some specific reforms, but was often silent about who should be responsible for carrying them out (e.g., National Commission, 2004, pp. 419-421).

Spilt Oil

In April 2010, in the Gulf of Mexico, a deep water oil drilling rig operated by British Petroleum (BP) exploded, killing 11 workers and causing a massive gusher that eventually released nearly 5 million barrels of crude oil into the Gulf. The spill caused extensive and continuing damage to marine and wildlife habits and to the fishing and tourist industries on which most of the residents of the Gulf depend. The government held BP responsible for managing the clean-up and compensating victims, but the various investigations and legal proceedings have still not entirely settled which of the several companies and individuals involved are responsible for the spill and its effects.

In May 2010, President Obama appointed a seven-member National Commission to investigate the spill with the aim of "providing recommendations on how we can prevent—and mitigate the impact of—any future spills that result from offshore drilling" (White House Press Office, 2010). Although the Commission was called "bipartisan" because the co-chairs were identified as a Democrat and a Republican, the composition and the mission were not political in the way that the 9/11 Commission was. Both the co-chairs had held positions and had experience directly relevant to the environmental disasters of this kind. The other members were recognized independent experts, mostly researchers or leaders of apolitical institutions.

Even though its explicit charge was forward-looking, the Commission realized that it had to examine the causes, and that such an examination would require giving some attention to decisions that individuals had made. The commission

> did not try to assign specific blame for a catalog of mistakes and shortcuts taken by the companies and their employees, but it is clear from the report that the major agents engaged in highly risky behavior that neither senior management nor government regulators properly oversaw. (Broder, 2011, p. A14)

The Commission concluded that

> the immediate causes of the Macondo well blowout can be traced to a series of identifiable mistakes made by BP, Halliburton, and Transocean that reveal such systematic failures in risk management that they place in doubt the safety culture of the entire industry. (National Commission on BP Deepwater Horizon Oil Spill and Offshore Drilling, 2011, p. vii)

The list included many mistakes that could be attributed to specific individuals or small groups of individuals, such as the supervisors who ignored early warnings that key pieces of equipment such as the blow out preventer might fail. Many individuals had both the authority and knowledge to change the practices that led to many of these errors, but the pressure to save time and money evidently drove the decision making more than concern for safety (National Commission, 2011, pp. 125-126).

Eventually the numerous legal proceedings began to identify some individuals who were more responsible than others, and allocate some responsibility to the several corporations involved. But undoubtedly, even the cumulative total of legal liability will not be commensurate with the damage caused by the spill. The more constructive effort focuses on assigning responsibility for preventing or reducing the risk of similar disasters in the future and the first line of response here is governmental oversight. The report of the Commission, which because of its relative independence and expertise, carried out an investigation more constructively in this way than did the 9/11 Commission. The report and the analyses of other observers point to significant failures of design responsibility.

There were several different agencies responsible for oversight, and no one had overall authority. The responsibility design was diffuse, which probably contributed to the disaster. Furthermore, the principal agency for regulating the drilling, the Mines Minerals Service (MMS), granted so many exceptions and overlooked so many violations that its officials may be as much responsible for the disaster as many of those at BP (Urbina, 2010). The Commission made clear that agency officials had missed many opportunities for redesigning the regulatory system (National Commission on BP Deepwater Horizon Oil Spill and Offshore Drilling, 2011, p. 71).

Although the MMS failures were partly the result of manifest corruption that had long plagued the agency, they were made worse by a design problem. The agency was charged with two different and conflicting tasks: promoting the industry (encouraging drilling) and regulating it (ensuring that safety was the highest priority). Even without the corruption, the promotional efforts would have been likely to overshadow the regulatory responsibilities. One lesson is that organizational designers should divide conflicting responsibilities by assigning them to different agencies. That is in fact one of the steps that the government has now taken in this case, splitting the previous agency into three different parts to avoid the conflicts (U.S. Secretary of the Interior, 2010).

But the problem persists because the individuals who know the most about the industry and how to regulate it effectively come from the same backgrounds, and often move in the same circles as the people they are regulating. Even if they are not looking for opportunities in the industry, they are more likely to see the world from the perspective of those whom they are regulating than from the perspective of the citizens who may be harmed by mistakes that the industry (or the regulators) make. To the extent that government seeks the most competent experts to conduct oversight, this design problem cannot be avoided at this level.

