DISASTER MYTHOLOGY AND AVAILABILITY CASCADES

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I. INTRODUCTION

In the aftermath of Hurricane Katrina, both public officials and the mainstream media painted a dramatic and deeply disturbing picture of violence and looting in devastated New Orleans. The New Orleans Police Superintendent asserted that "little babies [were] getting raped" in the Superdome, a shelter where hurricane survivors took refuge.[1] As a guest on the Oprah Winfrey Show, New Orleans Mayor Ray Nagin reported that Katrina's survivors were sinking into an "almost animalistic state" after days of "watching hooligans killing people, raping people."[2]

Similar accounts dominated newspaper headlines and TV coverage of Katrina for days. The media consistently depicted post-Katrina New Orleans both as a city descending into anarchy and violence and as a war-zone in which Katrina's victims attacked those who had come to their aid. Epitomizing this alarming rhetoric, a *New York Times* editorial reported that New Orleans was "a snake pit of anarchy, death, looting, raping, marauding thugs, suffering innocents, a shattered infrastructure, a gutted police force, insufficient troop

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1. *Oprah Reports*, OPRAH.COM (Sept. 6, 2005), http://www.oprah.com/slideshow/ oprahshow/oprahshow1_ss_20050906/2; *see* Joseph B. Treaster & Abby Goodnough, *Powerful Storm Threatens Havoc Along Gulf Coast*, N.Y. TIMES, Aug. 29, 2005, at A1, *available at* http://www.nytimes.com/2005/08/29/national/29storm.html?scp=1&sq=Powerful%20Storm%20 Threatens%20Havoc%20Along%20Gulf%20Coast&st=cse (describing how the Superdome functioned as a designated shelter of last resort, where almost ten thousand people sought refuge).

2. Brian Thevenot, *Myth-Making in New Orleans*, AM. JOURNALISM REV., Dec. 2005– Jan. 2006, at 30, 34 (internal quotation marks omitted).

levels and criminally negligent government planning."[3] Not to be outdone, the *Financial Times* of London asserted that, at the Convention Center, another shelter of last resort for New Orleans' besieged citizens, "girls and boys were raped in the dark and had their throats cut and bodies were stuffed in the kitchens while looters and madmen exchanged fire with weapons they had looted."[4] The lead news story in the *Los Angeles Times* described National Guard troops taking "positions on rooftops, scanning for snipers and armed mobs as seething crowds of refugees milled below, desperate to flee."[5] Television coverage likewise asserted that looting had overtaken New Orleans. Television channels played clips of Katrina survivors taking goods from deserted stores in a seemingly never-ending 24-hour loop.

Yet these unrelenting tales of anarchy, violence, and chaos in post-Katrina New Orleans proved to be, at best, greatly exaggerated and, at worst, utterly false. Nearly a month after Katrina struck New Orleans, major news outlets retracted many of their previous reports of widespread violence and crime in Katrina's wake.[6] Unfortunately, the early reports have proved resilient, and the truth has never fully overtaken the myth.

II. DISASTER MYTHOLOGY AND ITS CONSEQUENCES

The myths about post-disaster human behavior that took hold in the aftermath of Katrina were not unique to that catastrophe. More than three decades earlier, disaster sociologists had identified several important public misconceptions about typical human behavior in the aftermath of disasters.[7] These misconceptions—also called "disaster myths"—include (1) the myth that widespread antisocial behavior, such as violence and looting, is common after disasters; (2) the myth

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3. Maureen Dowd, Op-Ed., *United States of Shame*, N.Y. TIMES, Sept. 3, 2005, at A21, *available at* http://www.nytimes.com/2005/09/03/opinion/03dowd.html?scp=1&sq=Maureen%20Dowd%20United%20States%20of%20Shame&st=cse.

4. Guy Dinmore, *City of Rape, Rumour and Recrimination*, FIN. TIMES, Sept. 5, 2005, at 7.

5. Ellen Barry, Scott Gold & Stephen Braun, *New Orleans Slides into Chaos; U.S. Scrambles to Send Troops*, L.A. TIMES, Sept. 2, 2005, *available at* http://articles.latimes.com/2005/sep/02/nation/na-katrina2.

6. *Compare id.*, *with* Jim Dwyer & Christopher Drew, *Fear Exceeded Crime's Reality in New Orleans*, N.Y. TIMES, Sept. 29, 2005, at A1, *available at* http://www.nytimes.com/2005/09/29/national/nationalspecial/29crime.html?scp=1&sq=Fear%20Exceeded%20Crime%27s%20Reality&st=cse, *and* Susannah Rosenblatt & James Rainey, *Katrina Takes a Toll on Truth, News Accuracy*, L.A. TIMES, Sept. 27, 2005, at A16, *and* Brian Thevenot & Gordon Russell, *Rape. Murder. Gunfights.*, NEW ORLEANS TIMES-PICAYUNE, Sept. 26, 2005, at A1.

7. E.L. Quarantelli & Russell R. Dynes, *When Disaster Strikes (It Isn't Much Like What You've Heard & Read About)*, 5 PSYCHOL. TODAY 67, 67–69 (1972).

that most disaster survivors will panic and engage in irrational flight behavior; and (3) the myth that disaster survivors commonly suffer a shock reaction that paralyzes them and interferes with their ability to respond to the disaster and care for themselves and others.[8]

Understanding how these myths gain traction during disasters is important because these misconceptions distort our legal and policy framework for disaster response and recovery. The myth of widespread antisocial activity, for example, has resulted in a U.S. legal system of disaster response that overemphasizes security risks at the expense of humanitarian efforts to rescue and care for survivors.[9] First, exaggerated reports of looting and violence post-disaster make the President more likely to deploy federal troops in a law enforcement capacity, rather than a humanitarian capacity, and less likely to deploy troops at all if the President decides for legal or political reasons not to invest federal troops with law enforcement authority.[10] Second, such exaggerated reports also tend to delay aid to survivors. After Katrina, Mayor Nagin reacted to exaggerated reports of violence and looting by diverting 1,500 New Orleans police officers from search and rescue missions to anti-looting patrol.[11] Officials also delayed delivery of desperately needed food, water, and sanitation supplies to shelters of last resort until massive military escorts could be assembled to accompany the deliveries and respond to the looting and gangs that officials expected the shipments to encounter.[12] Third, public officials may respond to inflated fears of looting and violence by implementing restrictions on freedom and freedom of movement—such as roadblocks, curfews, and vague declarations of

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8. *Id*.

