

Moving Minds, Moving Policy

What the City of Berkeley's Soft-Story Ordinance Can Teach Us About Motivating Mitigation

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Soft-Story Wood Frame Apartments

VULNERABLE & SOCIALLY-IMPORTANT



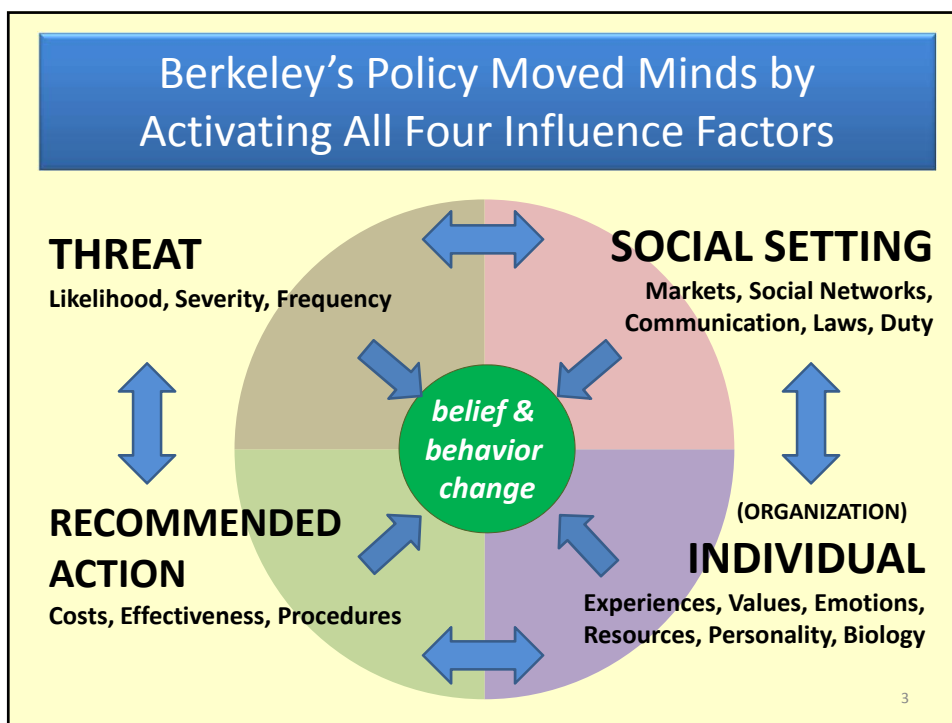
Photo Credits: U.S. Geological Survey, 1989, 1994

RELATIVELY EASY(?) TO RECOGNIZE & IMPROVE BUT NOBODY DOES IT



EXCEPT IN BERKELEY, CA WHERE 20% DID

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Berkeley Passed Its Soft-Story Ordinance 16 Years After Loma Prieta



1989: Loma Prieta – Marina on fire

1994: Northridge – 16 deaths

1996: Berkeley identifies ~400 suspected soft-story multifamily buildings

2000: City staff and local experts initiate policy action

2005: New requirements passed for pre-1997 suspected soft-story residential structures w/5+ units

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Two Program Phases, Two Immediate Goals: Collect Information, Transform the Market

- 1. MANDATORY EVALUATION REPORT** in 2 years
 - \$586 filing fee; engineering cost ≈ \$4,000
 - IEBC Chapter A4 plus guidance framework
 - Must include retrofit scheme
- 2. CREDIBLE THREAT** of future “mandatory retrofit” phase
- 3. NOTICE ON TITLE**
- 4. NOTIFY TENANTS**
- 5. POST SIGN** →
- 6. Limited INCENTIVES**
- 7. FINES** (up to \$5,000)

