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The Exxon Valdez Resurfaces in the Gulf of Mexico ... and the Hazards of “Megsystem Centripetal Di-Polarity”

Zygmunt J.B. Plater*

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Abstract: The 2010 BP Deepwater Horizon blowout spill in the Gulf of Mexico shocked the nation with the amount of oil and harm it unleashed upon the Gulf and its natural and human ecosystems. As details of the calamity became available, they revealed frustrating parallels to the 1989 Exxon Valdez oil spill in the Gulf of Alaska in terms of causation and impaired response capability. Similar systemic deficits characterized the actions of corporate managers and state and federal regulators in the oil industry of both Gulfs. In a “di-polar” system where industry and government regulators are supposed to counterbalance one another, but instead come too close together, responsible overall management of operations and risks suffers. The lessons and recommendations incorporated in the 1990 Alaska Oil Spill Commission’s Final Report on the Exxon Valdez spill, including watchdog citizen councils, were highly germane but largely ignored or forgotten in the decades between the Alaska Report’s release and the 2010 BP tragedy. This Article reviews the Gulf of Mexico spill in light of the Gulf of Alaska spill, and notes how this time around we must finally learn how to deal more seriously with the megarisks posed when di-polar convergences occur in these megasystems of hydrocarbon production and transport.

* Professor of Law, Boston College Law School. The author chaired the State of Alaska Oil Commission’s legal task force after the 1989 wreck of the M.S. Exxon Valdez. This Article is built upon a shorter piece, *Learning From Disasters: Twenty-One Years After the Exxon Valdez Oil Spill, Will Reactions to the Deepwater Horizon Blowout Finally Address the Systemic Flaws Revealed in Alaska?* (available at <http://www.elr.info/articles/vol40/40.11041.pdf>, published as part of an Environmental Law Institute Report. Both pieces benefited from the help, gratefully acknowledged, of two research assistants, Brendan Boyle and Joseph Horton, both of the Boston College Law School Class of 2012. The views expressed here, other than those cited to the Commission and other sources, are the author’s own and not those of the Commission or of my research assistants. Given the on-rolling current events underlying this present analysis, a number of citations herein are necessarily given to press accounts which may be revised with further information. While noting this caveat, it is evident that many solid journalistic reports have come from the oiled waters and beaches of the Gulf, and that over time the factual record will, of course, be substantially deepened by historical vetting.

Introduction

Twenty-one years ago, after the calamitous Exxon Valdez oil spill in Alaska's Prince William Sound, the pervasive systemic flaws—that made a major calamity in the Gulf of Alaska not just possible, but probable¹—were largely cloaked behind the figure of a captain with a drinking problem.² By any analysis, the Gulf of Mexico calamity, almost twenty times larger than the Exxon Valdez spill,³ was, like the 1989 spill, a systemic dysfunction resulting from marked shortcomings of industry and government regulation in multiple aspects of the overall oil production and transport process, not an exceptional anomaly attributable to just one well, one company, or one dereliction.⁴

¹ See Alaska Oil Spill Comm'n, Final Report: SPILL: The Wreck of the Exxon Valdez: Implications for Safe Transport of Oil 206 (1990) [hereinafter Alaska Comm'n Report], available at <http://www.arlis.org/docs/vol1/B/33339870.pdf>. The Alaska Commission issued an extensive final report with appendices, available through the Alaska Resources Library and Information Services website, http://www.arlis.org/docs/vol2/a/EVOS_FAQs.pdf.

² See Alaska Comm'n Report, *supra* note 1, at 7.

³ See Zygmunt J.B. Plater, *Learning from Disasters: Twenty-One Years After the Exxon Valdez Oil Spill, Will Reactions to the Deepwater Horizon Blowout Finally Address the Systemic Flaws Revealed in Alaska?* 40 *Env'tl. L. Rep.* 11,041, 11,041 n.2 (2010). The Exxon Valdez spill is generally reported as having released approximately 250,000 barrels, or almost eleven million gallons, of crude oil. See Alaska Comm'n Report, *supra* note 1, at iii. Estimates of the total oil released in the Gulf have been contentious; however, the government now estimates that the BP Deepwater blowout spill now appears to have released roughly five million barrels, at a rate between 50,000 to 60,000 barrels per day from April 20, 2010, until a top cap was applied on July 15, 2010. See Nat'l Comm'n on the BP Deepwater Horizon Oil Spill & Offshore Drilling, *Deep Water: The Gulf Oil Disaster and the Future of Offshore Drilling* 146–47, 167 (2011) [hereinafter BP Commission Report]. It appears that BP will challenge this estimate because, among other reasons, fines are based on the total oil released. See Robert L. Cavnar, *BP Wins: EPA Will Agree to Cut Oil Spill Estimate*, *Huffington Post* (Feb. 2, 2011, 9:07 AM), http://www.huffingtonpost.com/robert-l-cavnar/bp-wins-epa-will-agree-to_b_817327.html.

⁴ Though the systemic similarities of the two spills are the focus of this analysis, it should be noted that there are marked physical differences between the two spills. No oil spill, of course, like no coastal setting, is exactly like any other. The shores of coastal Alaska are very different from the reedy marshes and beaches of the Gulf coast in ecology and climate. Oiled sandy beaches may be easier to clean than cobbled stone beaches where the oil penetrates deeply. Marshes, however, are far more problematic. Plater, *supra* note 3, at 11,042 & n.5. Warmer temperatures can break down oil faster. Cassie Rodenberg, *How Oil Breaks Down in Water*, *Popular Mechanics* (May 7, 2010 11:21 AM), <http://www.popularmechanics.com/science/energy/coal-oil-gas/oil-spill-water-chemistry>. The winds and currents of the Gulf of Mexico are more complex than in the Gulf of Alaska. See Pete Spotts, *Gulf Oil Spill Driven by Complex Ocean Currents and Eddies*, *Christian Sc. Monitor* (May 15, 2010), <http://www>.

