Two Forms of Vulnerability

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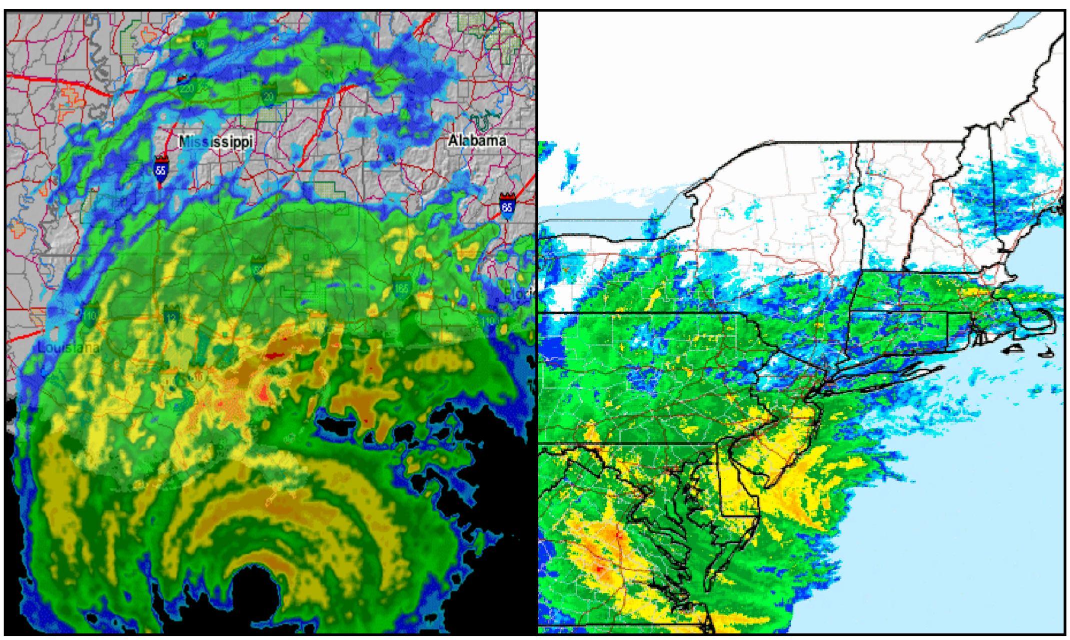

I. Two Hurricanes

I want to begin by reflecting on two recent natural disasters in the United States – Hurricane Katrina, which struck the Gulf Coast in 2005, and Hurricane Sandy, which struck the Northeast last year. Both hurricanes caused enormous damage. In economic terms, they were the costliest natural disasters in U.S. history. Although they affected vast areas of coastline Sandy and Katrina focused attention first of all on the vulnerability of two cities—New Orleans and New York—with large concentrations of people, infrastructure, and real estate.

Despite these similarities, it is striking that these two events provoked very different kinds of reflection among social scientists, journalists, and other critical observers.

Hurricane Katrina insistently directed our attention to the past. This is true in part because events like Katrina had occurred before, and their recurrence was expected. For example, in 1965 Hurricane Betsy struck New Orleans, inundating major parts of the city. In Betsy's wake, federal disaster planners developed a "superdisaster" model of an even more devastating hurricane strike on New Orleans. Since then, many large hurricanes have hit the Gulf Coast.[1] Katrina was nothing if not imaginable, imagined, and widely anticipated.

In the wake of Katrina, this history of past hurricanes, and past anticipation of future hurricanes, threw harsh light on other elements of the past. Most immediately, it focused attention on the failure to protect New Orleans through structural works, and on the lack of preparedness to respond to the disaster. But for many critical observers Katrina illuminated a still deeper level of prior determinations. The vulnerability of certain groups, living in certain places, pointed to a history of racism and economic exclusion that was inscribed in the very structure of flood protections, the layout of New Orleans, and in government unpreparedness for the event. These observers pointed to a pernicious, self-enforcing logic: the poor and minorities settled in particularly vulnerable areas where, presumably, property prices were low; those areas were subsequently neglected, due to the fact that minorities and the poor lived in them. Moreover, the very marginalization of people living in these vulnerable areas made them less able to prepare for disaster or to cope with its consequences. In this critical understanding, Katrina was a not a "natural" disaster but a social disaster. Neil Smith, the critical geographer, wrote that the New Orleans population was "vulnerable not because of geography but because of long term class and race abandonment…exacerbated by the dismantling of social welfare by Democratic and Republican administrations alike."[2] The anthropologist Virginia Dominguez commented on the frequent observation that the scenes from Katrina were like those one might find in a Third World country. These reactions, she noted, evinced an odd denial: as though this was not a precisely an American story, as though Katrina's devastation could not be explained by longstanding features of American society.

A very different critical discussion followed Hurricane Sandy, seven years later. For a variety of reasons, Sandy did not point so insistently to the past. One is that no equivalent event can be found in the historical record. This is not to say that Sandy was unthinkable or entirely unanticipated. But experts deemed such an event to be extremely improbable.[3] Moreover, the relatively competent government response meant that there was less cause to dwell on past failures of preparedness. Finally, it was much harder to read Sandy's effects onto the prior determinations of social marginalization. The patterns of vulnerability that it rendered visible did not unrelentingly follow existing lines of economic or racial difference that were hard-wired into the very spatial and material pattern of settlement, as had been the case in New Orleans.

