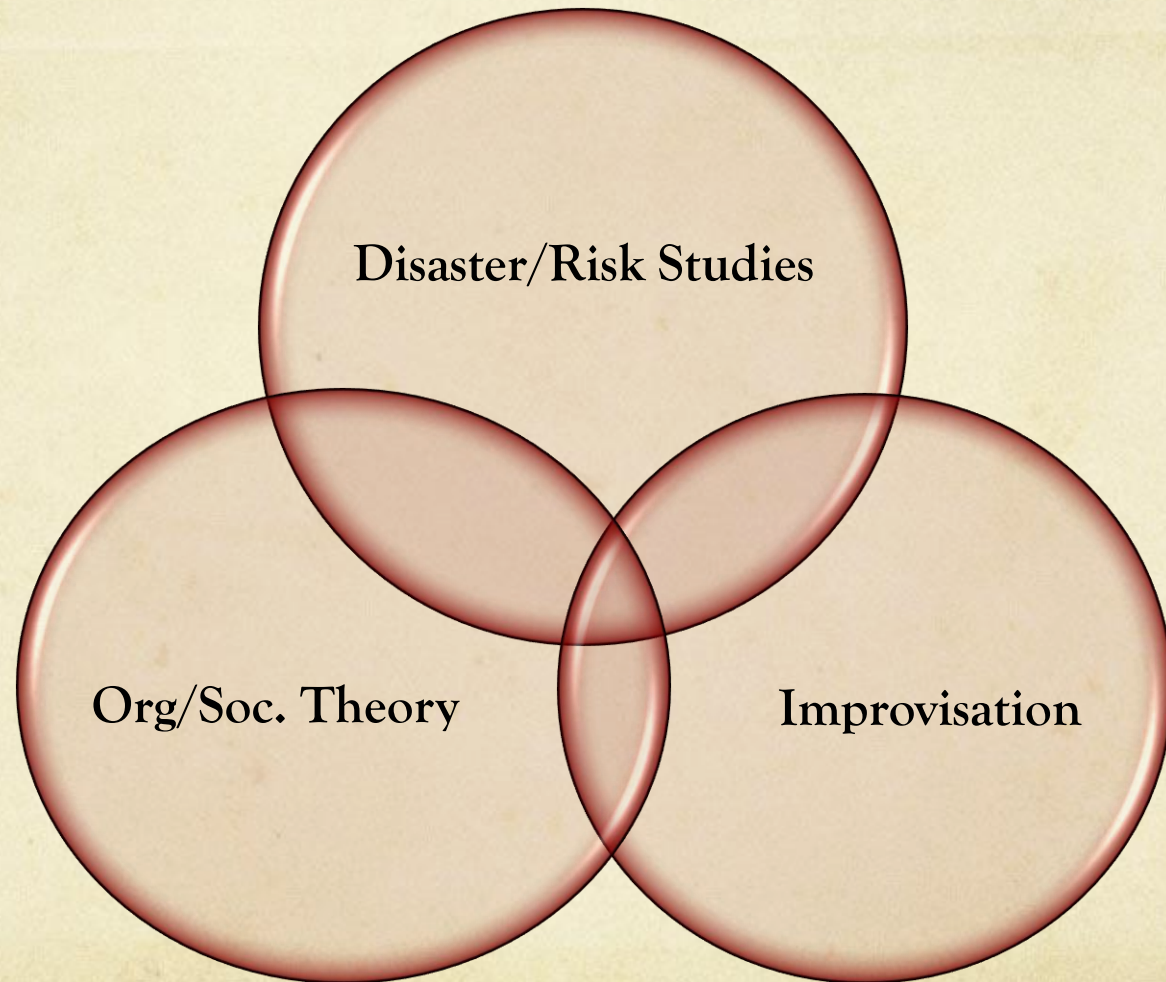
Why people do not prepare (in general)

Apathy

Complacency

Lack of information

Busy

Lack resources

APATHY

IT TAKES 43 MUSCLES TO FROWN AND 17 TO SMILE
BUT IT DOESN'T TAKE ANY TO JUST SIT THERE
WITH A STUPID LOOK ON YOUR FACE

However…

What preparedness means to people in at-risk environments and how these meanings influence action/inaction is not well understood (risk/disaster studies).

Disaster response has an element of emergence that is outside of planned action (organizational/sociological/disaster studies focused on improvisation/context/emergence).

Scholars and practitioners acknowledge the need to incorporate flexibility and adaptability into planning efforts but how to do this is not well understood.

METHODS

<u>Study Site</u>

Large university in Orange County, CA

Economically important area with a lot of resources and vulnerabilities

An organization and a community (a small city).

Provides data on both organizational and household preparedness.

Access

Research Questions

Initial Question: How do people contextualize preparedness efforts?