The system of oil production and transport in the Gulf of Mexico area, as in Alaska, is a sprawling, complex, multi-corporation, multi-agency megasystem, presenting multiplied points of risk and magnified potential for a mega-catastrophe.⁵

The central proposition of this Article, and a primary recommendation of the State of Alaska Oil Spill Commission in 1990, is that megasystems, with the potential for mega-catastrophe, require significant expansion of institutional perspectives beyond the traditional default configuration of public-private industry governance.⁶ The standard governance design in modern society, including governance of megasystems like the oil production and transportation sphere, is implicitly a “di-polar” arrangement⁷—a public-private societal governing structure comprised of two theoretically counter-balancing estab-

csmonitor.com/USA/2010/0515/Gulf-spill-oil-driven-by-complex-ocean-currents-and-eddies.

The Exxon Valdez oil spill soiled a coastal impact zone inhabited by no more than 30,000 people, with a sparse economy and only one state jurisdiction. Plater, *supra* note 3, at 11,042. The Gulf of Mexico’s affected coastal impact zone is home to nearly fourteen million people (if including the coastal impact zone population of Texas) with a complex coast-oriented economy in five separate states. U.S. Census Bureau, P25-1139, *Coastline Population Trends in the United States: 1960 to 2008*, at 9 (2010). In the Gulf of Mexico the defendants’ financial liability is likely to be commensurately much larger than Exxon’s payout in Alaska. Plater, *supra* note 3, at 11,042. Exxon paid roughly \$5 billion—compensatory settlements of \$507.5 million paid to private and municipal plaintiffs, which doubled in punitive damages after *Exxon Shipping v. Baker*, 554 U.S. 471 (2008), \$30 million in interest, criminal fines of \$25 million, plus \$125 million in criminal restitution, \$900 million in civil settlement with Alaska and the United States, and approximately \$2.4 billion in remediation expenses. Some of these amounts appear to have been covered by insurance or offsets. A precedent-setting Exxon Valdez “re-opener” clause was triggered in 2006 by Alaska’s request for an additional \$92 million for ecological damages. See Plater, *supra* note 3, at 11,042 & n.6. See generally William H. Rodgers, Jr. et al., *The Exxon Valdez Reopener: Natural Resources Damage Settlements and Roads Not Taken*, 22 Alaska L. Rev. 135 (2005) (urging the State of Alaska and the United States to seek enforcement of the Reopener Clause).

⁵ *BP Played Central Role in Botched Containment of 1989 Exxon Valdez Disaster*, Democracy Now (May 26, 2010), http://www.democracynow.org/2010/5/26/bp_played_central_role_in_botched.

⁶ See generally Alaska Comm’n Report, *supra* note 1, at v, 129, 139–40.

⁷ I have adapted the description of the standard model of traditional modern societal governance as “di-polar,” from a phrase used by Professor Lon Fuller in a slightly different context. See Lon L. Fuller, *The Forms and Limits of Adjudication*, 92 Harv. L. Rev. 353, 383 (1978); Zygmunt J. B. Plater, *Dealing with Dumb and Dumber: The Continuing Mission of Citizen Environmentalism* 20 J. Envtl. L. & Litig. 25 (2005). On one pole is the market dynamo that drives our economy, generating innovation, wealth, jobs, culture, and negative externalities like pollution as well—and on the other, government agencies hold the primary role and responsibility of counterbalancing the excesses of the marketplace economy.

lishments. On one side are the industry players in the marketplace, generating jobs, technology, wealth, and political power. On the other side are regulatory agencies, state and federal, tasked with monitoring the industry and protecting the public from industry's market failure externalities. As the Exxon Valdez spill revealed, however, and as decades of political scientists have described as "iron triangles"⁸ and "agency capture,"⁹ the counter-balancing "poles" too often incline centripetally¹⁰ into each other. The industry and agency players are too easily pulled together into a combined culture of complacency, collusion, and neglect.¹¹

⁸ The concept of "iron triangles" is a political science rubric that offers broad utility in understanding how modern government in reality functions, which often doesn't resemble the process described in civics textbooks. "Iron triangles" are formed by the relationship among a *regulated industry*, the *governmental agency (or agencies)*, and the *bloc of legislators* that hold especially strong affinities for that industry sector, typically served by a specialized cadre of lobbyists. See, e.g., Fred Powledge, *Water: The Nature, Uses, and Future of Our Most Precious and Abused Resource* 286–89 (1982). Each point of the triangle looks out for and serves the other two points in political and economic terms. See *id.* The narrowed, focused interests of each of these triangles creates a powerful political status quo in their sector of governance, each point of the triangle motivated by its own intricate system of rewards. See *id.* In government as well as geometry, triangles are the strongest of all geometric shapes. The "iron triangle" term has useful descriptive application in a wide variety of special interest settings, some more benign than others. See *id.* There are iron triangles for mining, timber, chemicals, ranching and rangelands, highway construction, public works pork barrels, the defense procurement industry, as well as for education, medicine and hospitals, sewage treatment, NASA, and more. See *id.*

⁹ In political science, "agency capture" is a well-known tendency of industry-agency convergence, and is part of the iron triangle phenomenon. A regulatory agency created in the fervor of a popular movement to regulate some designated problem may begin its life energetically pursuing the overall public interest, but over time its initiative gradually may be eroded into narrower views, intimately linked with the industry and problems it was intended to solve. See Richard B. Stewart, *The Reformation of American Administrative Law*, 88 Harv. L. Rev. 1669, 1684–87 (1975). Justice William O. Douglas said that "as I told my old friend, . . . Franklin Delano Roosevelt, . . . he should make every regulatory agency terminate after ten years. That's all the time they'll have to be effective before they are tamed." The author recalls Justice Douglas saying this to a class of his at the University of Tennessee (spring semester 1974); according to the author's recollection, on other occasions Douglas reportedly stated the optimal agency lifetime as five years, not ten.