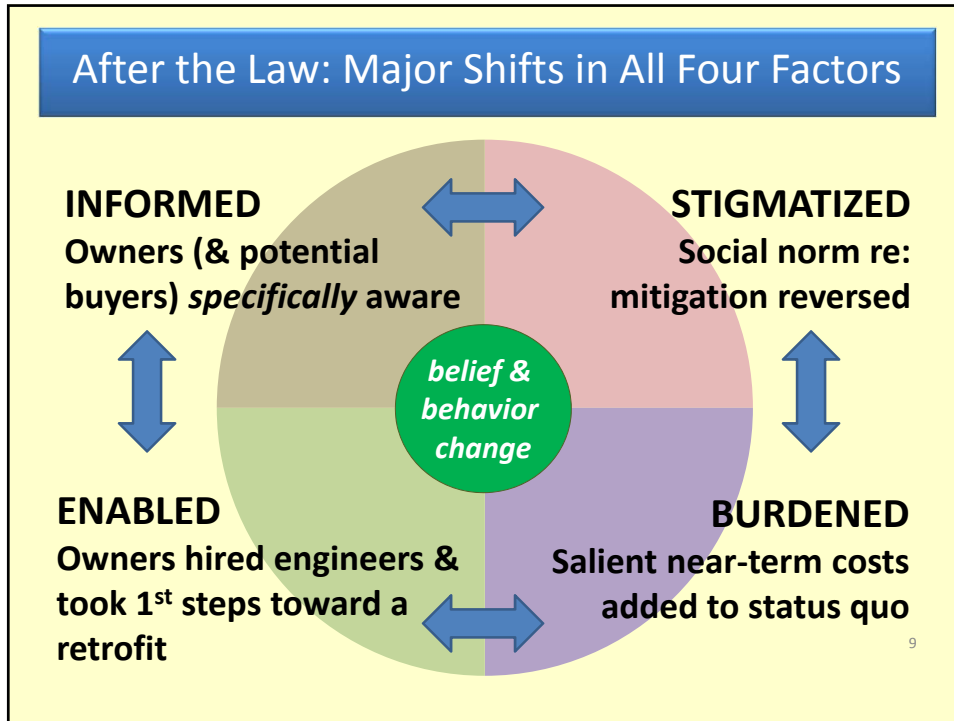


Who Owns Soft-Stories in Berkeley?

- Local small business people, trusts, family partnerships, non-profit/academic institutions
 - Mix of high/low knowledge of real estate & building trades; some rely heavily on agents
 - High personal experience with both EQs and mitigation of own home
- but...*
- EQs not a factor in rental property decisions

Before the Law: Socially-Reinforced Unrealistic Expectations

“It was after Loma Prieta, so everybody knew, but nobody was concerned because when you buy something, you think that some engineer draws the plan and...some city approve[d] it, so you figure out it’s got to be OK, and knowing other friends and other people in the industry, nobody ever had it in mind that he buys something that [was] approved but would be changed later.”



INFORMED: Traditional “Benefits-Seeking” Motivations (Protect Investment & Tenants)

“If there’s an earthquake, I don’t want the city to red-tag the building. It generates...the most income for me, so I want to do the work.”

“It was for the people’s safety and it protects us from liability and it’s the right thing to do...We were grateful we found out, that somebody told me. I wasn’t qualified to know.”

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ENABLED: Complying Put Owners Several Steps Down the Path

“I didn’t want to go through and spend all the money for the engineering report and then have to redo it when we [eventually] do the work...I just thought, how [can I] keep my costs down and not duplicate work.”

“I never considered...just starting it without finishing it. It didn’t make sense to me just [to] do it halfway.”

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The New Social Context: Retrofit is the Ideal

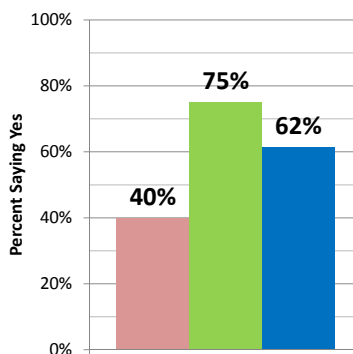
→ Listed properties are now de-valued because they are seen as vulnerable to:

- damage/injury/interrupted income stream post-EQ
and potentially...
- future regulatory mandates
- trouble w/tenants or banks

Conclusion: Most owners now know a retrofitter & think its better to be one

Know Someone Who Made Structural Improvements to Rental Property

- Retrofit Prior to Law (N=5)
- Initiated Retrofit After Law (N=22)
- No Retrofit (N=13)



STIGMATIZED & BURDENED: New Social & Individual Motivations to Retrofit

“I call it “The Leper’s List” because that’s essentially what the city is trying to do...they’re trying to get you to do the work because you want to get off of this list.”

“Well, they didn’t make me...But what are going to do if you know they’re gonna get tougher?”