Evolving Questions: What does it mean for participants to be prepared for a catastrophic earthquake?

What actions do participants engage in preparing for and thinking about the threat of a catastrophic earthquake?

How do participants imagine responding to both the short and long-term disruptions predicted for a major earthquake?

What are the disconnections between the two participant groups?
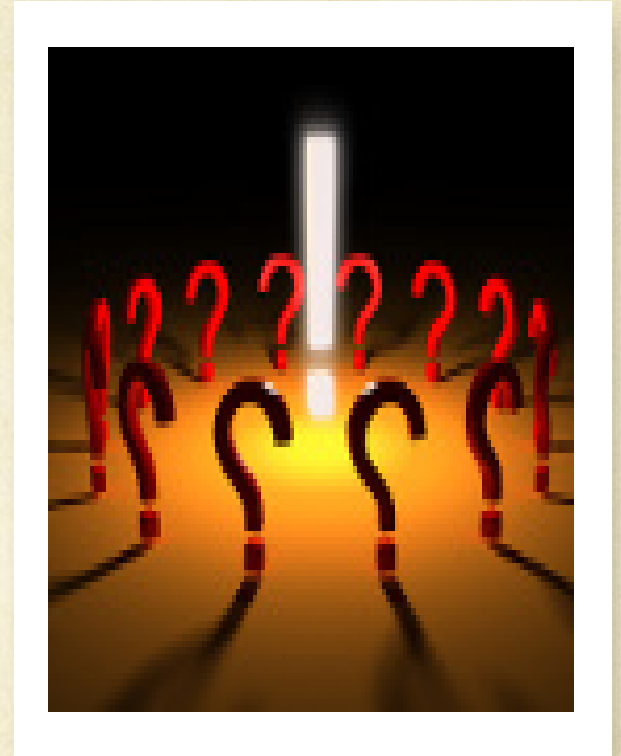
Rationale for methodology

Chose a Grounded Theory (Glaser and Strauss, 2006) approach to investigating the initial research question.

This approach acknowledges social phenomena are dynamic.

Was better suited than other approaches (such as planned content analysis) to help me understand the contextualization of preparedness.

Used narrative analysis in final part of dissertation to help identify disconnections between participants and values underlying the notion of preparedness.

Participants

Graduate students

Vulnerable population (low-income, transient, more independent than undergrads)

Represent the public

Expected to prepare for disasters but lack knowledge of expectations.

University staff

Engage in activities either directly or tangentially related to disaster preparedness on campus

Expect public to prepare

Data collection

In-depth interviews (21 staff, 19 students) = 40 interviews

Asked open-ended questions about preparedness actions and how people imagined responding to various short- and long-term earthquake scenarios (e.g. for staff and students)

100 hours of observation (preparedness events, drills, conversations, and preparedness tours)

Preparedness tours and inventories alongside student interviews.

Over 500 pages of archival analysis of campus disaster preparedness/planning materials

Started collecting data in February 2011 and finished final interview June 2012.

Grounded Theory

Grounded theory is the *systematic* and *comparative* collection and analysis of data intended to produce theory
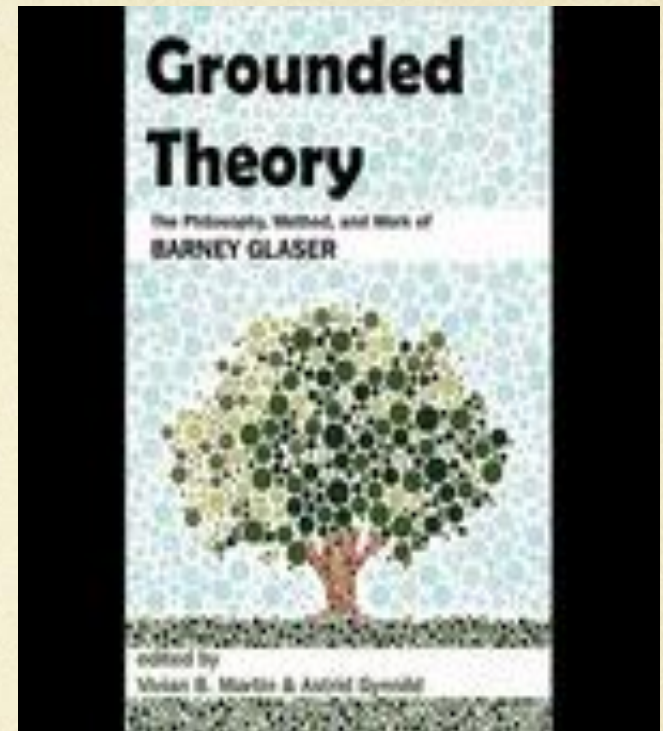
Start with broad research questions and collect appropriate data. Questions evolve.