¹⁰ Centripetally: "moving or tending to move toward a center." Oxford American Dictionary and Thesaurus 225 (2003).

¹¹ See Alaska Comm'n Report, *supra* note 1, at 5, 186, 205–06.

[A] general complacency had come to permeate the operation and oversight of the entire system. . . . Privatization and self-regulation in oil transportation contributed to the complacency and neglect that helped cause the wreck of the Exxon Valdez. . . . Success bred complacency; complacency bred neglect; neglect increased the risk—until the right combination of errors finally led to an accident of disastrous proportions. All parties—the shippers, Alyeska, the Coast Guard and the State of Alaska—shared in the complacency.

The major oil spill calamities in the two Gulfs have demonstrated that the standard di-polar governance model for oil megasystems produces a complex but poorly coordinated, insufficiently vigilant, risk-prone plexus that cannot be relied upon for human or ecological safety. This failing is only multiplied as drilling pushes ever farther and deeper to develop hydrocarbons.

To reform the problematic inertias observed within the Alaska oil megasystem, the Alaska Commission made fifty-nine substantial recommendations, more than half of them relevant to oil megasystems beyond Alaska.¹² One of the more significant recommendations was the call for creation of unique citizen councils.¹³ The Commission urged that the traditional public-private management arrangement be significantly expanded by institutionalizing a savvy citizen watchdog presence within the system—regional citizen advisory councils (RCACs).¹⁴ The Oil Pollution Act of 1990 (OPA-90) incorporated that recommendation for Alaska waters,¹⁵ and the experience of RCACs in Alaska shows the promise and the challenges of integrating citizen action.¹⁶

The Commission's innovative recommendation to create RCACs not only changed the public management perspectives of oil production and transport in Alaska,¹⁷ it also provides a potentially instructive model for managing oil production and other industrial megasystems in modern industrial democracies. Properly designed and implemented, RCACs provide a pluralistic structural design for governing, breaking up the centripetal tendencies of the usual agency-industry di-polar system. The 2011 Report to the President by the Na-

gency that produced this result. . . . [There was] a low level of vigilance and a discomfiting level of comfort between the industry and Coast Guard regulators. State regulation had been withdrawn.

Id.

¹² See *id.* at 129–71.

¹³ See *id.* at 139–40 (Recommendation 12).

¹⁴ See *id.* at 131 (Recommendation 3); see also *id.* at 139–40 (Recommendation 12), 146 (Recommendation 26), 163 (Recommendation 49).

¹⁵ 33 U.S.C. § 2732(d) (2006).

¹⁶ See *infra* Part III.

¹⁷ Joseph Horton, Citizen Watchdogs: Insulating Regional Citizen Advisory Councils—Lessons Learned from the RCACs of Prince William Sound and Cook Inlet, D.105, at 3–5 (Nov. 5, 2010) (unpublished research memorandum), available at <http://www.bc.edu/environmentallaw> (follow “Boston College Law School Land & Environmental Law Program Submission to the National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling” hyperlink).

tional Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling (“National Commission”) proposes to bring the innovative RCAC concept to the Gulf.¹⁸

The hard systemic lessons learned twenty-one years ago in Alaska were largely forgotten or diluted over subsequent years, even the few Alaska Commission recommendations that were partially incorporated into OPA-90.¹⁹ The question for national energy law and policy now is whether, this time around, we will acknowledge and implement the lessons for hard systemic change largely avoided two decades ago. There are many promising areas for reform, as noted in the work of the National Commission.²⁰ The innovative RCACs constitute one significant potential improvement in the oil megasystem. The Deepwater Horizon tragedy will be a doubly disastrous occasion if it does not produce systemic changes for the future, as the Exxon Valdez spill markedly failed to do. As White House Chief of Staff Rahm Emanuel said in another context, “You never want a serious crisis to go to waste.”²¹

I. Megasystems

Analyzing the role of oil production and transport in the life of modern society, the Alaska Commission described its broad and deep complexity as a “megasystem”:

[The world’s oil companies] have created a megasystem that carries oil from wellheads in the far corners of the earth to refineries in its major industrial centers. But this megasystem is fragile. It requires careful scrutiny from outside the industry in design, construction and operation. When it fails...entire coastlines are at risk. ...Alaskans assume such peril daily....Other Americans on three coasts face just as ominous a threat... What will reduce these risks? Obviously, the present system, providing minimum penalties for creating massive environmental damage, has not deterred the industry from putting the coasts and oceans of the world at continual risk. The system calls out for reform. The mission of this commission is to explain what must be done and why.²²

¹⁸ See BP Commission Report, *supra* note 3, at 212, 268–69, 281.

¹⁹ Joe Stephens, *Lessons from Exxon Valdez Spill Have Gone Unheeded*, Wash. Post (July 14, 2010), <http://www.washingtonpost.com/wp-dyn/content/article/2010/07/13/AR2010071306291.html>.

²⁰ See BP Commission Report, *supra* note 3, at 249–91.

²¹ Gerald F. Seib, *In Crisis, Opportunity for Obama*, Wall St. J., Nov. 21, 2008, at A2.

²² Alaska Comm’n Report, *supra* note 1, at v.

The BP blowout in the Gulf reflects virtually the same interconnected megasystem complexities and the same lack of unitary oversight, inconsistent vigilance, and shortcutting as revealed in Alaska in the aftermath of the Exxon Valdez spill. The Alaska Commission concluded that the tragic incident was not primarily attributable to a captain's drinking, but rather that an accident of that nature and caliber was probably inevitable.²³ As the Alaska Commission concluded, the Exxon Valdez spill was the predictable result of a megasystem that had developed a pervasive culture of complacency, collusion, and neglect.²⁴ But for the most part these lessons were subsequently forgotten or diluted.²⁵ As the Alaska Commission gathered research and evidence in the aftermath of the Exxon Valdez spill, however, the commissioners were repeatedly confronted with examples of deficiencies throughout the corporate and governmental management of the sprawling interconnected aggregation of elements that was the Alaska oil enterprise.²⁶

The Alaska Commission's report, instead of merely focusing on the 1989 calamity's tanker transport element as initially planned, ultimately addressed issues that presented serious risks throughout all stages of the oil production and transport process. Problematic concerns were identified stretching from the various oil production areas on Alaska's North Slope, across 800 miles of pipeline and pumping stations, across three mountain ranges, to the large tank farm holding facilities, onto the wharves — where tanker loading crews had been cut back to save money — and along a 2000-mile tanker route to refineries at Long Beach, California.²⁷ Throughout that megasystem, risky cost-

²³ See *id.* at 7 ("It was the result of the gradual degradation of oversight and safety practices that had been intended, 12 years before, to safeguard and backstop the inevitable mistakes of human beings.").