9. *See* Lisa Grow Sun, *Disaster Mythology and the Law*, 96 CORNELL L. REV. 1131, 1136 (2011) (outlining deleterious effects of disaster myths on survivors).

10. *Id*. at 1152. In the aftermath of Hurricane Katrina, President Bush's advisors apparently advised him that invoking the Insurrection Act, 10 U.S.C. §§ 331–335 (2006), to federalize state National Guard units and invest those units and federal regular troops with law enforcement authority would be problematic because of the potential political ramifications of seizing control from Louisiana's female, Democratic governor. *See* Eric Lipton, Eric Schmitt & Thom Shanker, *Political Issues Snarled Plans for Troop Aid*, N.Y. TIMES, Sept. 9, 2005, at A1. Concern about sending federal troops without law enforcement authority into the chaotic environment described in the exaggerated reports then delayed commitment of federal troops to New Orleans to meet vital humanitarian needs. *See* Sun, *supra* note 9, at 1161–62.

11. *Id.* at 1174–75 (citing *New Orleans Mayor Orders Looting Crackdown*, MSNBC.COM (Sept. 1, 2005), http://www.msnbc.msn.com/id/9063708/ (recounting how New Orleans Mayor Nagin "ordered 1,500 police officers to leave their search-and-rescue mission Wednesday night . . . to stop looting that has turned increasingly hostile").

12. *Id.* at 1176; Katy Reckdahl, *The Myths of New Orleans*, TUCSON WEEKLY, Aug. 24, 2006, http://www.tucsonweekly.com/tucson/the-myths-of-new-orleans/Content?oid=1085005.

"martial law"—that may risk excessive use of force by police, interfere with response efforts, delay evacuated residents' return to their homes, and violate basic rights.[13] Private citizens may likewise react to the myth by engaging in vigilante behavior to protect themselves and their property from perceived, but largely imaginary, threats.[14] Fourth, the prevalence of the disaster myth of looting and violence convinces us to squander post-disaster political capital on enacting unnecessary looting laws, often at the expense of adopting hazard mitigation measures that might protect lives and property during the next hazard event.[15]

In addition to these concrete, detrimental effects on our legal and policy framework for disaster response, exaggerated reports of widespread looting and violence can also stigmatize disaster victims.[16] That stigma can make other communities less receptive to taking in disaster survivors, in both the short and long term. In the short term, communities may balk at setting up evacuation centers and shelters for displaced survivors. In the long term, those survivors who choose to permanently relocate to another community may face discrimination in employment and other opportunities.[17]

Katrina survivors from New Orleans faced this kind of stigma in cities where they took refuge. For example, many New Orleans residents relocated, at least temporarily, to Houston. During that time, it was widely reported in both the local and national news that Katrina survivors were responsible for a wave of crime in the Houston area.[18] Studies later disproved the existence of a "Katrina

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13.   Sun, *supra* note 9, at 1178.

14.   *Id*. at 1148.

15.   *Id*. at 1198.

16.   *See* Gail Garfield, *Hurricane Katrina: The Making of Unworthy Disaster Victims*, 10 J. Afr. Am. St. 55, 58 (2007) (describing the effects of "rampant black criminality . . . reported in news accounts" on the government's emergency response).

17.   *See* Ctr. for Soc. Work Research, Katrina Evacuees in Austin, Texas: Analysis of Needs Assessment Data 8 (2006), *available at* http://www.utexas.edu/research/cswr/katrina/Documents/City%20of%20Aus%20Final%20Report.pdf (reporting "evidence of discrimination or negative stereotypes that undermined the successful employment of evacuees who remained in Texas, particularly in the Houston area where hostility ran particularly high").

18.   *See, e.g.*, Miguel Bustillo, *Houston Grumbles as Evacuees Stay Put*, L.A. Times, Aug. 21, 2006, *http://articles.latimes.com/2006/aug/21/nation/na-evac21*. Although Katrina evacuees were stereotyped, in part, because of the high crime rates that plagued New Orleans prior to the storm, *see, e.g.*, Nicole Gelinas, *Katrina Refugees Shoot Up Houston*, City J., http://www.city-journal.org/html/eon2006-01-04ng.html ("[I]t's also irrefutable that when New Orleans was inundated with floodwaters, what flooded *out* of the Crescent City was a core criminal underclass that, before the storm, generated the highest urban murder rate in the nation."), the reports of widespread looting and violence in Katrina's aftermath contributed to the public

crime wave," ushered in by evacuees from New Orleans, but the stigma remains.[19] The stigmatization of Katrina survivors as violent criminals has also resulted in employment and housing discrimination against survivors.[20]

III. DISASTER MYTH PERPETUATION AS AN AVAILABILITY CASCADE

These detrimental consequences of the disaster myth of widespread violence and looting demonstrate the necessity of finding political and legal tools to counter the myth's perpetuation and its effects on our framework for disaster response and recovery.[21] Considering the perpetuation of disaster mythology as an "availability cascade" may be helpful in understanding the myth's spread[22] and in generating possible options for countering the myth and its consequences.

Cass Sunstein and Timur Kuran have defined an "availability cascade" as "a self-reinforcing process of collective belief formation by which an expressed perception triggers a chain reaction that gives the perception increasing plausibility through its rising availability in public discourse."[23] More simply, an availability cascade results from the "interaction of the 'availability heuristic'—a mental shortcut by which an individual judges the probability of an event by his or her ability to conjure up examples of that event—and the social mechanisms through which risk perceptions are propagated."[24]

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perception that Katrina evacuees were criminals, *see, e.g.*, Dan Vergano, *No Crime Wave Among Hurricane Katrina Evacuees*, U.S.A. TODAY, http://www.usatoday.com/weather/ storms/hurricanes/2010-02-12-hurricane-katrina-crime_N.htm (quoting disaster scholar Joseph Trainor for the proposition that "[a] crime wave spawned by evacuees is typical of 'disaster myths' seen after catastrophes").

