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Hoping for the best, unprepared for the worst☆

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ABSTRACT

We explore the incentives for a career-minded policymaker to take preventative action to protect a principal against a possible crisis. The policymaker's ability and the action he takes are unobserved, but the principal draws inferences about the policymaker's ability based on the resulting outcome before deciding whether to retain him. When the crisis is potentially catastrophic, it is in the principal's interest for the policymaker to take preventative action. However, when the crisis is sufficiently rare, he fails to do so. Instead, the policymaker directs his efforts toward activities that enhance the principal's welfare when the crisis doesn't materialize. This distortion is driven by the policymaker's desire to be retained together with the inability of the principal to observe the policymaker's action. Our framework provides a novel explanation for why policymakers often fail to prepare effectively for rare disasters and other potential crises and contributes to a growing literature on electorally induced distortions in multi-task problems.

"*No one will ever get reelected for avoiding a crisis.*" — Barney Frank (D-Mass), Former Chairman of the House Committee on Financial Services.[1]

In the wake of any disaster, the inevitable question is whether more should have been done to prevent it. Often the event that triggered the disaster was foreseeable, but the responsible individuals failed to take the necessary actions that could have mitigated the resulting damage. For instance, many have argued that the damage caused by Hurricane Katrina was predictable and would have been less severe if the officials in charge had ensured that the levees could withstand a large hurricane (Irons, 2005).[2] Others have suggested that if either Congress or banking regulators had ensured that financial institutions had enough capital on hand to withstand a sharp decline in asset prices, the popping of the housing bubble would have been less painful (Nocera, 2011; Satow, 2008). Additional areas of public policy in which it is argued officials are not doing enough include addressing the long-term solvency of entitlement programs (Ferrara, 2011), reducing pollution that might contribute to climate change (Friedman, 2009; "Words are not Enough", 2012), securing "loose nukes" in post-Soviet Russia (Allison, 2005), and protecting the U.S. electrical grid from sabotage (Noonan, 2014).[3]

In this paper, we consider why electorally accountable policymakers may rationally under-invest in important preventative measures. The previous literature has established that voters reward elected officials for a good response in the wake of a crisis (Healy and Malhotra, 2009; Reeves, 2011), creating the incentive for elected policymakers to work hard to ameliorate the consequences of a disaster once it occurs. However, it does not appear that policymakers respond to the possible punishment for a substandard response with robust preventative measures. Rather, empirical evidence suggests that policymakers under-invest relative to the socially efficient level of crisis preparation, and that such

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[1] Quoted by former Treasury Secretary Hank Paulson, describing conversations between Secretary Paulson and Congressman Frank regarding the difficulties in convincing Congress to approve stabilization measures in the days after Lehman Brothers filed for bankruptcy (Paulson, 2010, 261).

[2] As early as 2001 FEMA ranked hurricane damage to New Orleans "among the three likeliest, most catastrophic disasters facing the country" (Berger, 2001). This, along with other evidence, led Irons (2005, 14) to conclude in his essay on Hurricane Katrina that "The threats posed by the hurricane, and the likely aftermath, were well known and unsurprising to most who thought about the hurricane threat to New Orleans. Unfortunately, much of the local, state, and federal leadership, especially the U.S. Army Corps of Engineers, appears to have remained complacent about preparing the levees for a catastrophic hurricane."

[3] Following the public revelation in February of 2014 of an attack on a California power grid in April of 2013, Peggy Noonan wrote in her weekend op-ed column that "In 2006 I met with some congressional aides and staffers to talk, informally, about what questions should be in the country's hierarchy of worries. They were surprised when I told them a primary concern of mine was electricity, how dependent we are on it, how vulnerable the whole system is. I asked if there was any work being done to strengthen the grid. Blank faces, crickets" (Noonan, 2014, A17). Noonan concludes her column with the general observation that "You always want to think your government is on it. You want to think they see what you see. But really, they're never on it. They always have to be pushed."

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under-investment goes unsanctioned by the electorate (Healy and Malhotra, 2009). Further, there is some evidence that increased electoral accountability may actually exacerbate the problem of under-investment in prevention (Choe and Raschky, 2012).

Various explanations have been offered for why adequate preventative measures are not taken. It has been suggested that special interests may impede preventative action (Bazerman and Watkins, 2008; Posner, 2004, 133–138), or that organizational redundancies induce less care among policymakers, thereby increasing the risk of a catastrophe (Benoit and Dubra, 2013; Goodspeed and Haughwout, 2012; Wildasin, 2011).[4] Others have argued that psychological and cognitive factors can lead policymakers to underestimate the expected damage from unlikely threats (Bazerman and Watkins, 2008), or that voter myopia may incentivize under-investment by policymakers (Healy and Malhotra, 2009, 402).

In what follows, we abstract away from the above considerations, and consider a setting with fully rational voters and policymakers, no interest groups, and no organizational redundancies. Even in the absence of these frictions, we show that so long as policymakers are primarily motivated by being retained, and voters have difficulty observing how policymakers allocate their effort across competing objectives, policymakers will under-invest in preparation for rare, but potentially catastrophic, events. More generally, we show that there can be a disconnect between how voters would like policymakers to allocate their effort and how policymakers choose to do so, with policymakers allocating effort where it's most likely to have a positive effect as opposed to where it's most needed.