Theoretical sampling guides data collection/analysis efforts

Data collection and analysis occur concurrently

Engage iterative and reflexive series of steps consisting of coding, memoing, and theory development

Coding, theme, and theory development

Open coding and memoing to develop initial themes

Iterative rounds of further coding (focused and axial/thematic coding) and memoing to refine themes and develop theory

Findings organized into 3 "parts"

Theoretical saturation – nothing new emerges from data

If indicated
Level 4
Theories can emerge from saturated categories & themes

Level 3 Coding
Axial/Thematic Coding

Previous coding is studied to develop highly refined themes

Level 2 Coding
Focused Coding, Category Development

Level 2 Coding reexamines Level 1 Codes and further focuses the data

Level 1 Coding
Initial Coding, Open Coding

Large quantities of raw qualitative data are focused and labeled during Level 1 Coding
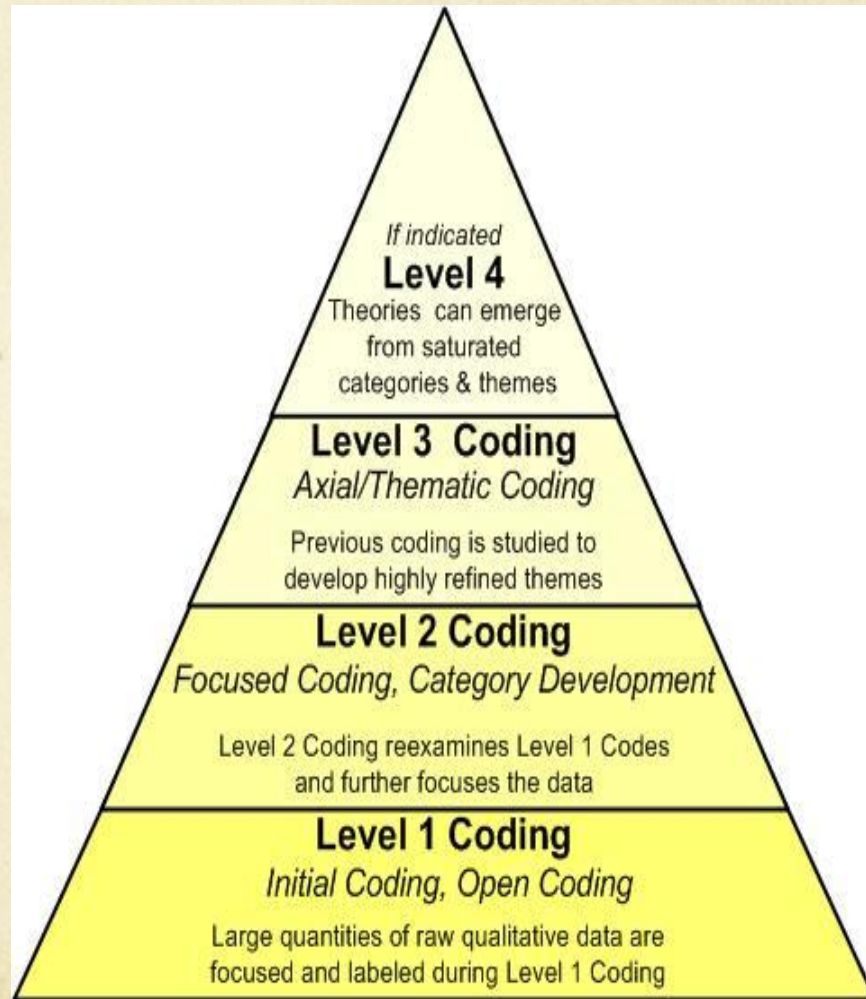
Image from: http://qrtips.com/faq/FAQ~code%20terms.htm

FINDINGS: Part One

o What does preparedness mean to participants?

o What underlies the meanings they make?

o How do these meanings influence actions related to preparedness?

'Traditional Preparedness'

Traditional preparedness is:

o   the collection and storage of key resources, knowledge, tools, and objects with the intention of using them when a disaster occurs (e.g. earthquake kits and plans)

o   the imagination of multiple future disaster scenarios and how individuals/organizations might respond to them through the employment of actions/resources at-hand

Constructed as absolutely essential to surviving and restoring normalcy in a post-disaster situation.