19. *See* James Pinkerton, *Study: Katrina Crime Wave Nonexistent in Houston*, HOUS. CHRON., Feb. 15, 2010, http://www.chron.com/disp.story.mpl/metropolitan/ 6868718.html# ixzz1NV6taCRz ("A huge crime wave blamed on thousands of Katrina evacuees in Houston and other Southwest cities never happened, say criminologists who warned public officials and the media to be careful in attributing crime to the former New Orleans residents.").

20. Reckdahl, *supra* note 12.

21. *See* Sun, *supra* note 9, at 1136 (outlining legal and political measures that could help counter the harmful effects of the disaster myth).

22. *Id*. at 1150.

23. Timur Kuran & Cass R. Sunstein, *Availability Cascades and Risk Regulation*, 51 STAN. L. REV. 683, 683 (1999); Kuran and Sunstein consider examples such as Love Canal, Alar in apples, airplane safety, asbestos, and Agent Orange in their analysis of availability cascades. *See id*. at 691–703.

24. Sun, *supra* note 9, at 1150 (quoting Kuran & Sunstein, *supra* note 23, at 685).

The mental "availability" of violence and looting as disaster risks is amplified in the United States by a popular culture of disaster movies and by media reporting of disasters, both of which—not surprisingly—focus on such antisocial behavior in disasters' aftermath:

> The calm, helping behaviors typically exhibited by disaster survivors are hardly the fodder of either attention grabbing headlines or fast-paced entertainment. Those portrayals of disaster increase the mental 'availability' of violence and looting as disaster risks by proliferating examples of disaster-related violence and looting (even if those examples never, in fact, occurred).[25]

A disaster risk that has a human component—like looting and violence—may also be more "available" mentally than the underlying risks posed by the natural hazard event itself because manmade risks tend to be more salient in people's minds than those that appear to be naturally created.[26] While some academics (like Sunstein and Kuran) are likely to view this tendency to focus on and react more strongly to manmade risks than "natural risks" as a cognitive error, others (like Dan Kahan of Yale's Cultural Cognition Project) might view this tendency as a culturally mediated value judgment.[27] Regardless of

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25. *Id.*

26. *See*, *e.g.*, Kuran & Sunstein, *supra* note 23, at 709; Lennart Sjoberg, *Risk Perception: Experts and the Public*, 3 EUR. PSYCHOLOGIST 1, 1, 3, Mar. 1999 ("[P]eople seem to react much stronger to man-made risks and disasters caused by human error or negligent behavior than to disasters of a similar magnitude." (citation omitted)).

It is a truism among disaster scholars that there is no such thing as a "natural" disaster, because such disasters are caused by the interaction of human social systems with hazard events. Gilbert White, the influential geographer who shaped much early disaster scholarship, wrote more than seventy years ago that "[f]loods are 'acts of god,' but flood losses are largely acts of man." John Schwartz, Obituary, *Gilbert F. White, 94, Expert on Floods and Nature, Dies*, N.Y. TIMES, Oct. 7, 2006, http://www.nytimes.com/2006/10/07/obituaries/07white.html. The same is true for other types of "natural" disasters, as well. Nonetheless, the average citizen may be less aware of this human contribution to so-called natural disasters, and thus seems likely to view the associated risk as primarily natural (rather than manmade) in origin.

27. Sun, *supra* note 9, at 1151 (citing Dan M. Kahan, *Two Conceptions of Emotion in Risk Regulation*, 156 U. PA. L. REV. 741, 741 (2008) (asserting that "emotional apprehensions of risk reflect persons' expressive appraisals of putatively dangerous activates")). Kahan does not challenge the existence of availability cascades, but contends that shared "cultural commitments" help determine which risk perceptions are likely to take hold in certain groups and that risk perceptions are likely to "feed upon one another among persons who share cultural commitments." *See* Kahan, *supra*, at 757 ("[I]nsofar as one of the primary sources of information people have about the relationship between their values and a putatively dangerous activity is what persons who share their commitments think about it, perceptions of danger naturally feed upon one another among persons who share cultural commitments."). Thus, Kahan suggests that informational cascades are likely to be bounded by—rather than bridge—existing divides between groups with different cultural commitments. On this view,

how one characterizes this tendency, the consequence is that at least some members of the public may be predisposed to believe that violence and looting are common reactions to disasters because of the salience of those manmade risks.

Sunstein and Kuran's work on availability cascades focuses on the role of two (often interrelated) social mechanisms that produce and amplify availability cascades: "informational cascades" and "reputational cascades."[28] An informational cascade—or "bandwagon or snowballing process"—arises when individuals "base their own beliefs on the apparent beliefs of others" because those individuals lack complete information about the relevant issues.[29] Informational cascades occur, in part, because of the "bounded rationality" of human beings: individuals necessarily lack the time, resources, and mental energy to gain perfect information on every matter; therefore, individuals may be inclined to accept a particular view "simply [because] of its acceptance by others."[30] Informational cascades may be particularly likely to occur in the aftermath of disasters, which often curtail access to information by disrupting communication networks and which also bring basic survival needs to the forefront, perhaps crowding out some attempts to verify the accuracy of information received from fellow survivors and other sources. Hurricane survivors, for example, "may be inclined to believe that looting is likely to occur simply because their neighbors post signs declaring that 'Looters will be shot,' reflecting the neighbors' apparent belief that looting is a serious problem."[31] They may also be inclined to believe word-of-mouth reports from fellow survivors that looting and violence are occurring because they lack adequate means and time to verify the stories and believing a false report is likely to appear less personally costly than disbelieving a report that turns out to be true.[32]

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informational cascades usually occur in groups with shared cultural commitments, rather than spanning groups with divergent preexisting commitments. *Id.*

    28.   Kuran & Sunstein, *supra* note 23, at 685.

    29.   *Id.* at 685–86.

    30.   *Id*.