²⁴ See *id.* at 206.

²⁵ Stephens, *supra* note 19.

²⁶ See generally Alaska Comm'n Report, *supra* note 1, at 129–71 (Findings and Recommendations). The deficiencies are noted throughout the Report text and reflected in the Recommendations as deficits requiring reform: the need to compensate for deficiency in prevention safety prioritizing (see Recommendation 1, 2, 4, 6, 8); need for best available technology in corporate and agency implementation (Recommendation 7); need for better state agency vigilance over corporate practices (Recommendations 10, 14–17, 25, 43–46); need for better federal agency presence in overseeing corporate practices (Recommendations 29–31); deficiencies in environmental safety reporting (Recommendation 33); deficiencies in governmental and corporate incident response planning (Recommendations 14, 18, 22, 38–45, 48–51). See *id.*

²⁷ See Alaska Comm'n Report, *supra* note 1, at 5; *Pipeline Facts*, Alyeska Pipeline Service Co., <http://www.alyeska-pipe.com/pipelinefacts.html> (last updated May 28, 2010). According to the Alaska Commission's Chairman and Executive Director, the Commis-

cutting by Alyeska, the industry consortium—dominated in fact by BP²⁸—that ran the Alaska oil system, and the acquiescence of under-vigilant government agencies, driven by profits, politics, and the necessities of oil supply, made breakdowns in operations and response possible.²⁹

As ongoing investigations in the aftermath of the BP Deepwater Horizon blowout spill have revealed, there are fragilities and serious points of risk throughout the Gulf of Mexico oil megasystem as well,³⁰ and not just for wells at great depth. The BP Deepwater Horizon blowout was not an exceptional anomaly.³¹ Here is the apparent syllogism:

sion found deficiencies throughout the oil extraction and transport megasystem, and that is why the commissioners ultimately widened the focus from just addressing tanker transport. “But I wish we’d gotten more about pipelines into OPA-90,” said the Chairman. Telephone interview with Walter Parker, Chairman, Alaska Oil Spill Comm’n (Mar. 17, 2011); Telephone interview with John E. Havelock, Executive Director, Alaska Oil Spill Comm’n (Mar. 17, 2011).

A rough map graphic submitted to the Alaska Commission by the Boston College Exxon Valdez student research group, and used in some of the Commission discussions, illustrated the different interconnected sectors that constituted an integrated system with risks (often including catastrophic risks) throughout. See Bos. C. L. Sch. Land & Envtl L. Program Submission to the Nat’l Comm’n on the BP Deepwater Horizon Oil Spill & Offshore Drilling, app. D.100 (Nov. 5, 2010), available at <http://www.bc.edu/environmentallaw> (follow “Boston College Law School Land & Environmental Law Program Submission to the National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling” hyperlink),²⁸

BP, at the time of the Exxon Valdez spill, had a 50.01% controlling interest within the seven-corporation Alyeska consortium, which meant that the Alyeska consortium’s operational decisions, much criticized by the Alaska Commission report, were driven by BP’s majority position. See Noaki Schwartz, *BP Had a Key Role in the Exxon Valdez Disaster*, ABC News, May 25, 2010, <http://www.pottsmc.com/articles/2010/05/25/news/doc4bfbfae49ac8813211300.txt>.

²⁹ See Zygmunt J.B. Plater, *A Modern Political Tribalism in Natural Resources Management*, 11 Pub. Land L. Rev. 1, 6–10 (1990). These cost-cutting, risk-enhancing measures contributed substantially to causing the Alaska spill, including the exhaustion of tanker crew personnel and inadequate radar, and to major deficiencies in response capabilities after the spill occurrence. *Id.*; see also Alaska Comm’n Report, *supra* note 1, at 35 (“Although the U.S. Coast Guard promised to push for both systems, by the time the oil was flowing in 1977 the agency had not installed either full-coverage radar or any other electronic surveillance in the sound.”).

³⁰ See BP Commission Report, *supra* note 3, at vii, 2, 62, 71, 78–83, 140, 174–96.

³¹ See *id.* at 122. The Commission found that the Minerals Management Service (MMS) lacked the resources, experience, and training to adequately ensure safe oil platform operations. *Id.* at 57, 126–27. The “root causes [of the BP Deepwater Horizon Oil Spill] are systemic and, absent significant reform in both industry practices and government policies, might well recur. The missteps were rooted in systemic failures by industry management (extending beyond BP to contractors that serve the industry), and also by failures of government to provide effective regulatory oversight of offshore drilling.” *Id.* at 122–23.

the greater the size, complexity, and technical sophistication of the elements of a megasystem, the greater the risk of mega-catastrophe—and the greater the need for extreme vigilance in design, coordination, and operation. Yet the bigger such megasystems become, the harder it is for corporate managers and government agencies alike to see, keep track of, and manage the cumulative mass of critical points of risk. Likewise, the bigger the megasystem, the greater the daily internal economic and political pressures to maximize short-term benefits, and, perversely, to fractionalize vigilance.