Imagined futures

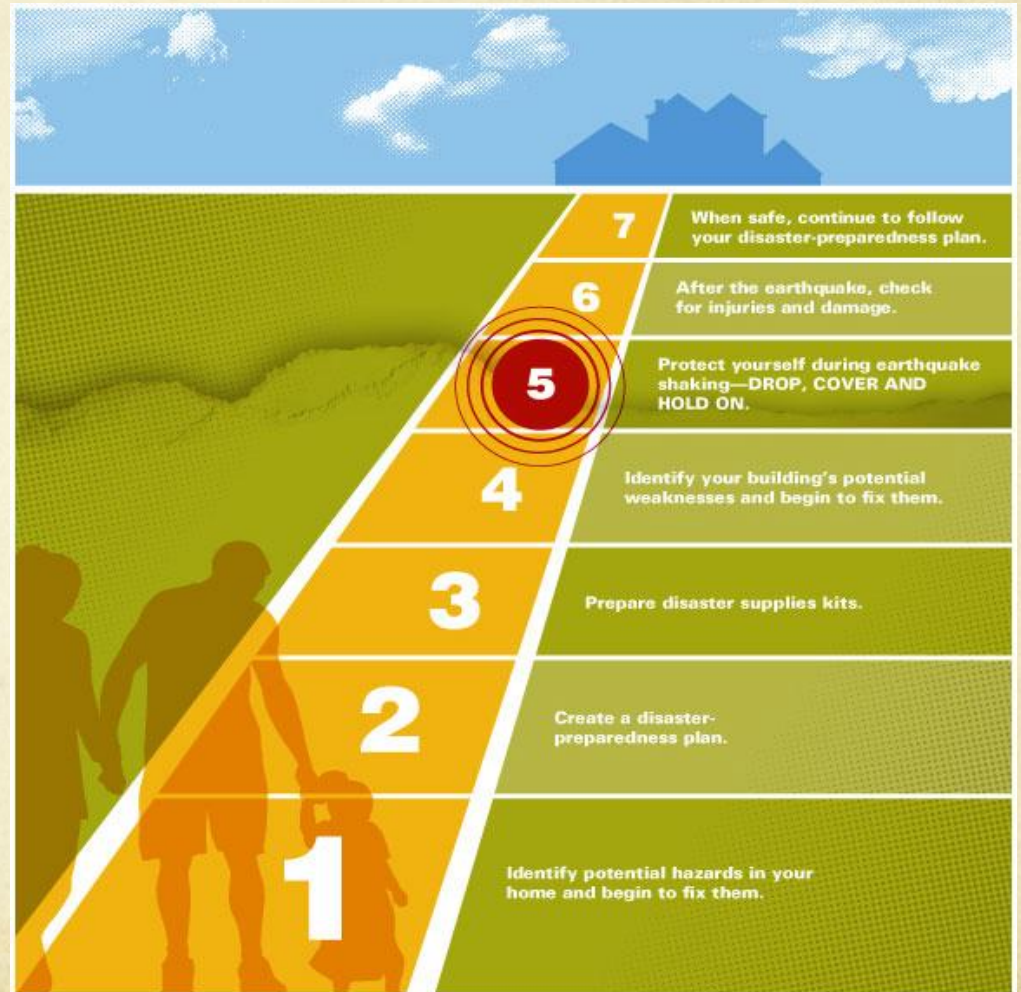On a deeper level than actions of collecting and storing:

Image from: http://www.earthquakecountry.info/roots/seven_steps.html

What underlies Traditional Preparedness?
(two dimensions of trust)

Infrastructure/resource continuity

Reproducible realities.

Belief in infrastructure/resource continuity

Belief larger infrastructures would be available:

> "Here [in Orange County]…I see response…my daughter was stuck in the car. She was locked in the car and the key was inside…So here they rescue things…I called 911. They came. This is not like the same as (an) earthquake because it's just like one person in trouble, but I feel they respond good." -Grad Student "Shoreh"

Persistence of resource availability:

> "Then, suddenly, it [needed resources] appears. Is Obama giving it to you? Who knows? It doesn't matter. It just appears when you really, really, really need it."-University IT Staff

> "When I come here [to Orange County] everything is easy; so the idea that everything could potentially from one moment to the other be completely gone seems so unreal that I find it's hard to plan for it in a way…There is a sort of contradiction in California because it feels so safe here." –Grad Student "Sofia"

Faith in reproducible realities

Ontological Security (Giddens, 1984) = trust in the belief that what happened yesterday will continue tomorrow and also into the future.

Ontological Crisis = the risk of a major earthquake, while largely acknowledged as real by participants, was fundamentally disruptive to the illusion of a reproducible reality people create and recreate in the enactment of everyday life.

"It [disruption] happens all the time and we incorporate it into the reactive narrative of normal and it releases the lesson instantly almost like we're built for it...it's very symptomatic of our entire way of life...We think about it like, I wake in the morning and I have my coffee and I do some work and everything's fine when I go to bed."- Student "Lilly"

Conclusions of part one

Two dimensions of trust are inhibitive of preparedness actions. The prospect of major disaster disrupts people's trust in predictability that's reinforced by the typical progression of day-to-day life.

The idea of preparing for a disaster conflicts with the experience of life in Orange County as safe.