    31.   Sun, *supra* note 9, at 1151.

    32.   Because individuals often will not be aware of the true cost to them (and will not internalize the societal costs) of "false positives"—reports that reflect exaggerated or untrue claims of looting and violence, they are likely to focus on the risk to them and their families of "false negatives"—failure to raise the alarm and take proper protection against looting and violence that is actually occurring. Accordingly, individuals may be more inclined to believe exaggerated or false claims of looting and violence than to discount those claims, and the

The second social mechanism for spreading availability errors is a reputational cascade. A reputational cascade occurs when an individual embraces a certain view in her public dealings (a view which may conflict with the person's own privately held view) to garner public approval or forestall public criticism or censure.[33] For example, a state governor might call out the state National Guard to police a disaster-devastated area, not because she believes that looting and violence are likely to occur, but because she believes her constituents are concerned about those risks and will criticize her for failing to take action to counter those risks.[34] Similarly, a state legislator might propose passing or strengthening a state looting law after a serious disaster in his state, not because he believes the law is necessary to deal with disaster looting, but because he believes he can score political points with his constituents who worry about looting of their homes.

Observations gleaned from the perpetuation of disaster mythology suggest that perhaps reputational cascades should be viewed as a subset of a broader category we might term "false acquiescence cascades." Individuals may have various motivations, aside from reputational interests, for "false acquiescence"—acting and speaking as though they hold a particular view, when in fact they do not,[35] including motivations that are more public-regarding.[36] For example, during Hurricane Gilbert, one city emergency manager, who knew that "looting rarely occurs," "took very public precautions to prevent looting" in order "to convince citizens that it was safe to evacuate."[37] This example suggests that once a risk assessment has achieved a certain threshold of acceptance, individuals may acquiesce in, and even participate in, the perpetuation of that assessment, even if they disagree with it, for fear that the assessment is too widely held

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"informational cascade" will be perpetuated.

33.   *See* Kuran & Sunstein, *supra* note 23, at 686–87.

34.   Sun, *supra* note 9, at 1151.

35.   Kuran refers to this phenomenon as "preference falsification," TIMUR KURAN, PRIVATE TRUTHS, PUBLIC LIES: THE SOCIAL CONSEQUENCES OF PREFERENCE FALSIFICATION ix (Harvard Univ. Press, 1997), so these "false acquiescence cascades" might also be termed "preference falsification cascades." However, Kuran defines "preference falsification" primarily as misrepresentation of private preferences induced by "social pressures" such as reputational interests. *Id*. "False acquiescence" is intended to capture a broader range of motivations.

36.   *See* KURAN, *supra* note 35, at 3.

37.   HENRY W. FISCHER, III, RESPONSE TO DISASTER: FACT VERSUS FICTION AND ITS PERPETUATION; THE SOCIOLOGY OF DISASTER 51 (Univ. Press of Am., 3d ed. 2008).

to be effectively countered and that failure to respond to that assessment will produce adverse social consequences. We might call this subset of false acquiescence cascades "futility cascades."

Futility cascades might occur in many different contexts beyond the propagation of disaster myths. For example, a public official who is convinced of the validity of anthropogenic climate change, but whose constituency is dominated by climate change skeptics, might decide to frame government measures she believes would help mitigate climate change as promoting efficiency or reducing some other pollutant, rather than as mitigating green house gases. She might adopt this stance because she believes that public opinion on climate change is currently intransigent in her area and that framing the necessary measures as climate change mitigation will be counterproductive and will inhibit their adoption. Thus, she might publicly appear to acquiesce in climate change skepticism by implicitly or explicitly endorsing the view that the measures should only be undertaken to serve other, less controversial, goals in order to secure their implementation. Scholars have thus far given insufficient attention to the possibility that public officials (or other individuals) might acquiesce in—and even promote—a particular conception of risk for reasons that are less about bounded rationality or reputational interests and more grounded in that individual's desire to further the public good in the face of substantial and intractable opposition to what the individual views as the "correct" assessment of risk.

IV. POTENTIAL TOOLS FOR COUNTERING DISASTER MYTH PERPETUATION

Framing the perpetuation of disaster mythology as an availability cascade may be helpful in addressing the problems created by disaster myths because scholars have already identified some tools to reduce the deleterious effects availability cascades can have on risk regulation. These tools include altering the incentives of so-called "availability entrepreneurs" and insulating decision-makers from political pressures generated by availability cascades.

The first of these ideas suggests that availability cascades might be addressed by changing the incentives of those who are principally responsible for both setting the cascade in motion and perpetuating its spread. Sunstein and Kuran posit the existence of "availability

entrepreneurs," who "instigat[e] and manipulat[e] . . . availability campaigns," often to achieve some political end.[38] In the disaster myth context, at least some of those most directly involved in myth perpetuation—Hollywood producers and media—seem driven less by political aims and more by commercial concerns. These myth perpetuators seem to be unwitting "entrepreneurs" at best, at least in terms of the political and social effects of disaster mythology.

Even the incentives of some of these accidental entrepreneurs potentially could be altered, however, by imposing penalties for the perpetuation of availability cascades based on false premises. For example, Kuran and Sunstein discuss the possibility of product defamation laws as one way to deter availability cascades that exaggerate the dangers posed by particular products.[39] The parallel remedy for disaster myths might be group libel suits, brought by disaster survivors. In the case of post-Katrina New Orleans, there is evidence that the false media reporting permanently stigmatized New Orleanians as a group, as dangerous and violent people, who are undeserving of our assistance.[40] As suggested earlier, that stigma has followed many displaced Katrina survivors to their new homes (whether temporary or permanent) in other cities, making it more difficult for them to find both housing and jobs.[41] The stigmatization of New Orleans Katrina survivors may also have influenced the amount of money the country has been willing to commit to rebuilding New Orleans.[42]

However, because group libel suits have been all but eliminated by the United States Supreme Court on First Amendment grounds, they are neither a remedy for these potential harms in the U.S., nor an effective deterrent of similar myth-perpetuation in the future.[43] Nevertheless, given that the media have no obvious political

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38. *See* Kuran & Sunstein*, supra* note 23, at 733; *see also id*. at 713 ("Availability cascades do not appear randomly. For one thing, activists choose which dangers to stress publicly. For another, if an availability cascade is to unfold, enough people must initially be receptive to it.").