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The New Social Context Re-Framed the Risk Communication “Message”

→ Non-retrofiters differed from post-law retrofitters only in:

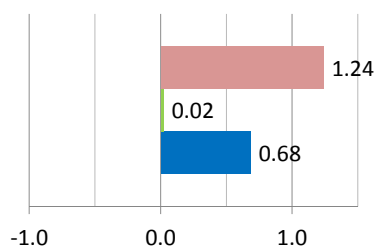
- faith in mitigation benefits
- regulatory focus

Conclusion: Adding short term downsides to not retrofitting got *prevention-oriented* people who could afford it to take action

Average Regulatory Focus Score by Group

■ Retrofit Prior to Law (N=5)
■ Initiated Retrofit After Law (N=22)
■ No Retrofit (N=11)

PREVENTION-ORIENTED ←→ PROMOTION-ORIENTED



The “Bad Building” Policy Process

5 Steps	Recommendations
1. Create Inventory	<ul style="list-style-type: none"> • Use basic criteria not engineer judgment for initial screening
2. Handle False Positives (& False Negatives)	<ul style="list-style-type: none"> • Quick, transparent appeal process
3. Choose Standards for Evaluation/Upgrade	<ul style="list-style-type: none"> • Pilot test codes & guidance • Provide template evaluations for prototypes • Facilitate competition
4. Align Incentives with Desired Behavior	(ask me later!)
5. Case Management	(ask me later!)

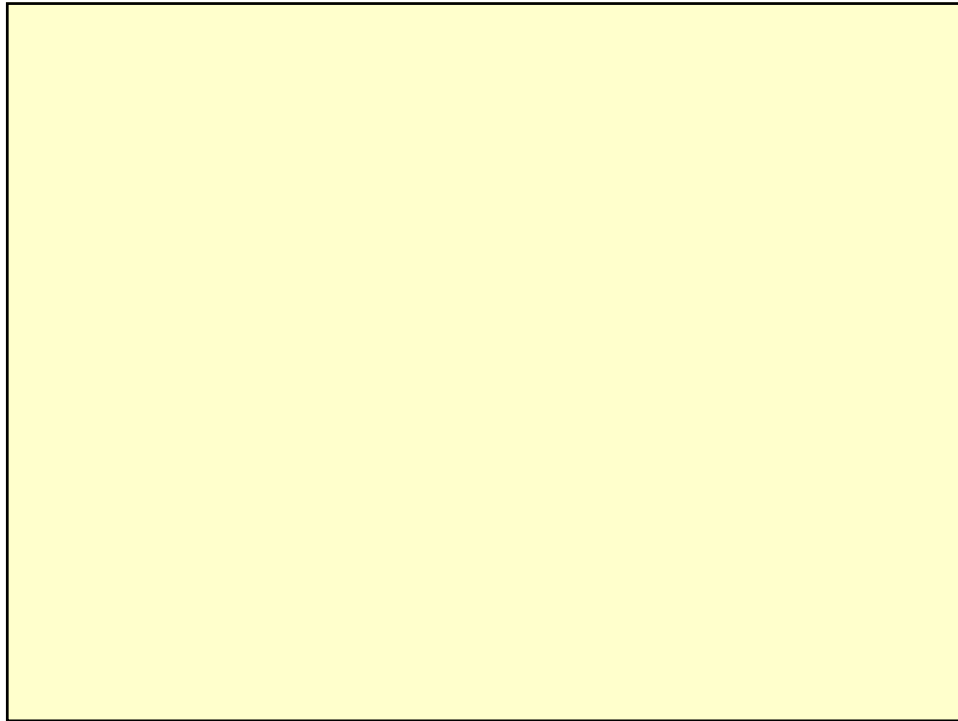
In Conclusion, Two Policy Lessons from Berkeley’s Experience

1. By activating all influence factors, mandatory evaluations change minds & (some) behavior
2. Opportunities for policy change exist outside of major events -- *if we’re ready with workable ideas*

Thank you!

Your Questions

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The “Bad Building” Policy Process

Steps 4 & 5	Recommendations
4. Align Incentives with Desired Behavior	<ul style="list-style-type: none"> • Use escalating fines for tardiness, shirking • Eliminate nuisance costs • Technical assistance & modest rewards go a long way • Offer means-tested assistance
5. Case Management	<ul style="list-style-type: none"> • Anticipate intensive customer service, long program duration • Integrate with other services, IT platforms • Maintain consistency in report reviews

What About the Buildings & Retrofits?

- 2 Building “Types” by age, height, & materials:
 - 1920-1940: 3 or 4 stories
 - 1950-1970: 2 story w/o Wood structural panel or
3 story w/Wood structural panel
- Large diversity among buildings thought to be “of a class”
- 13 pre-law retrofits, average ≈ \$50,000
75 post-law retrofits, average cost ≈ \$75,000

Barriers to Voluntary Seismic Upgrading

- Skepticism about the benefits of mitigation
- High upfront cost and *cost uncertainty*
 - Upgrading is a daunting, multi-step ordeal and the law made it even HARDER
- “Wait & see”
 - what the city does, esp. whether \$ will be offered
- Tenant disinterest
- Skepticism about the hazard
 - what’s the threshold for acceptable risk?