Instead, Sandy provoked intense reflection on the future. Specifically, it focused attention on a climate changed future in which events like Sandy—so foreign to historical experience—will occur with much greater regularity. Most centrally, Sandy was understood to provide a window on the ever-increasing vulnerabilities of systems that are essential to collective life. The system for providing refined gasoline to New York was crippled for weeks due to shutdowns of local refineries and oil terminals, and to delays in re-opening local waterways that had to be checked for storm debris.[4] Emergency generators in hospitals—often placed in basements that were flooded—were rendered useless. The subway system was inundated, as the transportation authority had no way to seal tunnels and stations from encroaching sea water, resulting in billions of dollars in damage. Through these breakdowns, it seemed, a catastrophic future announced its arrival in the present.

So here we have a very stylized account of how two events were problematized by a range of critical observers. One event pointed to the past, to the determinations of the social field, to racial division and economic exclusion. The other pointed to a future that is different from the past. Here, the vulnerabilities of greatest concern are those of critical systems upon which collective life depends: energy, transportation, and emergency services.

Now of course I am overdrawing this distinction. After Hurricane Sandy race and poverty were indeed discussed as sources of vulnerability, although this theme was much more muted than it had been after Katrina.[5] Meanwhile, many commentators speculated on the connections between Katrina and climate change, and on the increasing vulnerability of critical systems, such as the oil infrastructure in the Gulf of Mexico. So if we dig into the complex reactions to Katrina and Sandy, we would find that these two kinds critical reflection are messily combined. But despite this messiness, or perhaps because of it, I want to insist that this stylized contrast points to a meaningful difference. That is to say, this distinction tells us something significant about the contours of our world today.

II. Two forms of vulnerability

We live in a vulnerable world. By this I do not mean what is usually meant by this claim: that we are increasingly susceptible to various kinds of stresses and shocks. As we all know, that is true in some ways and not in others, in some places and not others, and for some people and not others. Rather, what I mean is that over the last thirty or forty years, in an ever-growing number of areas, vulnerability has been identified as a problem that demands urgent action. Along with its obverse terms, such as security, preparedness, and resilience, vulnerability is being made to do more work, to bear an increasing conceptual and practical burden.

That said, as my initial examples were meant to suggest, there is not a single discourse of vulnerability.[6] Rather, today we observe a restless push and pull over different understandings of vulnerability and different ways to manage it.[7] This push and pull often plays out on the level of technical understanding, but it obviously has political and ethical stakes.

As an initial cut at this dynamic and contested field, it is helpful to distinguish between two forms of vulnerability[8]—two alternative ways that vulnerability is constituted as an object of knowledge and a target of intervention. In referring to a "form" of vulnerability I mean a way of making vulnerability available as a possible object of knowledge, a field of intervention, and an instrument of political claim-making. To borrow a term from Paul Edwards, these two forms of vulnerability depend on different knowledge infrastructures – mechanisms for collecting and analyzing data, and stabilizing authorized expert claims about collective life. At the same time, each suggests a distinctive political ontology, and, as such, raises specific problems of political morality.

Two Forms of Vulnerability

	Social Vulnerability	**System Vulnerability**
Genealogical Points of Origin	Late 18th and 19th centuries: classical liberal thought and modern social sciences	Mid-20th century: nuclear preparedness, domestic emergency management
Object of Concern	Social groups	Vital systems and response infrastructures
Source of Hazard	Internal to the social field, the product of social organization	External shocks
Nexus of Vulnerability	Patterns of social marginalization (race, ethnicity, class, gender, age, etc.)	System properties (physical exposure to hazards, interdependencies, emergency response procedures, etc.)
Temporal Orientation	Toward the past as determinant of future risk	Toward a future that breaks from the past
Forms of Knowledge	Analyses of past regularities, correlations (e.g. statistical analysis)	"Enactment" of unprecedented events (system models, simulations, exercises, scenario planning)
Instruments	Measures to distribute or "socialize" risk; social welfare policies to address social marginalization	Measures to reduce vulnerability through ex ante preparedness (vulnerability reduction) and ex post response (relief, emergency response)

The first form of vulnerability can be traced to a familiar genealogy of modern liberal thought. Phenomena that were previously understood as "external" visitations of fate, the products of mere chance, or the rewards or punishments for an individual's moral character were discovered to have "social" determinations. In the 18th and early 19th centuries, for example, maladies such as pauperism and famine were attributed to government policies that disrupted the self-regulating market. In the 19th century, statistical analyses established correlations between various pathologies of collective life and divisions that ran through the social field: disease was linked to urban conditions in impoverished areas; life expectancy was linked to social class, and so on. This latter form of reflection was turned to the problem of vulnerability much later, in the 1970s, specifically in relation to natural disasters. It was discovered—and continues to be endlessly rediscovered—that the damage natural disasters inflict on people, groups, or even countries cannot be explained only by physical or geographical factors. Moreover, it is due to patterns of collective organization and social differentiation. Correspondingly, prescriptions for managing this "social vulnerability" include a range of measures classically associated with the welfare state that address social marginalization: measures to reduce extreme poverty, increase economic opportunities, expand access to health care and education, extend public infrastructures, and so on.