39. *Id*. at 749–51.

40. Garfield, *supra* note 16, at 58.

41. *See* Reckdahl, *supra* note 12 (recounting anecdotes of discrimination suffered by displaced New Orleans residents in Houston).

42. *Id*.

43. Although the Supreme Court upheld the constitutionality of a statute making it unlawful to engage in group libel against a "class of citizens," *Beauharnais v. Illinois*, 343 U.S. 250, 251–57 (1952), this holding has been severely undermined by the Court's subjection of defamation law to First Amendment inquiry under *New York Times v. Sullivan*, 376 U.S. 254 (1964).

motivation for perpetuating disaster mythology and have at least an aspirational commitment to truth, a targeted information campaign that exposes disaster mythology and suggests other attention-grabbing headlines (like dramatic rescues) might succeed in decreasing media reporting of disaster myths.[44]

Disaster sociologists Kathleen Tierney and Christine Bevc have perhaps identified a more purposeful availability entrepreneur of looting and violence mythology by positing that those who favor militarism in society will tend to perpetuate mythology that sets the stage for militarized disaster response.[45] Other potential myth perpetuators include law-enforcement agencies in the affected areas, who might fear losing control and might hope that rumors of looting and violence will result either in outside reinforcements or loosening of constitutional or other restraints on law enforcement activities (as under the popular conception of "martial law").[46] Local public officials (as well as business owners and disaster survivors in affected areas), desperate for a quick influx of outside aid, might also exaggerate law-and-order difficulties on the ground in an effort to spur faster state and federal response.[47] The same officials might exaggerate law-and-order difficulties for an entirely different reason: to justify and excuse slow or inept governmental response.[48] Conversely, political opponents of current officeholders might attempt to get a jump-start on the "blame game" that often follows natural disasters[49] by exaggerating the prevalence of looting and violence in the disaster's aftermath. More fundamentally, emphasizing that disaster-induced governmental breakdown or incapacity results in a kind of Hobbesian state of nature among survivors may justify more mundane, everyday governmental exercises of power outside the disaster context, as well, by reaffirming that only government stands between us and chaos.

Some of these incentives to perpetuate the disaster myth could

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44.   *Cf.* FISCHER, *supra* note 37, at 93 (reporting that education in disaster myths improved the accuracy of two newspaper reporters' coverage of a local disaster).

45.   *See* Kathleen Tierney & Christine Bevc, *Disaster as War: Militarism and the Social Construction of Disaster in New Orleans*, *in* THE SOCIOLOGY OF KATRINA: PERSPECTIVES ON A MODERN CATASTROPHE 35, 39 (David L. Brunsma et al. eds., 2007).

46.   *See id*. at 1182.

47.   *See id*.

48.   *See id.*

49.   *See*, *e.g.*, J. Steven Picou & Brent K. Marshall, *Introduction: Katrina as Paradigm Shift: Reflections on Disaster Research in the Twenty-First Century*, *in* THE SOCIOLOGY OF KATRINA *supra* note 45, at 1, 13.

potentially be countered by amending disaster laws and plans to preclude the outcomes the "availability entrepreneurs" seek. For example, the Insurrection Act,[50] which allows the President to invest federal military troops (or federalized National Guard troops) with law enforcement powers during, *inter alia*, "insurrections,"[51] could be interpreted narrowly to preclude the President from deploying federal military as disaster police absent clear evidence of widespread rebellion against government authority. Making clear that there is a substantial threshold that must be met before investing military with law enforcement authority during natural disasters might convince would-be availability entrepreneurs who favor militarization of disaster response that exaggerating law-and-order difficulties to force the militarization of the federal response would likely be futile.[52] Similarly, if the relevant state and local disaster laws preclude the imposition of martial law during a disaster (or the suspension of federal constitutional rights), local police may be less likely to exaggerate rates of looting and violence because they know that such rumors cannot be invoked to justify restrictions on basic rights.[53] Making clear to local officials that, historically, attempts to speed aid by overplaying law-enforcement concerns have often backfired, slowing the delivery of aid and interfering with recovery efforts, might also mitigate public officials' incentives to perpetuate inflated rumors of violence and looting.[54] These mechanisms for disincentivizing myth perpetuation may be important tools for countering disaster mythology.

The second of Kuran and Sunstein's ideas suggests reliance on politically insulated, deliberative expert decision-makers as a solution to the arguably irrational risk regulation spurred by availability cascades.[55] In particular, they recommend that these politically insulated decision-makers employ cost-benefit analysis. Dan Kahan

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50.   10 U.S.C. §§ 331–335 (2006).

51.   *Id*.

52.   *See* Sun, *supra* note 9, at 1170. There is always the possibility, of course, that insisting on a high threshold of looting and violence before the Insurrection Act can be invoked (or other protective measures authorized) might actually lead local officials to exaggerate claims of looting and violence to demonstrate that the triggering threshold has been met. Social scientists should continue, where possible and appropriate, to undertake careful empirical study of the effects of different triggering thresholds on the exaggeration of looting and violence during disasters, and the law should respond to their findings accordingly.

53.   *Id*. at 1182.

54.   *Id*. at 1178.

55.   Kuran & Sunstein, *supra* note 23, at 752–58.

criticizes this proposal, arguing that emotional assessments of risk reflect cultural value judgments that may be entitled to some weight in policy-making, which therefore should be democratically accountable rather than insulated from politics.[56]

What kinds of cultural value judgments might contribute to a heightened willingness to believe that post-disaster looting and violence are serious disaster risks that should be prioritized over other risks that exist in a disaster's aftermath? Perhaps some individuals believe it is worse to have property stolen by looters than to have it destroyed by the hazard itself. Similarly, some individuals might believe it is worse to be injured or killed in post-disaster violence than by either the hazard event or the humanitarian crisis the disaster may trigger. While it is possible that such cultural commitments exist, they may do substantial harm to others who do not share these commitments (by, for example, delaying aid).[57] Moreover, it seems equally likely—if not more likely—that the myth of post-disaster violence has found a warm reception with at least some audiences because of racism and classism[58] or because of a propensity to blame victims in order to justify the status quo[59]— cultural commitments that clearly should not be given weight in policy-making.