The acknowledgement of a need to prepare through traditional preparedness actions presents an ontological crisis for people because it brings to consciousness the reality of a particular threat.

*Part 2: How preparedness is enacted

o   What actions do participants engage in preparing for and thinking about the threat of a catastrophic earthquake?

o   How do participants imagine responding to both the short and long-term disruptions predicted for a major earthquake?

> Answering these questions helps deepen existing knowledge about people's preparedness efforts and provides new understandings of what people actually do, or imagine they would do in a disaster situation

Situated Preparedness

There were two ways in which preparedness for catastrophic events is *enacted* in this pre- crisis context constituting *situated preparedness*.

There is a connection between the two sets of practices and ways participants *imagined* their post-disaster responses.

Preparedness is highly contextualized and moderated by important factors in contrast with the more static conception of traditional preparedness.

Explicit Practices

Practices of preparedness enacted with the conscious intention of preparing for a disaster.

"Have a kit, make a plan, be prepared"

Implicit Practices

Structured by other factors unrelated to preparedness for earthquakes/disasters and are *overlooked* in current conceptions of preparedness.

> "What we do have here [in the daycare] is actually all the necessary supplies. So we have all the food and the water, because we keep daily water all the time. The water's here...and food, first-aid, and port-a-potties...those things are [just always here because of the nature of the work]." – Daycare Staff

> "I like to think that I could [manage after an earthquake}. I know how to make water from evaporation. There are so many sprinklers here. The ground is still moist. I could create about 20 pots of water. You wouldn't get too much but I think there would be enough for the short-term." –Grad Student "Agathe"

Structuration Theory

Social interactions are produced through a generative and dynamic relationship between structure and actions (Giddens, 1984).

The central argument of structuration theory is that structure and action form a duality by which structure is generative of action and action is generative of structure over space and time.