In the Gulf of Mexico region, fractionalized and less-than-vigilant government management practices appear to have been pervasive, paralleling insufficient industry operational practices. State and federal agencies exhibited negligence and lassitude toward operations of all the oil companies in the Gulf, not just BP.³² Critical geological information was routinely insufficiently available to permitting authorities and oversight monitors.³³ The various oil production transport systems—tankers, lighters, and pipelines—have broadly posed their own problems of safety and environmental threat and have not been adequately factored into the regulatory process.³⁴ And the risks are synergistic. For example, the construction and maintenance of pipelines and transit canals through barrier islands and Delta lands, to service hundreds of near-shore oil operations—between 9000 and 10,000 miles of channelization in Louisiana—has been virtually unaccounted for in oil permitting, but was a major reason why Hurricanes Katrina and Rita found coastal populations so unprotected.³⁵

³² Plater, *supra* note 3, at 11,042.

³³ Eric French et al., Trade Secrets and Proprietary Information, D.128, at 2 (Nov. 5, 2010) (unpublished research memorandum), available at <http://www.bc.edu/environmental-law> (follow “Boston College Law School Land & Environmental Law Program Submission to the National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling” hyperlink).

³⁴ Oliver A. Houck, Down on the Batture 205 (2010); Oliver A. Houck, *Land Loss in Coastal Louisiana: Causes, Consequences, and Remedies*, 58 Tul. L. Rev. 3, 25–28 (1983). The serious social externalities of oil industry practices in Louisiana are illustrated in the famous *Testbank* case. See *Louisiana ex rel. Guste v. Testbank*, 752 F.2d 1019 (5th Cir. 1985).

³⁵ See Melanie MacWilliams-Brooks et al., Categorical Exclusions from EIS, D.107, at 4–5 (Nov. 5, 2010) (unpublished research memorandum), available at <http://www.bc.edu/environmentallaw> (follow “Boston College Law School Land & Environmental Law Program Submission to the National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling” hyperlink); see also Joel Sartore, *Image 1346387 of Official National Geographic Prints Store*, Nat’l Geographic, <http://gallery.pictopia.com/natgeo/photo/9190416/> (last visited Apr. 15, 2011) (depicting canals carved through Louisiana wetlands).

II. The Hazards of Megasystem Centripetal Di-polarity

*The commission found a low level of vigilance and a discomfoting level of comfort between the industry and Coast Guard regulators. State regulation had been withdrawn.*³⁶

A. Patterns of Preparation Failure: Alaska to the Gulf of Mexico

The preconditions for destructive discharges from oil megasystems can lie latent within the process of planning, permitting, constructing and operating oil drilling systems, and designing insufficient precautionary safeguards. In Alaska the 1990 Commission noted that the entire system had been developed with shortcuts and a primary focus on production rather than safety.³⁷ The official state and local regulatory agencies often uncritically accepted industry data and assurances on the design and safety of system elements, issued permits without required documentation, did not insist on strict compliance with corporate and federal rules, and, on occasions when they attempted to assert regulatory vigilance, were resisted, delayed, or overturned by the industry's greater resources and political momentum.³⁸ The "revolving door" between industry and regulators produced what political science describes as agency capture.³⁹

As the Alaska Oil Spill Commission investigations revealed, the Alyeska Owners' Committee, led by BP, systematically cut back on critical safety measures.⁴⁰ The Alyeska Owners' Committee successfully pressured the U.S. Coast Guard to accept a variety of regulatory changes, including: making the Sound's vehicle separation zone volun-

³⁶ Alaska Comm'n Report, *supra* note 1, at 186.

³⁷ *See id.* at 34-36.

³⁸ *See generally id.* at 34-59. At the commencement of the pipeline, the State of Alaska passed a protective statute establishing stricter standards for tanker safety and pollution avoidance. In response, the industry's management consortium successfully attacked most of the law on preemption grounds in federal district court. *Chevron U.S.A., Inc. v. Hammond*, No. A 77-195, 1978 A.M.C. 1697, 1712-14 (D. Alaska June 30, 1978). The state only appealed some minor provisions of the law, which were deemed unpreempted by the Ninth Circuit. *Chevron U.S.A., et al. v. Hammond*, 726 F.2d 483, 501 (9th Cir. 1984).

³⁹ *See Stewart, supra* note 9, at 1684-87.

⁴⁰ *See Alaska Comm'n Report, supra* note 1, at 7 ("[O]ne basic conclusion of this report is that the grounding at Bligh Reef represents much more than the error of a possibly drunken skipper: It was the result of the gradual degradation of oversight and safety practices that had been intended, 12 years before, to safeguard and backstop the inevitable mistakes of human beings.").

tary rather than mandatory;⁴¹ loosening agreed-upon requirements for industry-financed high-resolution radar systems;⁴² firing the around-the-clock expert loading crews at the Valdez Marine Terminal to save \$10 million a year in costs, thereby forcing ships' crews to take on the exhausting and delicate job of loading their tankers carefully to avoid structural failure;⁴³ and excusing industry from having to fund a rapid response station on Hinchinbrook Island – which could have quickly accessed the Exxon Valdez on Bligh Reef and captured virtually all the discharged oil before it got caught up by wind and currents.⁴⁴ And when the big one occurred, the megasystem's failure to prepare for a major spill was grimly evident.

Similar complacency and inappropriate collusion is increasingly revealed in narrative details from the Gulf of Mexico oil production system.⁴⁵ Regulators and those being regulated operated together in

⁴¹ Though depicted as sharp vessel separation corridors on the nautical chart of Prince William Sound, the separation zone is not mandatory. *See id.* at 8–9. The author was informed during Commission investigations that under the 1980 Inland Navigation Rules, the separation zone for Prince William Sound had not been designated as a mandatory lane divider. Under current regulations, vessel separation zones are now generally mandatory. *See* 33 C.F.R. § 83.10 (2010).