Although Kahan's concerns do not seem particularly weighty in this context, assigning disaster decision-making to politically insulated experts would nonetheless be problematic. The decisions made in a disaster's immediate aftermath about issues such as response priorities and curfews seem like particularly poor candidates for insulated, deliberative expert decision-making. First, in contrast to most risk regulation that Congress undertakes, lives at stake in disaster decision-making are not vague, unidentifiable victims reduced to statistics, but concrete, more easily identifiable individuals whose lives and wellbeing are immediately affected. Local citizens, rightly, will demand that their elected officials make such critical

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56. *See* Kahan, *supra* note 27, at 760–61.

57. Kahan himself acknowledges that not all such value judgments are entitled to weight in the democratic process, particularly if imposing those judgments on others "exposes [them] . . . to significant physical harm or restrictions on liberty." Dan M. Kahan & Paul Slovic, *Cultural Evaluators of Risk: "Values" or "Blunders"?*, 119 HARV. L. REV. 171 (2006). In any event, I reject politically insulated decision-makers for some of the same reasons Kahan does.

58. Sun, *supra* note 9, at 1149.

59. Jaime L. Napier, Anesu N. Mandisodza, Susan M. Andersen & John T. Jost, *System Justification in Responding to the Poor and Displaced in the Aftermath of Hurricane Katrina*, 6 ANALYSES OF SOC. ISSUES & PUB. POL'Y 57, 64 (2006).

decisions. Second, all the planning in the world cannot anticipate the precise problems, demands on resources, and trade-offs that will have to be considered in a particular disaster situation. Much of the critical information will not be available until the disaster occurs—and even then serious information gaps will likely exist. Moreover, decisions will have to be made under tremendous time pressure in order to minimize deaths, injuries, and property damage.[60] These circumstances will generally require quick executive action rather than deliberative decision-making by some politically insulated body. Third, most disaster decision-making occurs at state and local levels. Given this multiplicity of decision-makers, it is difficult to imagine that each state or locality would have the political will or the resources to employ insulated experts for disaster decision-making. This is particularly true given the uncertainty about which localities will actually suffer major disasters and be forced to call upon those decision-makers.

Nonetheless, there is significant value in ensuring that disaster decision-makers have access to advice and counsel from emergency-managers who are educated in the pitfalls of disaster mythology. Thus, a first step toward countering disaster mythology may be legally requiring[61] or otherwise incentivizing[62] states and local governments to

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60. Of course, disaster priorities and plans can and should be put in place before disasters occur. *See* David A. Super, *Against Flexibility*, 96 CORNELL L. REV. 1375, 1380 (2011) (arguing that disaster decisions often should be made in advance, rather than procrastinated until the time of a disaster, because "while information typically becomes more plentiful over time, other inputs to legal decisions, particularly decisional resources, often become scarcer"). In practice, however, disaster planning sometimes tends to veer toward the production of what disaster sociologist Lee Clarke terms "fantasy documents," which serve primarily to reassure an organization's constituencies rather than provide effective blueprints for disaster response. *See generally* LEE CLARKE, MISSION IMPROBABLE: USING FANTASY DOCUMENTS TO TAME DISASTER (U. Chi. Press, 2001). As a descriptive, if not normative matter, some gaps in planning are to be expected. Moreover, some types of disaster decisions—like planning how buses will be used to evacuate populations who lack personal transportation, *see* Super, *supra*, at 1448—are more amenable to advance decision-making than others because some decisions do not depend on precise information about where a disaster strikes and what kind of damage it inflicts.

61. *See* GA. CODE ANN. § 38-3-27(a)(3)(F)-(G) (2007) (requiring, in most circumstances, that directors and deputy directors of local emergency management organizations hired after July 1, 1999, be certified under the Georgia Emergency Management Agency's Certified Emergency Manager Program and comply with continuing education requirements); *see also* CONN. GEN. STAT. ANN. § 28-1a (West 2007) (requiring that the commissioner of the Connecticut Department of Emergency Management and Homeland Security "possess professional training and knowledge consisting of not less than five years of managerial or strategic planning experience in matters relating to public safety, security, emergency services and emergency response").

hire emergency managers who have sufficient education or experience in managing disasters. Insisting that state and local emergency-managers fulfill continuing education requirements would also be valuable, particularly if the curriculum specifically requires education about disaster mythology. Similarly, the relatively new requirements for the Federal Emergency Management Agency (FEMA) administrator, imposed by the Post Katrina Emergency Management Reform Act of 2006,[63] are an important step toward ensuring that federal decision-makers have more expert input.[64]

Some empirical evidence supports the conclusion that education of local emergency managers would be beneficial in counteracting disaster mythology. Although local emergency-managers are more aware of disaster myths than the general public,[65] research suggests that many still believe important components of disaster mythology. In a recent survey of local emergency-managers, an overwhelming majority (85%) "understood that survivors usually are the first to engage in search and rescue activities,"[66] but only half (50%) realized that victims generally do not panic during a disaster.[67] "Less than half

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62. *See* ALA. CODE § 31-9-61 to -62 (LexisNexis 2006) (encouraging local emergency managers to meet state certification—which requires at least two years of college education, three years of relevant work experience, and 200 hours of state emergency management coursework—by providing salary supplements to certified emergency management directors or, if their salaries already meet a certain threshold, providing the employing entity "an additional allocation of federal funds" for local planning and mitigation programs).

63. Pub. L. No. 109-295, §§ 689b(b)-689c, 120 Stat. 1394, 1449 (codified at 6 U.S.C. §§ 774–75 (2006)).

64. *See* 6 U.S.C. § 313 (2006) (requiring that the FEMA administrator have "a demonstrated ability in and knowledge of emergency management and homeland security" and "not less than 5 years of executive leadership and management experience in the public or private sector"). These requirements were imposed largely in reaction to President Bush's appointment of Michael Brown, who lacked any significant emergency management experience, as FEMA Director, which was widely viewed as political cronyism that cost Katrina victims dearly. *See, e.g.*, Paul Krugman, Op-Ed, *All the President's Friends*, N.Y. TIMES, Sept. 12, 2005, at A1, *available at* http://www.nytimes.com/2005/09/12/opinion/12krugman.html. In contrast, the current FEMA Administrator, Craig Fugate, is widely regarded as a capable and experienced emergency manager. *See* Ginger Thompson, *Emergency Manager Chosen for FEMA*, N.Y. TIMES, Mar. 5, 2009, http://query.nytimes.com/gst/fullpage.html?res=9401EEDD113DF936A35750C0A96F9C8B63.