The second form of vulnerability can be traced genealogically to developments in the military domain, initially in strategic bombing theory, and then in nuclear preparedness planning during the early Cold War (Collier and Lakoff 2014). Events like aerial bombardment or nuclear attack were understood to be external visitations, ruptures, or shocks with no precedent in past experience. Unmoored from the past, we might say that these were profoundly unsocial events. Knowledge practices such as system modeling, simulation, scenario planning, and exercises were invented to understand how these events would affect vital energy, transportation, and production systems upon which modern life depends. These tools of enactment then suggested measures to increase preparedness by reducing the vulnerability of vital systems, monitoring disasters as they unfold, and providing relief to victims. Beginning in the 1960s and 1970s these knowledge practices and governmental techniques related to "system vulnerability" were taken up to address non-military problems: international development, natural disasters, public health, economic and financial regulation, and domestic security, for example. In these domains, too, the paradigmatic concern was with events whose likelihood or consequence could not be grasped through reference to the social field: the superdisaster; the outbreak of a novel pathogen; mass casualty terror attacks; or crises that threaten the financial system.

Now having introduced this distinction, I want to more or less repeat the qualification I made after my initial examples. These two ways of thinking about vulnerability are not mutually exclusive. Particularly in the last fifteen years we find attempts to bridge these two forms, to connect them in an overarching framework. But in other situations this distinction demarcates lines of division and political contest. In such cases these two forms of vulnerability define oppositional identities, and are enlisted in struggles for resources, and in efforts to establish political legitimacy.

The remainder of this paper provides a few illustrations of these dynamics by considering two areas. First, I will consider some recent discussions in international development, initially examining a curious recent attempt to link and reconcile the two kinds of vulnerability I have just introduced, and then looking at a case in which they stand in tension."

Second, I will return briefly to natural disaster policy in the United States, and focus in particular on very recent discussions related to risk, responsibility, and compensation in the wake of Hurricane Sandy.[9]

III. Development as Risk Management

It has really been in the last fifteen years—in the wake of the structural adjustment experience of the 1980s and 1990s—that vulnerability has moved to the center of development discussions. Here, I follow a fascinating article published earlier this year by the political scientist Jacqueline Best in the *Third World Quarterly*. Its title is "Redefining Poverty as Risk and Vulnerability" (Best 2013).

On Best's account, two features of the structural adjustment experience pointed to limits of the liberalization project, and placed risk and vulnerability on center stage. The first was the growing number of poor people in many parts of the world, despite the economic benefits that were supposed to accompany a more liberalized economic order.[10] Here, liberalization was understood to encounter a limit in those individuals, groups, or even countries that proved unable to take advantage of market opportunities. The second was the devastating effect of economic shocks and other crises such as natural disasters—even in countries that, according to the dominant prescriptions, were doing most things right. The Asian financial crisis provided a crucial initial example; the recent global financial crisis provided another. Here, liberalization met its limit in shocks that could not be absorbed through market mechanisms for managing risk. These two problems were interconnected since it was observed that shocks increased poverty, and disproportionately affected the poor.

Best shows that in light of this experience, and following a significant internal struggle at the World Bank in the late 1990s, increasing emphasis was placed on policies to promote "pro-poor" growth. Crucially, she discerns in these proposals a novel "ontology" of poverty.[11] Poverty is no longer understood only as a static condition—a level of income, for example, or a particular level of "human development." It is also a dynamic state of readiness or un-readiness for future events, whether these are positive economic opportunities that have to be seized or negative shocks that have to be weathered.

For my purposes the latter point is of central interest. Vulnerability to unanticipated shocks is defined as a dimension of poverty. The reduction of vulnerability becomes a crucial aim of measures to alleviate poverty. This point was foundational in the 2000/2001 World Development Report. It argued that "[v]ulnerability to external and largely uncontrollable events—illness, violence, economic shocks, bad weather, natural disasters—reinforces poor people's sense of ill-being, exacerbates their material poverty, and weakens their bargaining position. That is why enhancing security…is key to reducing poverty. And so is reducing poor people's vulnerability to risks and putting in place mechanisms to help them cope with adverse shocks" (World Bank 2001: 3).[12]

But what, precisely, does it mean to enhance security, reduce poor people's vulnerability to risks, and help them absorb shocks? Does this new focus on pro-poor growth address *social* vulnerability by targeting sources of marginalization and longstanding social disparities? Or does it focus on the vulnerability of critical systems and mechanisms of response? And how does this task of vulnerability reduction relate to the project of liberalization?

Material for answering these questions can be found in a number of high-profile World Bank studies and strategy documents from the last few years, which have returned to these questions again and again. Prominent among these are a 2012 Social Protection and Labor Strategy and a Concept Note for the 2014 World Development Report, due out later this fall, entitled *Managing Risk for Development*. I want to dwell for a moment on the latter document. In discussing risk management *for* development it also makes a case for understanding development *as* risk management—and in this sense understanding development, in part, as the management of vulnerability. To orient this discussion, I will focus on a table found in this document's appendix, which provides a window on how social vulnerability and system vulnerability interact in this new development imaginary (see figure).