Specifically, we analyze a setting in which there are two states of the world, a rare state and a common state.[5] Crucially, if the policymaker prepares for a given state, this enhances the principal's welfare if, and only if, that state is realized. In our leading application, in the rare state, the policymaker and the principal he represents are confronted with a crisis, such as a large hurricane or earthquake, whereas in the common state no such event materializes. Hence, by preparing for the rare state, the policymaker can prevent a crisis from turning into a large-scale catastrophe, whereas, by preparing for the common state, the policymaker can make a positive situation even better.

The principal's utility depends not only on the realized state and the policymaker's preparation decision but also on the policymaker's underlying managerial ability, which is initially unknown to the principal (as well as to the policymaker). As the policymaker has limited resources, he must choose how to allocate his effort between preparing for the rare state and the common state. While the principal does not observe the policymaker's preparation decision, she does observe the realized state and her realized utility before deciding whether to reelect the policymaker. Such observations allow the principal to make inferences about the incumbent policymaker's ability. These inferences, in turn, determine whether the principal reelects the incumbent. The incumbent is motivated by reelection, and, being forward looking, the principal retains the incumbent if and only if she believes his ability exceeds that of his potential replacement.

Our main result is that, when the rare state is sufficiently unlikely to be realized, the policymaker will focus all of his effort on preparing for the common state, *even if the principal would prefer that he focused on preparing for the rare state*. As the incumbent's objective is to maximize his probability of being retained, he will choose his effort so as to maximize the probability the principal believes his ability is greater than his replacement's. And since effort spent preparing for a given state can only enhance perceptions of the incumbent's ability when that state is realized, effort will not be directed toward preparing for a state that is unlikely to occur. Hence, regardless of how large the returns to effort are in the rare state, when the rare state is sufficiently unlikely, the incumbent will not devote any effort toward preparing for it. Instead, all effort will be directed toward the common state.[6]

To further develop intuition for this result, suppose that the incumbent was expected to allocate a positive amount of effort preparing for the rare state. Then, by devoting all of his effort toward preparing for the common state, the incumbent can induce the principal to overestimate his ability in the common state at the expense of underestimating his ability in the rare state. This results in an electoral boost in the common state and an electoral loss in the rare state relative to when he allocates effort toward the rare state. That said, the electoral loss in the rare state is bounded, as the probability of reelection in every state is between zero and one. So, if the rare state is sufficiently unlikely, this deviation would enhance the incumbent's overall probability of reelection. Hence, when the rare state is sufficiently rare, preparing for it will be inconsistent with equilibrium behavior.

Turning to the model's comparative statics, we show that a greater probability of a crisis can increase the principal's welfare. Since adequate preparations can provide a large boost to the policymaker's retention probability should a crisis materialize, policymakers will have a greater incentive to prepare for those crises that are more likely to occur. This makes it possible that an exogenous increase in the likelihood of a crisis can be beneficial, provided that two conditions are met: First, the increased risk of a crisis translates into greater preparation, and, second, that such preparation is sufficiently effective at mitigating the losses that result when a crisis materializes.

While our analysis is motivated by the failure of governments to prepare for rare crises, our results on under-preparedness hold in any environment in which one state is sufficiently rare but there is a large return to effort on that state. In the case of a crisis, the returns to preparation can be large since such preparation can potentially prevent catastrophic losses. Returns could also be large because the failure to prepare will preclude the possibility of sizeable upsides. For example, under certain conditions, significant positive externalities could be generated if the government provided timely support to industries on the verge of major technological breakthroughs (Mazzucato, 2015); however, if these conditions are rarely met, our analysis suggests that incumbent politicians will be unprepared to facilitate such breakthroughs. In short, not only do our results help us understand why politicians under-prepare for rare, but potentially catastrophic events, but they also shed light on why politicians may be unprepared to seize rare opportunities when they arise.

Further, we show that our results concerning under-preparedness for rare events do not depend on the principal being able to observe the state of the world. While observability of the state of the world may be a reasonable assumption when analyzing government preparedness for natural disasters, as voters can observe the presence or absence of earthquakes and hurricanes, it may be less reasonable when analyzing government preparedness for potential foreign threats or financial crises. For instance, voters may not be able to distinguish a situation where there are no threats to the financial system from one in which a threat is met with effective preparation.

By providing a model in which the desire to be perceived as able can lead policymakers to under-prepare for rare events, our model contributes to a literature that explores how reputational concerns can lead to distortions in policymaking.[7] Within this literature, there are different ways a policymaker's ability can influence the principal's welfare. One

[4] The effect of institutional redundancies on the care taken by individuals in an organization is a classic topic in political science and sociology. See Ting (2003) for analysis of this problem and an overview of the literature.

[5] We later generalize our analysis to a setting with an arbitrary number of states of the world.

[6] That a policymaker's effort on a task is increasing in the extent to which the principal can observe the outcome on that task also plays a role in Alesina and Tabellini (2007). They consider a setting in which there is a single task and effort is costly, and show that a policymaker will exert less effort when the outcome becomes noisier due to the greater difficulty of influencing the principal's perceptions of his ability.

[7] See Ashworth (2012) for an overview.