The Post-Katrina Act "also aims to increase the professionalism and expertise of FEMA staff by requiring FEMA to develop a 'strategic human capital plan,' and establish 'appropriate career paths'—including requisite training, education, and experience—for agency personnel." DANIEL A. FARBER, JIM CHEN, ROBERT R.M. VERCHICK & LISA GROW SUN, DISASTER LAW AND POLICY 135 (2d ed. 2010) (quoting 5 U.S.C. §§ 10102, 10103 (2006)).

65. *See* FISCHER, *supra* note 37, at 124–25.

66. *Id.* at 125.

67. *Id.* at 126.

(46%)" of those surveyed "knew that survivors usually do not behave irrationally due to the shock of the experience."[68] Thirty-nine percent believed that residents will engage in looting.[69]

Those local emergency managers who had taken more training courses, experienced at least two disasters, worked as emergency managers for more than five years, or had additional education had more accurate views of post-disaster human behavior.[70] Neither general work experience in the disaster field nor participation in disaster drills was positively correlated with more accurate views.[71] "Education had a greater impact than disaster experience, or any of the job experience variables (training seminars, drills, years on the job, and years in the field)."[72] The survey results suggest that "hiring individuals with a college degree and then involving them in an on-going [emergency-management] training program is optimal."[73] Requiring that emergency-managers be college-educated may pay dividends in other respects, as well. Evidence suggests that the only factor positively correlated with an emergency manager's adoption of mitigation measures (to prevent future disaster costs) is increased education.[74]

Of course, having more highly educated, better-informed decision-makers is not a full solution to the problems created by disaster mythology. Indeed, as discussed earlier, even the best-educated decision-makers may feel they have little choice but to indulge the general public's fear of violence and looting by taking very public steps to reassure people in harm's way that they can safely evacuate their homes because the National Guard or police stand ready to thwart potential looters. Decision-makers may reasonably fear that, without such reassurances, many will fail to evacuate.

For example, Thomas Drabek, a groundbreaking disaster sociologist, has suggested that the best approach to dealing with the disaster myth of extensive post-disaster looting is to allay public fears by creating an "impression" that law enforcement is prepared to

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68. *Id*.
69. *Id*.
70. *Id*. at 127–28.
71. *Id*. at 128.
72. *Id*.
73. *Id*. at 129. Of course, local budget constraints may make hiring more educated emergency managers difficult, especially given that in some smaller cities and rural areas, emergency managers may be part-time or may have multiple, unrelated job functions.
74. *See id*. at 149–52.

prevent looting by heavy policing of the disaster area.[75] Drabek suggests that local officials should "emphasize security" when dealing with the public and should "communicate loudly and clearly that security will be tight."[76] In addition, Drabek suggests that local law enforcement should "buttress" its forces with a "citizens' patrol."[77]

Unfortunately, however, these solutions are prime examples of false acquiescence futility cascades that perpetuate both the myth itself and the deleterious consequences the myth engenders. While Drabek warns against "overallocat[ing] resources" to looting patrols,[78] official announcements that such patrols are necessary are likely to prompt additional media reporting of the myth and to bolster the public's belief that looting and violence are typically serious problems in a disaster's aftermath.[79] Those heightened public fears, in turn, may increase public demand for excessive security measures that divert resources from other, more pressing needs. Law enforcement may also rely on those public fears to justify unnecessary restrictions on freedom and freedom of movement post-disaster. Moreover, Drabek's suggestion that a citizens' patrol be assembled to police for looting may well risk the kind of vigilante violence that was observed after Katrina. Indulging and reinforcing public fears of looting seems unlikely to be the right answer.

The need for effective public education to counter the disaster myth of pervasive looting and violence is evident. Unfortunately, the challenges facing successful education campaigns are both real and difficult to surmount. Sunstein, for example, is sufficiently skeptical of the value of public education in countering overblown risk assessments that he asserts that the best solution is often to "[c]hange the subject."[80] Despite Sunstein's well-founded skepticism, carefully designed disaster public-information campaigns, like environmental education and youth anti-smoking campaigns,[81] may nonetheless be

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75. THOMAS E. DRABEK, THE HUMAN SIDE OF DISASTER 97 (CRC Press, 2d ed. 2010).

76. *Id*.

77. *Id*.

78. *Id*.

79. *Cf*. GEOFFREY R. STONE, PERILOUS TIMES: FREE SPEECH IN WARTIME 539 (2004) (acknowledging that aggressive government action taken to ward off excessive public fears of terrorism "affirms the legitimacy of the fear").

80. *See* CASS R. SUNSTEIN, LAWS OF FEAR: BEYOND THE PRECAUTIONARY PRINCIPLE 125 (Cambridge Univ. Press, 2005) (suggesting that the best approach to managing public overreaction to "low probability risks" is often "[c]hang[ing] the subject").

81. *See, e.g.*, Matthew C. Farrelly et al., *Evidence of a Dose-Response Relationship Between "Truth" Antismoking Ads and Youth Smoking Prevalence*, 95 AM. J. PUB. HEALTH 425, 425,

among the most effective tools for countering disaster mythology. Public information campaigns could, for example, publicize the real tradeoffs that occur when the myth encourages public officials to prioritize law enforcement needs over search-and-rescue and other basic humanitarian relief. A greater public understanding of the costs of disaster myth perpetuation—including the real risks that aid will be delayed to those in need—might help halt the spread of information cascades during disasters as individuals will have a better sense that crediting and spreading "false positive" reports of violence and looting has real costs—costs that might affect them individually or their family, friends, and neighbors.[82] Dampening information cascades would, in turn, likely diminish the strength of false acquiescence cascades, including both the reputational cascades identified by Kuran and Sunstein and the futility cascades identified in this article.