Social practices are constituted by this dynamic relationship

social practice

structure   action

time, space

structure   action

Adapted from Rose, 1999
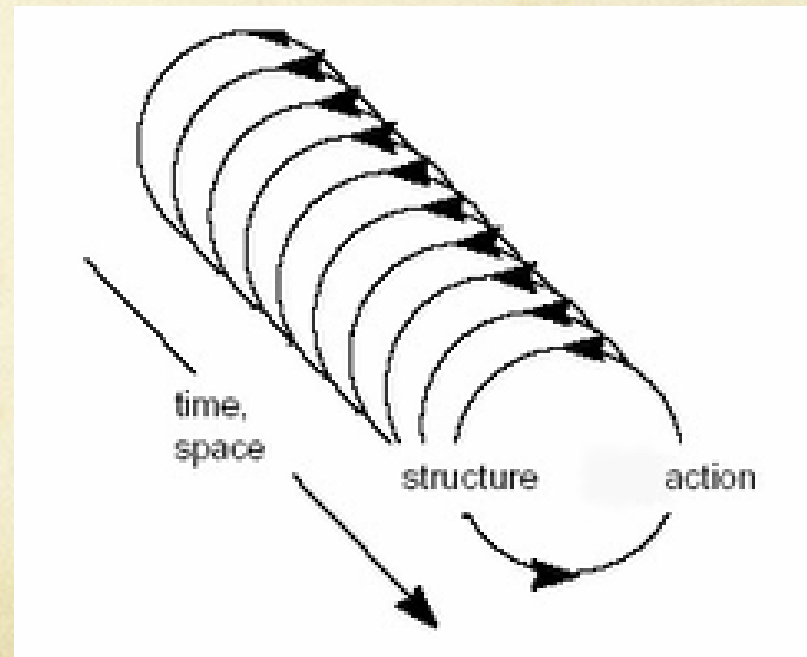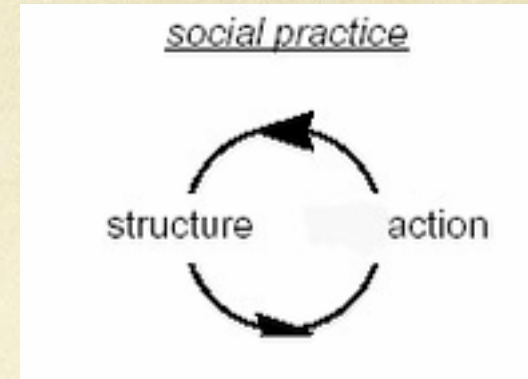
Structure and action components of explicit and implicit practices
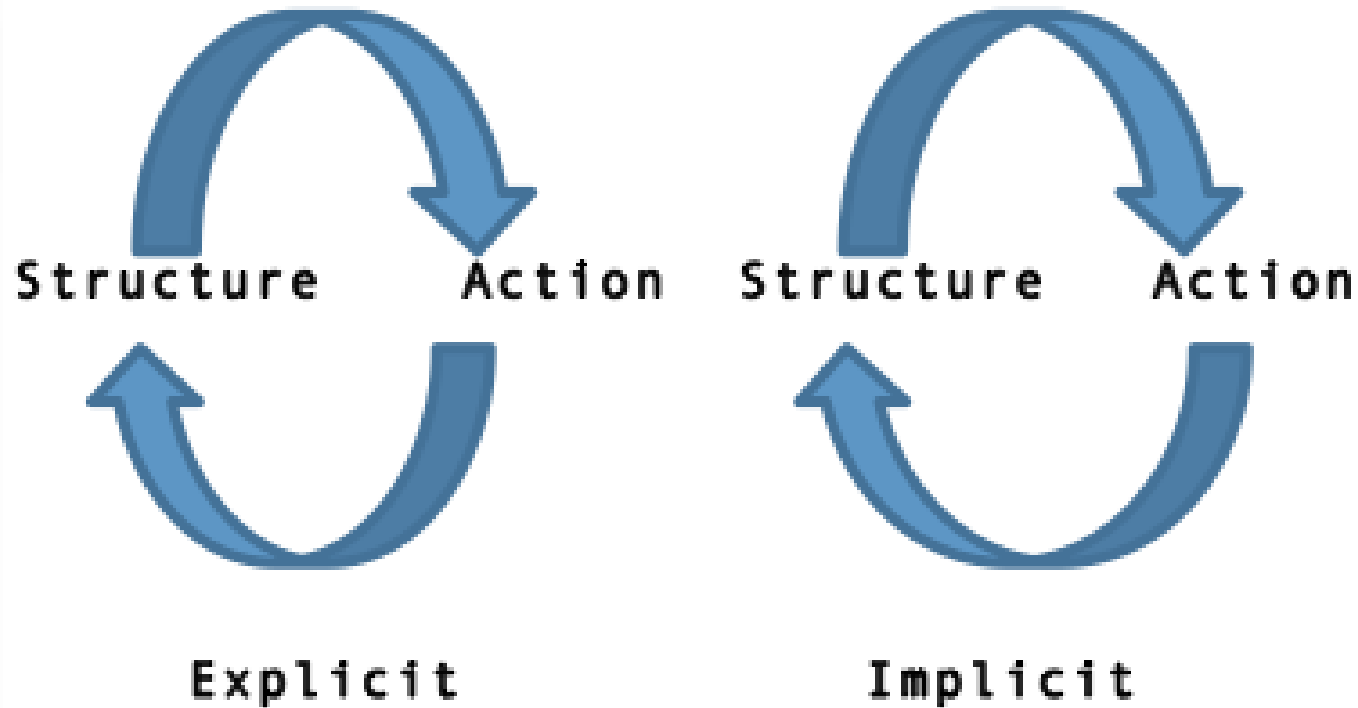
Structuring Aspects - Explicit
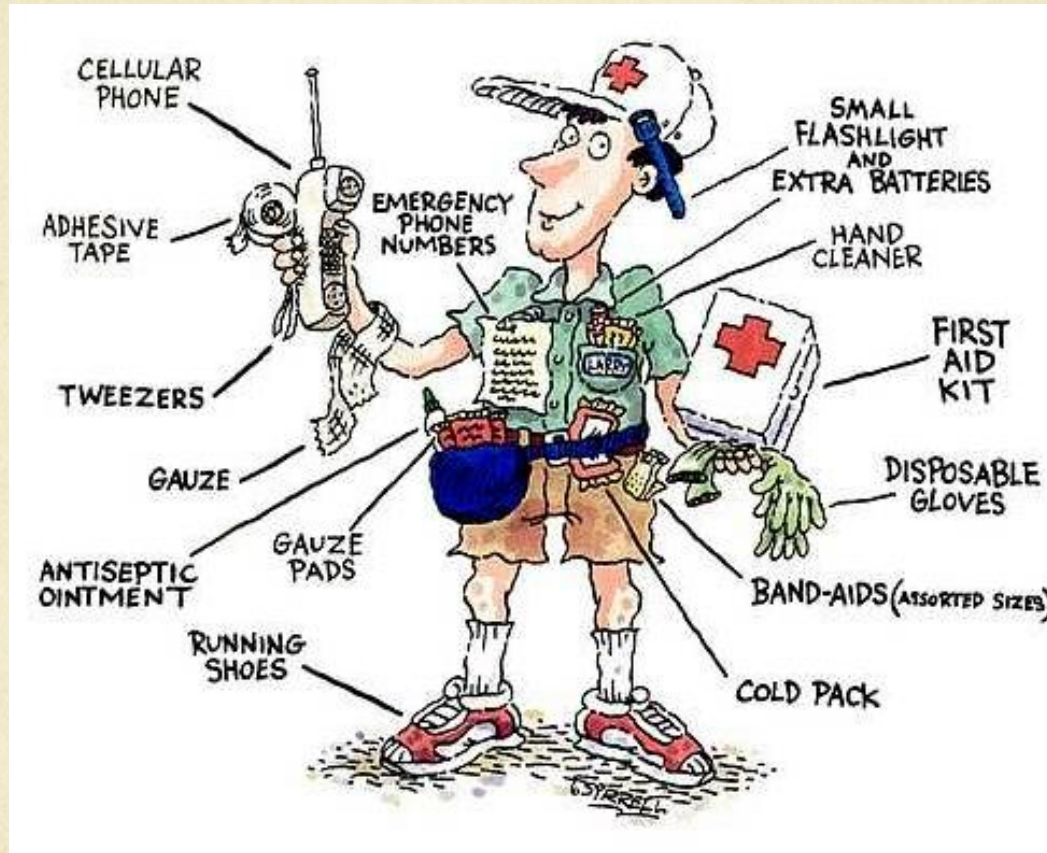
Explicit Actions