The columns of this table, whose titles are listed across the top, refer to "different components of risk management." The "Concept Note" defines these as mechanisms through which people "mitigate the losses and improve the benefits that [they] may experience while conducting their lives and pursuing development opportunities." The subject is the risk taking agent. These are this agent's tools for anticipating or responding to various risks. The first three columns refer to tools of *ex ante* preparedness before an event occurs: *knowledge* about risk, mechanisms of *protection* to lower the probability and magnitude of a negative outcome, and *insurance* mechanisms to "transfer resources from good times to bad." The fourth column

Systems	Public Goods and Government Policies to Support/Augment			
	Knowledge	***Protection***	***Insurance***	***Coping***
Household	-Public schools, education, and training. -Consumer protection. - Financial literacy and management.	- Government transfers (cash, in-kind, productive). - Subsidies (education, housing) -Regulation (land tenure, gender, child labor). - Service delivery	- Publicly-provided health insurance. - Public pensions. - Unemployment insurance.	- Government transfers (cash, in-kind) - Subsidies - Workfare
Community	- Weather forecasts, early warning systems (EWS). - Awareness raising, change of norms, and behaviors.	-Rule of law (security services). - Disaster risk reduction. - Adaptation to climate change. - Sanitation.	- Savings and credit groups. - Publicly-provided weather insurance. - Social protection against covariate risk.	- Disaster relief provided by the State
Enterprise Sector	-Information collection and dissemination.	- Provision of public goods and services/infrastructure - Labor market regulation. - Product market regulation (entry & exit, innovation, competition)	- Public insurance (natural disasters, environmental accidents). - Public guarantees.	-Corporate bailouts
Financial System	- System-wide data collection & dissemination. -Information sharing. -Assessment/ monitoring of systemic risk and EWS. - Knowledge networks.	- Debtor/creditor rights. -Regulation, supervision and enforcement. -Consumer financial education. -Crisis simulation -Exercises	- Public insurance and guarantees (deposit). - Minimum and regulatory buffers. - Fiscal contingent liabilities. - Foreign exchange reserves.	-Identification of troubled systemic banks. -Bank and crisis resolution (bank liquidity assistance, blanket guarantees, recapitalization).
National Economy	- Data collection and dissemination. -Information disclosure requirements. - EWS.	- Monetary/exchange rate policies - Trade diversification (product and market). -Capital flow management -Banking regulation and supervision.	-Countercyclical macroeconomic policies. - Asset management (reserve hoarding, stabilization funds). - Debt and liability management	- Fiscal austerity. - Fiscal stimulus (tax breaks, spending cuts) - Debt issuance. - Government borrowing.

refers to *ex post* coping, defined as "actions to lessen the impact of negative outcomes, should they occur, and to recover from them."[13]

This, certainly, sounds like it addresses system vulnerability. This feeling is strengthened when we consider the vertical axis. The rows of the chart correspond to what the Concept Note calls "social and economic support systems", ranging from the household and the community up to the financial system and the national economy.[14] It notes that these systems "support people's risk management by, first, alleviating the vast array of constraints they may face, and, second, controlling aggregate or systemic shocks."[15] If Jacqueline Best identifies a new dynamic ontology of poverty, we have here a new ontology of the collective order in which poverty is located. "People and their systems": people as managers of risk and systems as sources of resilience.

These systems are also the targets of governmental interventions—which are listed in the boxes in this chart.[16] What do they tell us about the aims, instruments, and obligations of government in this framework?

First and foremost, we note that it does not suggest abandoning liberalization as a core project. Quite the contrary: the concept note argues forcefully that a flexible and well governed market economy is a key source of resilience.[17] Thus, we see that key pillars of structural adjustment are central to this framework: fiscal austerity, monetary and exchange rate policies, and trade promotion policies are all mentioned explicitly. It is worth noting that the chart also refers to policies that had at best an ambiguous relationship to structural adjustment: counter-cyclical macroeconomic policy, including fiscal stimulus; and capital flow management. The experience with successive global financial crises and new thinking in economics leaves its mark. Nonetheless, a liberalized, flexible, and stable market economy remains an unquestioned baseline and background.

At the same time we find a strong emphasis on the proposition that certain kinds of events present risks to these economic and social support systems, and that managing these risks requires government intervention. Thus, we find a range of measures for addressing systemic risks and vulnerabilities that cannot be absorbed through market mechanisms. In the domain of natural disaster policy the chart refers to early warning systems, disaster relief, catastrophe insurance, climate change adaptation policies, and natural disaster risk reduction measures. In the domain of finance we have systemic risk monitoring, simulations of financial crises, exercises for managing them, regulatory and supervisory interventions, and crisis resolution measures.

Now, to pause for a moment, it may be tempting to see this as a proposal for a system vulnerability apparatus that simply operates alongside, and functions as a necessary complement to, a basically unaltered project of liberalization. Following the suggestion recently made by Jeremy Walker and Melinda Cooper (2011), these policies to reduce system vulnerability and increase resilience might be understood to fit comfortably with a rather pure vision of market order. It might further be tempting to suggest, as Jacqueline Best does, that this focus on shocks and systemic risks—and this dynamic ontology of poverty—tends to "downplay the problems of the chronically poor" and to "de-emphasize subtler sources of vulnerability, such as those associated with gender, class, ethnicity, or other structural fault-lines" (Best 2013: 123).