Moreover, emotional risk assessments that reflect value judgments of the type identified by Kahan are most likely to be reshaped by public information campaigns that focus on altering the social meaning of disasters and reframing the values at stake. While the exact content of such campaigns would probably vary from community to community,[83] if public information campaigns can help reconceptualize natural disasters as events that generally bring out the best in both people and communities, those campaigns might increase public skepticism about rumors of disaster atrocities and about the need for draconian military and police intervention.

In altering people's conception of natural disasters, one substantial obstacle that public information campaigns will likely encounter is the phenomenon of "biased assimilation":

> Biased assimilation refers to the fact that people assimilate new information in a biased fashion; those who have accepted false rumors do not easily give up their beliefs, especially when they have a strong emotional commitment to those beliefs; it can be

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428–30 (Mar. 2005) (suggesting that anti-smoking campaigns contributed to declines in youth smoking rates); Michael P. Vandenbergh, Jack Barkenbus & Jonathan Gilligan, *Individual Carbon Emissions: The Low-Hanging Fruit*, 55 U.C.L.A. L. REV. 1701, 1722 (2008) (finding that "[r]ecent literature reviews have concluded that more than half of the well-designed and funded [public information campaigns intended to promote individual behavioral changes that help the environment] have resulted in significant and positive behavior change").

82. *See supra* text accompanying note 31.

83. *See* Kahan, *supra* note 27, at 764–65 (suggesting that risk education will be most effective if it "affirms rather than denigrates recipients' cultural identities" and transforms the "social meaning" of the relevant risk).

exceedingly hard to dislodge what people think, even by presenting them with the facts.[84]

"Biased assimilation" thus encapsulates the common-sense notion that people tend to process new information in light of their preexisting beliefs; their precommitments are particularly likely to influence their assimilation of new information if they have a strong emotional attachment to, or other investment in, those preexisting beliefs.[85]

News coverage of Japan's March 2011 earthquake and tsunami provided an interesting illustration of biased assimilation in the context of the disaster myth of widespread looting and violence. In the aftermath of the devastating earthquake and tsunami, news sources reported—often with surprise—that there was very little looting taking place in Japan.[86] Rather than entertaining the possibility that the lack of looting in Japan might reflect a broader truth about human nature that should cause us to reconsider our deeply held—and mistaken—beliefs about post-disaster human behavior, newspapers and pundits sought to "explain away" the lack of looting as the result of some unique characteristic of Japanese society or culture.[87] Indeed, rather than prompting reconsideration of the Katrina news coverage or discussion of the fact that much of the early Katrina reporting was overblown and inflammatory, many media reports on the Japan earthquake simply resuscitated and repeated the exaggerated claims of looting and violence perpetuated in Katrina's immediate aftermath.[88] The news reports contrasted the

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84.   CASS R. SUNSTEIN, ON RUMORS: HOW FALSEHOODS SPREAD, WHY WE BELIEVE THEM, WHAT CAN BE DONE 9 (2009) (emphasis omitted).

85.   *Id.*

86.   *See, e.g.*, Susan Donaldson James & Russell Goldman, *Japanese, Waiting in Line for Hours, Follow Social Order After Quake*, ABC NEWS, http://abcnews.go.com/Health/japan-victims-show-resilience-earthquake-tsunami-sign-sense/story?id=13135355   ("As   Japanese survivors cope with food and gasoline shortages amidst the aftershocks and rising body count, they draw on a sense of social order. Unlike scenes in natural disasters in Haiti and New Orleans, there is little anger, no looting.").

87.   See Sun, *supra* note 9, at 1144 (citing, e.g., Christopher Beam, *Stop, Thief! Thank You.*, SLATE (Mar. 16, 2011), http://www.slate.com/id/2288514/ (attributing the lack of looting in Japan to specific features of the Japanese legal system and Japanese culture); *see also* Lisa Grow Sun, Op-Ed., *Disasters Bring Out the Best in People*, SALT LAKE TRIB., Mar. 26, 2011, http://www.sltrib.com/sltrib/opinion/51497668-82/looting-disasters-violence-disaster.html.csp.

88.   *See* Sun, *Disasters Bring Out the Best in People*; Pichai Chuensuksawadi, Op-Ed., *Stoic Calm in the Face of Utter Calamity*, BANGKOK POST, Mar. 15, 2011, http://www.bangkokpost.com/opinion/opinion/226703/stoic-calm-in-the-face-of-utter-calamityi (comparing the calm reaction to the earthquake in Japan to purported "chaos and anarchy" in response to Katrina in New Orleans).

calm, orderly behavior of Japanese survivors with the imagined behavior of Katrina's survivors.

The difficulties of rooting out firmly entrenched beliefs about looting and violence after disasters suggest that public education campaigns might be most effective if they are focused on the youngest citizens. Many elementary schools provide children with basic information about disasters (by, for example, conducting earthquake drills). Education campaigns that teach children that while disasters are tragedies, they are tragedies that usually bring communities together, rather than tearing them apart in chaos and crime, might be effective in creating a less-jaundiced view of post-disaster human behavior among individuals who have yet to form strong opinions about the likelihood of looting and other criminal behavior in disasters' aftermath. Any such campaigns should, of course, be subjected to empirical analysis to evaluate their effectiveness over time.

V. CONCLUSION

Disaster myths—particularly the myth of widespread looting and violence—interfere with effective disaster response and recovery. The spread of disaster myths can be usefully analyzed as an availability cascade. Although there is certainly no panacea for the problem of disaster mythology, that analysis suggests that the spread of disaster mythology can perhaps be mitigated by changing the incentives of availability entrepreneurs who might otherwise perpetuate the myth, by hiring better-educated emergency managers to advise local officials in disaster decision-making, and by creating targeted public information campaigns—particularly campaigns aimed at young people—that will help alter the social meaning of disasters. While these approaches are unlikely to completely halt the perpetuation of disaster mythology, they are important first steps in promoting a more accurate understanding of typical post-disaster behavior and designing the most effective policy and legal framework for disaster response and recovery.