⁴² *See* Alaska Comm'n Report, *supra* note 1, at 35; *supra* note 29 and accompanying text. Requirements for higher-quality radar had been reduced at industry's request to permit the utilization of less expensive radar systems, despite initial assurances that best available radar technology would be installed. Interview with Havelock, *supra* note 27. "When I was Attorney General [representatives of industry and the U.S. Coast Guard] assured me that BAT for radar would be installed in Prince William Sound. It wasn't. It was lousy technology." *Id.* (Commission Executive Director Havelock served as Attorney General for the State of Alaska from 1970 to 1973).

⁴³ *See* Plater, *supra* note 29, at 7.

⁴⁴ *See* Alaska Comm'n Report, *supra* note 1, at 39. Incidents in the Sound could have been addressed more rapidly and directly if the planned Hinchinbrook Island response station existed:

The need to deploy equipment to a spill from several locations rather than just from the Valdez terminal began to receive consideration in late December. Rear Adm. J.B. Hayes, Commander 17th Coast Guard District, provided the sharpest initial focus in a Dec. 28, 1976, letter to A.P. Rollins, Jr., the chief federal pipeline officer. Hayes noted that response times for vessels stationed in Valdez to a spill in Hinchinbrook Entrance had been determined to be seven to eight hours. "It is strongly recommended that Alyeska preposition appropriate response resources in the vicinity of Hinchinbrook Entrance." Although similar recommendations followed and became more specific, Alyeska never responded.

Id.

⁴⁵ Reports indicate that the MMS officials and industry personnel enjoyed social excursions together – often in improperly close relationships characterized as "a culture of ethical failure," "a culture of substance abuse and promiscuity," and "a pattern of abuses

symbiotic relationships reflecting the fact that they considered themselves part of the same unitary community.⁴⁶ Deepwater drilling at unprecedented depths was undertaken with casual oversight and lax requirements for drill plans.⁴⁷ Categorical exclusions from full environmental reviews were granted for deepwater drilling, and the potential for blowouts ignored as virtually impossible, ignoring data showing that blowout preventers are prone to failure.⁴⁸ Monitoring and enforcement of regulations was haphazard.⁴⁹ If violations were assessed, they were vigorously contested to burden and deter further enforcement.⁵⁰

Internally, corporate management decisions can too easily be based on short-term economic gain. Despite high hazard locations, great technological challenges, and high risk potentials, operations decisions over time are likely to be managed in business terms, dominated by shareholder and managerial expectations of high revenues, rather than public concern for human and ecosystem safety.⁵¹ Internal

and mismanagement." Charlie Savage, *Sex, Drug Use and Graft Cited in Interior Department*, N.Y. Times, Sept. 10, 2008, at A1.

⁴⁶ See Jason DeParle, *Leading the Way Into Deep Water*, N.Y. Times, Aug. 8, 2010, at A1. "Obviously we're all oil industry," said Larry Williamson, the [MMS] district manager. "We're all from the same part of the country. Almost all our inspectors have worked for oil companies. . . . They grew up in the same towns." *Id.*

⁴⁷ See Randy Lee Loftis, *Risks of Deep-water Drilling get Brush-off*, Anchorage Daily News, (July 15, 2010, 7:51 AM), <http://adn.com/2010/07/01/1349546/depper-oil-wells-in-gulf-pose.html>.

⁴⁸ See David Barstow et al., *Between Blast and Spill, One Last, Flawed Hope*, N.Y. Times, June 21, 2010, at A1; DeParle, *supra* note 46.

⁴⁹ See, e.g., Alaska Comm'n Report, *supra* note 1, at 47 (noting that Alyeska's contingency plan met "'regulation requirements on paper'" but would have failed a "'reality test'" (citation omitted)); *id.* at 58-59 (finding that no effective enforcement policy was available beyond shutting down the pipeline).

⁵⁰ BP's stance over the years was typified by its contesting safety violations in Texas City explosions and otherwise. See Press Release, BP, BP Texas City Refinery Formally Contests OSHA Citations (Oct. 30, 2010), available at <http://www.bp.com/genericarticle.do?categoryId=2012968&contentId=7057595>; David Batty, *BP to Pay \$50m Fine For Safety Violations After Texas City Explosion*, Guardian (Aug. 12, 2010, 9:28 PM), <http://www.guardian.co.uk/business/2010/aug/12/bp-texas-city-explosion-fine> ("BP initially contested paying the entire amount . . ."); Ben W. Heineman, Jr., *Valuing Safety is Good for Companies' Bottom Line*, Atlantic (Apr. 19, 2010, 10:40 AM), <http://www.theatlantic.com/business/archive/2010/04/valuing-safety-is-good-for-companies-bottom-line/39128/> ("In October 2009, the Occupational Safety and Health Administration announced it was levying an \$87 million fine against BP for failing to correct problems which caused the 2005 explosion; BP is contesting those charges.").

⁵¹ See Ravi Somaiya, *The Road to Deepwater Horizon: BP's Oil Spill in the Gulf of Mexico Was a Disaster Three Decades in the Making*, Newsweek, July 13, 2010,

corporate culture is likely to be dominated by whatever the dominant partner's corporate agenda and policies may be. Compounding this structure is a chief shortcoming – industry typically maintains its strict right to hold company information confidential, even where that data is of critical public importance.⁵²

BP may have been particularly prone to cutting corners in its dominance of the Alyeska management company and in the Gulf,⁵³ but the comfortable relationships with the Interior Department's Minerals Management Service (MMS), and its lax oversight were shared by all the Gulf drilling companies.⁵⁴ In Louisiana especially, and to a lesser extent in other Gulf States, oil is king and close accommodation with the oil industry at the state as well as federal level was standard operating procedure.⁵⁵

<http://www.newsweek.com/2010/07/13/the-road-to-deepwater-horizon.html> (discussing the tension between “profits and safety” at BP during the time leading up to the spill). See generally Vsevolod Tatarenkov, Supplement to Research Memo No. 102, at 6–10 (Nov. 19, 2010) (unpublished research memorandum), available at <http://www.bc.edu/environmentallaw> (follow “Boston College Law School Land & Environmental Law Program Submission to the National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling” hyperlink) (reporting a partial catalog of risk-enhancing operational decisions in the Alaska setting).