collect and refresh water

collect and refresh food

collect and refresh toilet paper

collect and refresh toilet supplies

store cash

collect and refresh batteries

double prescriptions

data and paperwork redundancy

Structuring Aspects - Implicit

Implicit Actions

store tents and sleeping bags

store water purification tablets

store food supplies (MREs)

practice living without modern conveniences

make your own food

buy stockpiles of toilet paper on-sale

data redundancy

Situated Preparedness

Identified explicit vs. implicit based on structuring element of "disaster preparedness".

Looked of for evidence of implicit and explicit practices having a structurated relationship.

Blending of implicit and explicit practices in responses to both short- and long-term disaster scenarios.

The interaction of explicit and implicit practices is how situated preparedness is enacted in at-risk contexts. While conceptually distinct, they become difficult to tease apart when people talk about how they would respond to a disaster:

> "I can start a fire with sticks if I have to because I have the basic knowledge that could help me. The knowledge would come back to me. I think that if I was in enough shock the [preparedness] list and the instruction would get me going." – Graduate student "Jessica"

'Action-Blending'

If one were to imagine removing the structuring, or guiding motivation of an implicit or explicit practice, most likely the action component would be strikingly similar for either set of practices, as long it was relevant to helping people negotiate disaster.

It matters little if a person collects cooking and food supplies for an earthquake or for an upcoming camping trip; it matters most that they have these tools and resources at hand and can use them in an earthquake situation.

Modifiers of practices perhaps more important than explicit and implicit structures.
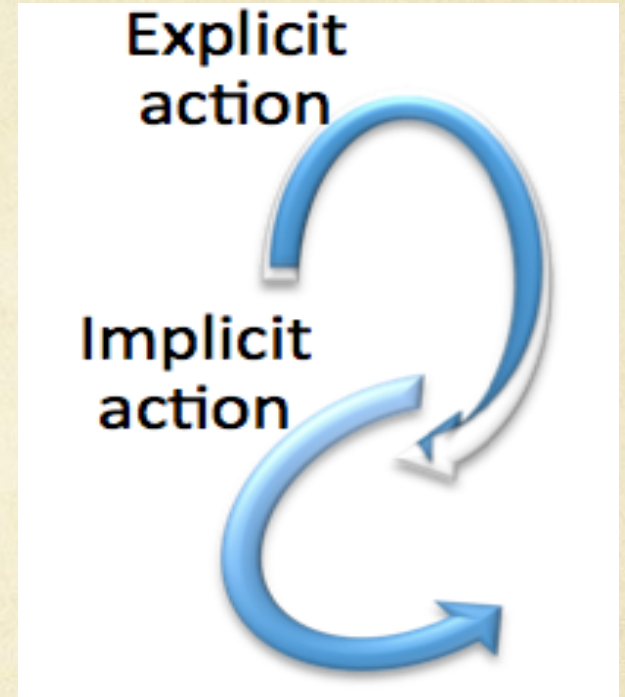
Modifiers: major categories of constraints and enablers

Contextual Sensitivity: Time and space are key features of context and have a great influence on what resources and actions are available in explicit and implicit practices (e.g. earthquake backpack)

Human Intentionality: 'Alternative intentionalities' – bulk alcohol as disaster preparedness (community-building, earthquake backpack, camping)

Social Constraint: Poverty, cultural context, isolation as a constraining and enabling factor

Conclusions of part two

Evidence for links between improvisation and resilience in pre-and post-disaster situations.

Implicit practices and constraining/enabling factors that need to be identified and incorporated into preparedness efforts.

Practical information in both the research setting and other risk contexts about the capacity for the community to engage in adaptive and resilient behavior in disasters.

Part 3: What can be done about this 'problem' of preparedness for disasters?