But I don't think that is what is at stake here. Or at least that is not the only thing at stake. In fact, the problems of social vulnerability are absolutely central to this framework. Social marginalization is recognized as crucial to determining the vulnerability of individuals and groups to shocks and stresses. The Concept Note thus argues that "People have limited income, assets, and other resources to acquire the knowledge needed to assess…risk, self-protect, or obtain insurance against it. The poor are hence more vulnerable to potential negative outcomes" (Concept Note 2012: 14). Thus, referring again to figure 1.1, we find a whole array of measures to directly address the *social* vulnerability of certain groups. These include investments in education and health care; subsidies for housing and higher education; and broader provision of public goods, such as infrastructure services. They also include regulatory interventions, such as labor and consumer protections. What is striking here is that classical elements of the welfare state reappear as instruments to address poverty conceived as vulnerability and risk.

But this is not all. These documents explicitly point to gaps in traditional social welfare measures, which, they argue, did a poor job of targeting "low-income countries and the very poor, the disabled, those in the informal sector and, in many cases, women."[18] Measures such as cash transfers—which have been massively expanded globally over the last decade, particularly in poor and middle income countries—are cited precisely as new instruments of social welfare that better target these marginalized groups.

Now there are certainly reasons for skepticism here—and I will suggest some of them in a moment. But I do want to underline the work being done in these documents. Social vulnerability appears here as the form through which old norms and practices of the welfare state are rearticulated in a new problematization of development. Indeed, as Best documents, the idiom of social vulnerability and social risk was self-consciously fashioned by key figures in the World Bank who wanted to provide a new grounds and justification for traditional measures of social welfare, economic regulation, and even redistributional policy that had been previously criticized as barriers to the functioning of a liberal market order. The justificatory logic here is derived from a familiar moral economy. Its basic maxim is that collective institutions ought to intervene to assist people in circumstances that are beyond their control. Vulnerability here indexes a set of problems that, as the Concept Note (2012: 3) argues, are "virtually impossible for individuals to handle successfully" and that therefore require government action.

In this vision, policies to address social vulnerability by targeting marginalization and poverty go hand in hand with measures to manage system vulnerability. The 2012 Social Protection strategy cheerily observes that "institutions that promote opportunity are often integrated with those supporting resilience and equity."[19] The 2000/2001 World Development Report proclaimed that "There is no hierarchy of importance" among instruments used to address social vulnerability and vulnerability to shocks. "The elements are deeply complementary" (World Bank 2001: 7). As is often the case in these kinds of programmatic visions articulated by the World Bank and other development agencies, all good things go together.

IV. Small Island Nations

But sometimes, of course, they don't. When we consider how vulnerability is addressed in particular policy areas, or through specific instruments, things inevitably look more complicated. Measures to address the vulnerability of systems to future catastrophes may stand in tension with measures to address social vulnerability by targeting patterns of poverty or underdevelopment that are inherited from the past. Here I will take another case from the domain of international development: Small Island Developing Nations—a collection of 52 island or low-lying coastal territories. In the last two decades the Small Island Developing Nations have played a central and exemplary role in international discussions of vulnerability. Here, we see how a particular kind of vulnerability becomes the site of identification and struggle—to gain recognition, to claim resources, and to valorize certain kinds of problems, inescapably, at the expense of others.

Until the early 1990s, the special issues of small island nations were primarily associated with the "economics of smallness and remoteness."[20] Factors such as poor transportation and communication and low resource endowments were thought to contribute to underdevelopment and relative poverty. But in the last twenty years, discussion of small island nations has increasingly focused on their vulnerability to external shocks that are outside their control.[21] Because these countries' economies are undiverse and heavily dependent on international trade, they are thought to be susceptible to international financial crises and fluctuations in global commodity prices. Moreover, since these nations' territories are overwhelmingly low-lying and coastal, they are highly prone to damage from natural disasters.

This environmental vulnerability obviously becomes ever more acute with rising sea levels, which may ultimately render some of these nations entirely uninhabitable.

Over the past 25 years, this problem of vulnerability to external shocks has been the focal point of mobilization by small island nations in the international community.[22] A key contention in this mobilization has been that vulnerability should be taken into account in the international system.[23] Here I will consider just one important example—these countries' qualification for "Least Developed Countries" status—because it nicely illustrates how the distinction between social vulnerability and system vulnerability can come to have political stakes. Here, I draw in part on the work of another political scientist, Catalina Arreaza, who has examined small island nations in her investigation of what she calls the technopolitics of vulnerability.

The category of Least Developed Country—or LDC—was invented in the early 1970s in the context of discussions around a New International Economic Order. *Inclusion* in the category was initially defined using conventional indicators of development, such as GDP per capita or, later, indicators of human development. Beginning in 1991, the same measures were also used to define *exclusion*. If a country's indicators improved it would be nominated for "graduation."