⁵² For example, during the “mad cow” scare involving Creutzfeldt-Jakob disease in beef, government agencies were pressured:

to keep secret the names of the retail outlets selling food subject to recalls. This agreement left consumers essentially in the dark, unable to protect themselves and their families from the possibility of ingesting contaminated meat. The USDA and DHS actions suggest that protecting the “proprietary information” of the meat industry is of greater importance than protecting public health and the safety of the food supply.

Elisa Obadashian, Senior Policy Analyst Consumers Union, Testimony Before the California Legislature on Mad Cow Disease (Feb. 24, 2004), available at [http://www.consumers](http://www.consumersunion.org/pub/core_food_safety/000879.html)

[union.org/pub/core_food_safety/000879.html](http://www.consumersunion.org/pub/core_food_safety/000879.html); see also French et al., *supra* note 33, at 2–3.

⁵³ See Schwartz, *supra* note 28.

⁵⁴ See DeParle, *supra* note 46. BP was not the only oil company in the Gulf that enjoyed lax enforcement including blanket categorical exemptions from environmental review. For Gulf of Mexico projects generally, MMS had been granting between 250 and 400 waivers a year. Juliet Eilperin, *U.S. Exempted BP's Gulf of Mexico Drilling From Environmental Impact Study*, Wash. Post, May 5, 2010, [http://www.washingtonpost.com/wp-dyn/content/article/2010/](http://www.washingtonpost.com/wp-dyn/content/article/2010/05/04/AR2010050404118.html)

[05/04/AR2010050404118.html](http://www.washingtonpost.com/wp-dyn/content/article/2010/05/04/AR2010050404118.html). The reported industry-agency improprieties did not single out BP as an exception. See Savage, *supra* note 45.

⁵⁵ See DeParle, *supra* note 46. For example, after Katrina it was apparent that a major contributor to inland flooding and the destruction of buffering coastal marshes was the 9000 miles of oil industry canals cut through coastal marshes to serve drilling operations, but this fact was generally not mentioned. See Houck, *Land Loss in Coastal Louisiana*, *supra* note 34, at 26, 75–78; Oliver Houck, *Who Will Pay to Fix Louisiana?*, *Nation*, July 12, 2010,

B. Failures in Response Plans

In the circumstances of their post-calamity responses as well, the two oil disasters, two decades apart, reveal distressingly similar systemic failures in response preparation and implementation. Contingency plans are the heart of response effectiveness, and in both cases the official contingency plans were largely fiction. The BP Gulf of Mexico plan notoriously included consideration of walrus, not found south of Seattle,⁵⁶ minimized the possibility of a blowout, and wildly exaggerated the practicability of discharge capture and clean-up.⁵⁷ The official Alaska plan had failed within forty-eight hours; a generic default Exxon corporate plan had to be brought in.⁵⁸ Although recommendations were made and we had the opportunity to learn from Alaska, twenty years later the command structure in the Gulf of Mexico was uncertain, with state and federal representatives stepping on one another's toes and BP not under their command and control.⁵⁹

at 11 (describing Louisiana's reliance on the oil and gas industry); MacWilliams-Brooks et al., *supra* note 35, at 6.

⁵⁶ *Walrus in Louisiana? Eyebrow-Raising Details of BP's Spill Response Plan*, Reuters, May 27, 2010, available at <http://blogs.reuters.com/environment/2010/05/27/walrus-in-louisiana-eyebrow-raising-details-of-bps-spill-response-plan/>.

⁵⁷ See Cain Burdeau & Holbrook Mohr, *BP Downplayed Possibility of Major Oil Spill*, Boston.com, May 1, 2010, available at http://www.boston.com/news/science/articles/2010/05/01/bp_downplayed_possibility_of_major_oil_spill/; Holbrook Mohr et al., *BP Spill Response Plans Severely Flawed*, MSNBC, June 9, 2010, available at http://www.msnbc.msn.com/id/37599810/ns/disaster_in_the_gulf/ ("There weren't supposed to be any coastline problems because the site was far offshore. 'Due to the distance to shore (48 miles) and the response capabilities that would be implemented, no significant adverse impacts are expected,' the site plan says."). Attention to preparation for dealing with a large blowout, not to mention a blowout at mile-depths, would seem an obvious concern given the well-known and destructive Ixtoc blowout in the Gulf's Bay of Campeche in 1979. See Ramon Antonio Vargas, *1979's Ixtoc Oil Well Blowout in Gulf of Mexico Has Startling Parallels to Current Disaster*, Times-Picayune (July 4, 2010 10:44 AM), http://www.nola.com/news/gulf-oil-spill/index.ssf/2010/07/1979s_ixtoc_oil_well_blowout_i.html.

⁵⁸ Alaska Comm'n Report, *supra* note 1, at 161, app. N at 1-2 (detailing a timeline of Days 2 and 3 of the spill).

⁵⁹ In contingency plans, equipment and funding are the responsibility of the industry rather than the federal taxpayer. See Alaska Comm'n Report, *supra* note 1, at 156 ("Recommendation 38: Government in Charge. The spiller should not be in charge of response to a major spill. A spiller should be obligated to respond with all the resources it can summon, but government should command that response."); *id.* at 162 ("Recommendation 48: Incident Command System. 'A formal command structure known as the Incident Command System should be used to direct [the industry-provided] response to oil spills.'"). The Oil Spill Liability Trust Fund, the primary institutional source of spill response funding, is funded by industry penalties, liability assessments, taxes, and fees. See 26 U.S.C. § 9509(b)

The Alaska Commission focused on the need for designing and implementing a decisive and unified incident command, a call that OPA-90's National Contingency Plan essentially avoided in practice.⁶⁰ In addition to asserting the need for governmental command authority over industry equipment and personnel, the Commission called for shifting oil spill containment and cleanup responsibilities to the U.S. Army Corps of Engineers if the Coast Guard proved incapable of asserting stronger command authority,⁶¹ and criticized U.S. EPA's lack of regulatory energy in oil spill prevention and response.⁶²