Another lesson, then, is that to address this kind of problem, we need an additional body to ensure that some oversight responsibility is assigned to people who have a different perspective. We need a body composed of members who would give more weight to the effects on citizens, and who are more willing to challenge expert opinion. One method that has been tried in similar circumstances is a citizens' advisory council (Applegate, 1998). Such a body was set up after the Alaskan Valdez disaster, but legislation to require that it be established in other regions failed to pass in Congress. The National Commission briefly reintroduced the proposal: any new "structure should therefore include a citizens' advisory council to provide formal advice and a direct line to citizens' concerns" (National Commission, 2011, p. 212). The Commission did not specify the form that such a council should take, but an earlier report by another federal panel set out some of the requirements a council should satisfy. It should be an independent public body charged with providing policy and technical advice for specific projects, sites, or regions. It would consist of 10 to 20 members, including directly affected parties, and also unorganized "individual residents that live in the communities or regions in which [the] site is located" (Federal Facilities Environmental Restoration Dialogue Committee, 1996, pp. 56-57). Governmental officials would serve as nonvoting members, and governments would provide professional staff.

Thus, two of the lessons of this episode—divide conflicting tasks, and add checking authorities—point to responsibility reforms that would address the problem of many hands by multiplying the hands. That solution might seem to recreate the problem it is supposed to solve. But the multiplication is not the same. The difference is that the hands would be specifically charged with oversight and nothing else, and they would be independent in the sense that neither their mission nor their interest would conflict with their responsibility for oversight.

This proposed multiplication of oversight responsibility for oil drilling would occur on a single level of authority; each of the authorities would have a somewhat different function but would be equal in the sense that neither would oversee the other. The type of structure is what may be called horizontal responsibility for oversight. Such a structure could of course create a

problem of coordination and potentially give rise to conflicts. Those problems could be mitigated by rules requiring regular consultation and joint meetings, and specifying which body takes priority in cases of conflict.

Rules of this kind could also obviate the need to establish a higher authority to oversee both bodies, which would create a further problem. It would in effect introduce a form of vertical responsibility to the structure. The problem with vertical oversight responsibility is that it tends to duplicate functions at each level, recreating the many hands problem. It also invites a reiteration of the question as to who will oversee the overseers, generating a regress of oversight that has no logical termination (Thompson, 2005, pp. 261-262). However, the vertical model may be necessary in some cases, and with the appropriate modifications can avoid these problems, as consideration of the failures of responsibility in the financial crisis beginning in 2007 illustrate.

Failed Banks

The financial crisis that plunged the world economy into the worst depression since the 1930s was set off when the housing bubble burst and a liquidity shortage developed in the United States in 2007 (Blinder, 2013). Such an immense and complex calamity had many causes, and not surprisingly, the list of individuals and organizations that could be plausibly blamed is distressingly long.[10] The crisis manifests the problem of many hands in its most florid form.

The most prominent of the many investigations was conducted by the Financial Crisis Inquiry Commission, created in July 2009 by Congress, which appointed all 10 of its members (Financial Crisis Inquiry Commission, 2010a). The members had considerable expertise in financial matters, but less independence from their political supporters. The Commission's analysis and recommendations were as a result less helpful in advancing the aims of design responsibility. Unlike even the 9/11 Commission, it split along partisan lines and did not issue a unanimous final report (Financial Crisis Inquiry Commission, 2011). The majority report made some effort to identify individuals and institutions that were responsible but included so many culprits that the minority report was provoked to object: "When everything is important, nothing is" (Financial Crisis Inquiry Commission, 2011, p. 414). Yet the "ten essential causes" summarized in the minority report itself emphasized broad impersonal forces, such as the credit bubble in the world economy, giving less attention to the role of individual decision makers (Financial Crisis Inquiry Commission, 2011, pp. 417-419). Nevertheless, the Commission's report contains information and analyses that are helpful in examining the failure of design responsibility in this case and potential changes to prevent such failures in the future.

Although a full assessment of responsibility for the crisis would examine many hands, one set of institutions—the rating agencies—merit special attention because they illustrate how the vertical model for designing oversight responsibility might be applied. The agencies, which include once respected organizations such as Moody's and Poor's, were not the best known villains in the popular exposes of the crisis, but their failures contributed significantly to the crisis (Financial Crisis Inquiry Commission, 2010b; 2011, pp. 43-44, 212, 426, 418). The agencies were the "reputational intermediaries" who enabled the banks to persuade investors that the securities were safe (Walter, 2010). The Commission majority concluded, "The three credit rating agencies were key enablers of the financial meltdown" (Financial Crisis Inquiry Commission, 2011, p. xxv).

Could agency executives have recognized the risk sooner? Even if they were unaware (and some surely were not), their ignorance does not seem excusable. Some of their own analysts knew that they were giving high ratings to nearly worthless securities (Lowenstein, 2008; U.S. Senate, 2010). If they knew or should have known, could they have downgraded the securities sooner? The pressure from the investment banks to give high ratings was relentless. The business of rating these securities accounted for nearly half of Moody's revenue in the year before the collapse. But the agencies could have revised their ratings—as they eventually did anyhow, and with worse consequences for everyone than if they had acted sooner.