This specter of graduation proved to be of singular import for those small island nations that are also LDCs. These countries are profoundly dependent on foreign aid.[24] Meanwhile, their access to many sources of foreign aid hinges on their status as LDCs, which determines eligibility for an ever-growing number of aid programs administered by the UN, the World Bank, and other organizations. But these countries' relatively strong economic performance has threatened this status.[25] Indeed, since the graduation of Botswana in 1994, all of the candidates for graduation from the LDC group have been small island nations. In response, these countries began an "unprecedented mobilization around the transformation of the graduation criteria" (Arreaza 2010: 23). They argued that a vulnerability index should be one indicator used in determining Least Developed Country status, thus forestalling their graduation.[26]

It should be clear that in this mobilization it was crucial to argue that the kind of vulnerability faced by small island nations cannot be indexed by measures of poverty, underdevelopment, or human development. Lino Briguglio, an economist who constructed the first economic vulnerability index, has written that "GDP or GNP per capita"—the traditional measure for inclusion in the LDC category—"often conceals [the] reality" of vulnerability faced by small island nations. "[I]n the case of economic, environmental, climate change, and disaster vulnerability," he continues, "the thrust of the argument relates to damage caused by external forces, and not the result of domestic policies." This is the kind of vulnerability faced by small island nations, which he contrasts refers to what he explicitly calls "social vulnerability"—which is connected to "internal factors." This distinction was accepted by the Committee on Development Policy, the UN technical body responsible for making recommendations about inclusion in the LDC category, and which began employing a vulnerability index based on this distinction in 1999. Vulnerability, according to the Committee, reflects "the main kinds of exogenous shocks faced by low-income countries and their exposure to these shocks"—it does not refer to those "internal" factors that result from domestic policy failures. Again, the "social" determinants of vulnerability are excluded from this index. Arreaza has described the significance of this definition in striking terms: in the LDC index, "vulnerability [is] no longer socially produced."[27]

We might also note that in these restrictive definitions of vulnerability there is also a hint of a claim to moral priority. The kind of vulnerability that arises from exogenous shocks is outside a country's control. It is a vulnerability for which a country cannot be held responsible. The implicit contrast speaks for itself: social vulnerability is that kind of problem for which, perhaps, a country should indeed be made to take responsibility.

On one level this is a minor case. The total population of small island nations is small, small enough that their claims on resources might not have been significant enough to spark concerted opposition. But we can find in this case the general form of a problem and a question that is likely to become ever more significant in our vulnerable world. Explicitly, the argument of the small island developing nations is that we should attend to the poor *and* the vulnerable. That is to say: the vulnerable should be afforded considerations that are granted to the poor or the underdeveloped. But when the question concerns access to a limited pool of funds—which, in this case, it does—this must inevitably mean the poor *or* the vulnerable. The technical construction of vulnerability is then, necessarily, linked to questions of political morality: What claim does vulnerability to future catastrophes—here specifically distinguished from sources of *social* vulnerability such as underdevelopment or poverty—have on the allocation of resources? Should the historical wounds of poverty and underdevelopment cede ground to the as-yet-uninflicted wounds of future catastrophes?

V. In the Wake of Sandy

Let me leave the scene of development and turn, if only very briefly, to a final example that cuts at these issues in a different way. It brings us back to the United States, and to Hurricanes Katrina and Sandy.

I began this talk by drawing a contrast between the critical reflection that followed these two events: Hurricane Katrina was understood through the lens of social vulnerability; Sandy through the lens of system vulnerability. But if we turn our attention to dominant governmental responses the distinction breaks down. The official report on the Federal Response to Hurricane Katrina focused on breakdowns in governmental response to the disaster, and proposed a "National Preparedness System" to address even more devastating future events.[28] Meanwhile, the reports that followed Sandy point to a highly competent government response and focus instead on planning reconstruction in a way that emphasizes resiliency. But in either case system vulnerability rather than social vulnerability provided the dominant lens for governmental assessment of these events. It is the future, rather than the past, that is at stake. Questions of poverty, inequality, or social marginalization barely make an appearance.[29]

But these latter issues have returned in curious ways in the wake of Hurricane Sandy. Here I want to mention just one that relates to another instrument for governing vulnerability to catastrophe, namely, insurance mechanisms for absorbing the *financial* impact of disasters. It requires a short detour into the history of a mundane governmental mechanism that has suddenly received a lot of attention in Sandy's wake.

Since 1968 the United States has had a national flood insurance program. In its initial conception, the rates charged for policies were supposed to reflect the risk of living in a certain location. The logic is that this mechanism for providing security through indemnification would also serve as an instrument for vulnerability reduction. Because residents of flood planes would pay much higher premiums, people would have an incentive to move to areas where risk was lower.[30]

In the ensuing decades, however, this insurance mechanism did not work as planned. Provisions to keep rates low—enacted to protect homeowners from higher costs—meant that insurance premiums did not reflect the risk of living in a particular place. Far from providing an incentive to move out of flood-prone areas flood insurance thereby served to *subsidize* residence in such areas by providing security against loss at minimal cost. This rather perverse arrangement persisted for decades. Many argue that it has materially contributed to flood losses in the United States over the past half century. But it was increasingly called into question in the 2000s as a series of disasters—most notably Hurricane Katrina in 2005—overwhelmed the reserves of the federal flood insurance program, which to date has accumulated $24 billion of debt. A reform of the system was passed in July 2012. Among other things, insurance premiums were mandated to quickly rise to reflect the risk of flood loss. It was supported by a broad coalition of advocates that notably included environmentalists who have come to see risk-rated insurance as an important mechanism for promoting climate change adaptation and more ecologically sound uses of land.