Part three constructs and analyzes 'official' and 'unofficial' narratives of disaster preparedness and identifies:

1) Values imbedded within the concept of traditional preparedness

2) Disconnections between organizational and public actors in an area at-risk for a major earthquake

3) Suggestions for how future preparedness efforts might incorporate these findings

Narratives and uncertainty

People construct narratives to make sense of the connections between actions and events and by doing so, make causal inferences about a phenomenon of interest.

Actions and stories contained within plans and planning processes reveal important information about how people believe they will act in the future/acted in the past.

Important to how people interpret risk and uncertainty. Accounts and explanations of the social world allow people to make sense of the unexpected through the lens of ordinary life.

Views about values often surface when talking about risk.

Narrative Data analysis

I analyzed interviews, field notes, and all archival materials in the initial grounded theory approach

I flagged pieces of data that indicated major themes separate for each participant group and set these portions aside while I engaged in the larger analysis.

Looked for common themes separated by type of data: staff interviews and observations plus archival data in one group as representative of the 'official version' of preparedness and then student interviews and preparedness tours as indicative of the 'unofficial version' of preparedness.

 Wrote memos on themes emerging from the data and developed each set of narratives.

Findings

'Official Version' - University staff

Top-down approach that is a combination of plans, command and control tactics, and educational materials to increase awareness and preparedness actions to facilitate successful disaster responses among the public.

'Unofficial Version'-University students

Minimal knowledge of ways to prepare for an earthquake and of organizational efforts and expectations. A belief they had the skills and resources to survive and recover.

Rhetorical Analysis

[Feldman et. al., 2004]

Storyline – People are personally responsible for their own preparedness efforts and the more you prepare, the better you can respond in a disaster. If you don't prepare you are not a responsible person.

Oppositions – preparedness and non-preparedness, responsibility and irresponsibility, now and future, right and wrong, success and failure.

Syllogism – Preparing now for a future disaster is the right thing to do and shows high levels of personal responsibility for those who prepare. Non-preparedness is wrong and irresponsible.

Therefore, if you demonstrate personal responsibility through preparedness efforts, enacted in the present, you will be successful in the future.

Values and expectations

Preparedness is laden with values relating to personal responsibility/individualism (both students and staff) and compliance (staff – especially those in positions of authority).

Preparedness actions are the responsibility of those in risk contexts (especially members of the vulnerable public)

A high level of compliance to prescribed actions was directly linked to the assumption of successful response in a future disaster.

Some implicit practices viewed as threatening to university staff ('Occupy' example).

Key disconnections between groups

Staff

Lack of trust in the abilities of students to respond in disasters

Lack of understanding of the resources, skills, tools, and knowledge of students with potential for utilization in response.

Fear of emergent response

Students

Lack of knowledge of what to do in an earthquake

Lack of knowledge about other traditional preparedness recommendations

Pre-existing skills, resources, tools, and knowledge potentially useful in earthquake response are taken for granted

Addressing the gaps: the Situated Preparedness Approach

Goals

Foster new communication channels between disparaged groups to bridge gaps

Share accurate knowledge between both groups

Create situated, inclusive, and evolving definitions of preparedness and related practices

Identify and capitalize on existing resources and knowledge to 'build on' resilience

Approach

Assess what 'works' and 'does not work' in the study community related to those definitions

Adopt practices that work and cease activities that do not.

Bridge gaps between groups (e.g. adopt Business Continuity practices for the public, minimize written materials, emphasize communication to build trust and transfer knowledge, engage in preparedness tours, create community liaisons).

Connecting the gaps and de-emphasizing values

The approach is designed to connect the gaps by creating relationships, fostering trust, and sharing knowledge between organizational and public actors within (and potentially out) of the research context by:

Transmitting knowledge about risks of an earthquake/ other potential disasters

Dispelling misconceptions between disparate groups,

Identifying and capitalizing on existing resilience (explicit and   implicit practices)

Enacting these on an ongoing and evolving basis to account for enabling/constraining factors within organization/   community.

Conclusions

Traditional Preparedness presents an ontological crisis for people. Contributes new insights to literature on problems with disaster preparedness (Harries, 2008 – preparedness interferes with sense of safety and home) and issues of trust and ontological security in making plans (Misztal, 2001).

Implicit and explicit practices provide the basis for improvisation/resilience pre-disaster. Only understood in post-crisis contexts/resilience (Wachtendorf, 2004; Horne and Orr, 1998) or its foundations (e.g. Weick, 1998 and jazz; Crossan,1998 and improve comedy).

Provides a new way to think about preparedness and a novel approach to improving current efforts by bridging gaps (in context) and de-emphasizing potentially harmful values. Existing literature emphasizes the effectiveness of preparedness efforts or 'building resilience" (e.g. Longstaff et. al., 2010).