As it happens, Hurricane Sandy struck only three months after these reforms were signed into law. Thanks to the reforms, homeowners who had to rebuild or repair their homes faced difficult choices. They could pay dramatically higher insurance rates, as much as $31,000 per year. They could undertake expensive modifications, such as elevating and otherwise flood-proofing their homes. Or they could simply move somewhere else. This new calculus of choice suggests an important qualification of the political morality of vulnerability: individuals, groups, and countries cannot be held responsible for calamities that lie outside their control, but must take responsibility for their relationship to a catastrophic future to the extent that it is within their control. The application of these moral principles, of course, will inevitably be a matter of controversy.

This has certainly been the case in the discussion around rising insurance rates in the U.S. in the past year. The U.S. Congress, which overwhelmingly passed the insurance reforms In July 2012, passed a bill to delay the higher rates in July 2013. Defending this action, Senator Mary Landrieu, a democrat from Louisiana, argued that "On the heels of this recession, it's just terribly cruel and harsh…how much more can we take?" A petition organized by the left-leaning advocacy group MoveOn supported the delay in order to protect those residents of low-lying areas near water who were "more susceptible"—should we say, vulnerable?—"to the increases." A former member of the New York City Planning Commission commented that the higher rates would cause "a massive displacement of low-income families from their historic communities" as coastal areas become affordable only for the very rich.[31]

Here, too, a measure to address vulnerability to future catastrophe is in tension with an impulse to protect the poor who are vulnerable in a different sense. Technical measures to address vulnerability frame problems of political morality: How is the demand for responsibility to a catastrophic future socially distributed? Should it apply equally to the rich and the poor? Can one's responsibility to a catastrophic future be relieved by the fact of poverty? Obviously these questions have very broad resonance today.

Conclusion

Let me conclude in the briefest way.

The cases I have examined are quite disparate. They present entirely different ways in which vulnerability can be the site of governmental intervention, but also of moral dispute, conflicting claims to resources, identification and counter-identification. The distinction between social vulnerability and system vulnerability offers some purchase on these cases, but it hardly reveals a common pattern across them.

The problem I would like to end with concerns how critical scholars ought to position themselves in this rather complex terrain. The politics here are vexing. Environmentalists advocating climate change adaptation are pitted against defenders of the poor. Countries that are LDCs due to their exposure to "external" shocks lay claim to pools of resources designated for the poorest countries. The usual instincts of critical scholars—to heroically leap, once more, to the defense of the social point of view—seem entirely inadequate.

[1] One recent estimate is that a hurricane with Katrina's intensity is likely to strike the Gulf Coast once every fourteen years.

[2] Neil Smith, "There's No Such Thing As a Natural Disaster," June 11, 2006 (http://understandingkatrina.ssrc.org/Smith/).

[3] One study concluded that no event similar to Sandy could be identified in the historical record, dating to 1851, and that the likelihood of an event like Sandy in any given year was 1 in 714—making it a 0.14% event (http://climatecrocks.com/2013/02/05/superstorm-sandy-template-for-future-storms/). Another (MIT) study estimated it was an 800 year storm (looking at the likelihood of a particular storm surge at the Battery in Manhattan). The Army Corps estimates that a Katrina-like event is about twice as likely, but in fact the historical record is filled with many examples of damage like Katrina.

[4] New York Oil Supply: How Sandy Taught Empire State A Tough Lesson About Fuel , Joshua Schneyer and Selam Gebrekidan, Nov 27 (Reuters). Accessed at: http://www.huffingtonpost.com/2012/11/27/new-york-oil-supply-sandy-gas-shortage_n_2197129.html

[5] For example, some commentators noted the concentration of housing for the poor along the waterfront in New York City, particularly in buildings owned by the New York City Housing Authority. See Jonathan Mahler, "How the Coastline Became a Place to Put the Poor," *The New York Times,* December 3, 2012.

[6] My emphasis on multiple discourses of vulnerability and contestations over them might be contrasted to the analyses in Bankoff (2001) and, for the obverse term of "resilience," Murphy and Cooper (2011).

[7] This plurality is acknowledged in diverse expert discussions of vulnerability, ranging from the social sciences to the physical sciences to policy studies. Usually it is acknowledged so that it can be overcome through some more encompassing, holistic, and integrative definition; indeed, holism and integration seem to be central virtues in these discussions. The distinction I am proposing is not intended to capture all or even most of the relevant distinctions in this field, still less to do justice to this quite substantial literature. I simply hope to point to some of the significant distinctions in this field.

[8] This phrase is indebted to Andrew Lakoff (2010) with whom I have developed many of the conceptual distinctions that are mobilized in this paper.

[9] [Is there is a more extensive motivation of the themes that are unpacked in this paper that you want to dive into. For example, you may want to motivate the whole question of liberalization in relationship to vulnerability; or, perhaps to say that vulnerability is becoming a frame or form around which an entire set of issues are getting re-raised]

[10] These include South Asia, Latin America, Sub-Saharan Africa, and the post-socialist states of Europe and Central Asia. In the last 15 years the story has changed substantially, as poverty rates have fallen in most of these areas, sometimes dramatically.

[11] "Whereas poverty was conceived before as relatively static, vulnerability, risk, and resilience are concepts that redefine poverty as something dynamic. This reconceptualization of poverty as dynamic has a corollary impact on the kinds of development techniques deemed appropriate, requiring a more proactive and pre-emptive set of practices that seek to constitute more active, self-governing poor people. While this more active intervention does require a more engaged state apparatus than was evident in the structural adjustment era, its role remains constrained by the liberal preoccupation with limiting governmental power. Thus, this more proactive form of governance involves less direct forms of power, reconstituting patterns of inclusion and exclusion in increasingly obscure forms."

[12] It proposed to broaden "the notion of poverty to include vulnerability and exposure to risk" (p. 15).

[13] World Bank, Managing Risk for Development, pp. 12-13.

[14] These systems are treated analytically as distinct, and the Concept Note proposes that they will be treated separately—each in its own chapter—in the upcoming World Development Report, but that in practice they are intertwined: "In reality, multiple systems coexist and interact with each other in an integrated environment. Together, they can form larger systems, as when households are combined with enterprises and financial institutions to form a national economy. Together, they can affect each other, as when the financial sector becomes the source of shocks affecting the internal conditions and external environment of households, communities, and firms" (World Bank, Managing Risk for Development, p. 11). Systems upon systems upon systems.

[15] Ibid. p. 13. The Concept Note also emphasizes that these systems may be the source of vulnerabilities. Since people depend upon them, they are susceptible to "systemic risks" that disrupt these systems.
[16] "The state is a key player in supporting people's risk management as well as that of their different support systems. In doing so, the state may either provide an enabling environment for efficient decision making or intervene directly. How can the state better provide an enabling environment that enhances risk management by individuals and their systems?" (Concept Note, p. 26).
[17] p. 23: "At the national level, a strong macroeconomic stance can give the government sufficient scope to provide public goods at the time most needed. For example, China's large foreign exchange reserves and low level of debt enabled the government to respond effectively to the Asian financial crisis of 1997-1998 by implementing a stimulus program that kept the economy on a path of strong growth."
[18] Social Protection and Labor Strategy, p. XIII, XI.
[19] Social Protection Strategy, XIV.
[20] "The main characteristics and problems of island developing countries were discussed in UNCTAD reports and raised in United Nations General Assembly resolutions, at regular intervals, between the late 1970s and the mid-1990s. The most commonly raised problems were issues of smallness and remoteness, constraints in transport and communications, distance from market centers, low resource endowment/narrow resource base, dependence on few commodities as sources of foreign exchange earnings, limited internal markets, and vulnerability to natural and environmental disasters" (Hein 2004: 5).
[21] Hein (2004:10): "A recent feature of the international debate on disadvantaged countries, including SIDS, has been the increasing emphasis on their vulnerability. The concept of vulnerability relates to ecological fragility, proneness to natural disasters, and concentration of exports on limited ranges of products and markets."
[22] In 1990 these countries formed an Alliance of Small Island States. They were formally recognized as a distinct group by the UN in 1992. Recognition from other international organizations followed.
[23] Another prominent example, alongside the one I discuss here, is small island nations lobbying for for special accommodations in the World Trade Organization to account for their exposure to fluctuations in external trade.
[24] On average it comprises over 20% of their GDP (Arreaza).
[25] Hein (2004: 10) notes, thus, that the increasing emphasis on vulnerability was closely connected to growing skepticism about the economic disadvantages faced by these nations: "In a context where available data showed that SIDS tended to fare better, in terms of per capita income and quality of life, than most other developing countries, there was concern that the validity of the category as being 'disadvantaged' and meriting special attention might be questioned. At the same time, arguments based on the disadvantages of remoteness were also becoming less convincing, as air access to most SIDS was improving…international transportation costs wree decreasing, and progress in telecommunications was reducing the advantages of distance. The idea was put forward that, for SIDS and other groups (in particular, LDCs), vulnerability should be taken into account ot better illustrate intrinsic disadvantages. At the same time, the need was felt to operationalize the concept of vulnerability through the use of indicators to capture the proneness of countries to external shocks beyond domestic control, as well as the impact of relevant shocks."
[26] In fact, as Arreaza points out, the story is a bit more complicated than this. The idea of using a vulnerability index had been approved at the [BARBADOS CONFERENCE in XXXX?] Advocacy by small island nations made it one of the only provisions agreed upon at that conference to be actually put into effect.
[27] Arreaza 2010: 33, n. 42.
[28] Among its 125 recommendations not a single one addressed social marginalization, at least not directly.
[29] In the Katrina report the one exception was the elderly, whose inclusion might be explained by the demographics of support for the Republican Party support in the United States. In the Sandy report the most notable exception were those who would be affected by rising insurance rates – as discussed later in this section.,
[30] For a discussion see Collier (2014).
[31] Quoted in David M. Halbfinger, "Post-Storm Cost May Force Many From Coast Life," *The New York Times,* November 28, 2012.

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