C. *Dangerous Dispersants: Regulators Bowing to Industry*

EPA's continued failure to scrutinize and regulate dispersants has been a critical element in the shortcomings of national spill response.⁶³ Dispersants, in fact, provide one of the most significant examples of dysfunctional contingency response mechanisms in the di-polar management of oil industry risk. Despite warnings from the Alaska Commission twenty years previously,⁶⁴ industry-led contingency planning and government acquiescence resulted in vigorous and indiscriminate use of dispersants in response to oil spills, rather than mechanical surface collection technologies—booms and skimmer craft, which are more effective and less destructive to human and ecological health, but more expensive to maintain and operate.⁶⁵

(2006). As the Alaska Commission noted, command must be governmental, yet when the U.S. EPA command ordered BP to sharply restrict the use of Corexit dispersants, BP demurred, persuading the Coast Guard to allow continued extensive use. See David A. Fahrenthold & Steven Mufson, *Documents Indicate Heavy Use of Dispersants in Gulf Oil Spill*, Wash. Post, Aug. 1, 2010, <http://www.washingtonpost.com/wp-dyn/content/article/2010/07/31/AR2010073102381.html>.

⁶⁰ Alaska Comm'n Report, *supra* note 1, at 162; see 33 U.S.C. § 1321(d) (2006). Implementation of the National Incident Management System often reflected disorganization and insufficient preparation. See Jim McKay, *Gulf of Mexico Oil Spill Prompts Debate on NIMS, Unified Response*, Emergency Mgmt. (Sept. 13, 2010), http://www.icyte.com/system/snapshots/fs1/c/4/b/8/c4b8dd4e4209a32417d138cedf77c01a59fd76c0/index.html?anno_id=327017.

⁶¹ Alaska Comm'n Report, *supra* note 1, at 156 (Recommendation 39).

⁶² *Id.* at 157 (Recommendation 40).

⁶³ Riki Ott, *Sound Truth and Corporate Myth\$: The Legacy of the Exxon Valdez Oil Spill 422-27* (2005). The necessity, and shortcomings, of EPA's scrutiny of dispersants are analyzed at length in Dr. Riki Ott's major compilation of post-Exxon Valdez Oil Spill accounting. See *id.*

⁶⁴ See Alaska Comm'n Report, *supra* note 1, at 198-99.

⁶⁵ See Vsevolod Tatarenkov, *The Marine Spill Response Corporation: A Closer Look*, D.102, at 2-3 (Nov. 5, 2010) (unpublished research memorandum), available at <http://www>.

As the consequences of the BP Deepwater blowout continue to be revealed, the previously-unfamiliar word “dispersant” may well achieve the same kind of public-awareness notoriety as the once-unknown “chad.”⁶⁶ Dispersants were targeted by the Alaska Commission as deeply problematic, but are nonetheless strongly favored by industry for a variety of salient reasons. Dispersants are cheaper in terms of out-of-pocket costs to the spiller than removal actions.⁶⁷ Perhaps even more compelling, dispersants are “optically” preferable: they play a key role in the “out-of-sight, out-of-mind” response strategy.⁶⁸ If oil can be sunk beneath the surface and broken up into billions of small suspended droplets, it becomes invisible, lessens the images of fouled beaches and dying wildlife, and its existence can be doubted and denied.⁶⁹ By discharging a torrent of dispersants a mile below the surface, the objective is to prevent much of the oil from ever reaching visibility at the surface. However, if oil does reach the shore, dispersants can, to some extent, achieve surface cleaning.⁷⁰ In Alaska, high-pressure spraying of dispersants on stony beaches was a major objective for Exxon in creating news video of successful post-spill cleanup.⁷¹

But dispersants have serious destructive effects when released into the environment, and not just for wildlife. In Alaska temporary workers hired to spray dispersants on Prince William Sound and on the beaches reported a litany of physical effects from exposure to

bc.edu/environmentallaw (follow “Boston College Law School Land & Environmental Law Program Submission to the National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling” hyperlink).

⁶⁶ See, e.g., Bryan Walsh, *Oil Spill: What's Going on Under the Gulf?*, Time (Aug. 2, 2010, 6:55 PM), <http://ecocentric.blogs.time.com/2010/08/02/oil-spill-whats-going-on-under-the-gulf/>; HBO's “Recount” *Revisits the Hanging Chad*, NPR (May 25, 2008), <http://www.npr.org/templates/story/story.php?storyId=90813445>.

⁶⁷ See Dagmar Schmidt Etkin, Cutter Info. Corp., *Estimating Cleanup Costs For Oil Spills 5* (1999), available at <http://www.environmental-research.com/publications/pdf/1999-IOSC-Cost.pdf>.

⁶⁸ See Rocky Kistner, *Dispersant Controversy, Oil Plumes Persist in the Gulf*, Switchboard: Nat. Resources Def. Council Staff Blog (Aug. 20, 2010), http://switchboard.nrdc.org/blogs/rkistner/down_a_winding_road_that.html.

⁶⁹ See Matthew Brown, *Underwater Oil Plumes Disputed by BP CEO Tony Hayward*, Huffington Post (May 30, 2010, 8:55 PM), http://www.huffingtonpost.com/2010/05/30/underwater-oil-plumes-dis_n_595015.html.

⁷⁰ Int'l Tanker Owners Pollution Fed'n Ltd, *Technical Information Paper: The Use of Chemical Dispersants to Treat Oil Spills 5* (2005), available at http://www.itopf.com/_assets/documents/tip4.pdf.

⁷¹ Plater, *supra* note 3, at 11,044.

backspray.⁷² “We’re peeing blood,” the author was told, “We can’t let the foremen know or they’ll send us home to Texas, but if it’s doing this to us, what’s it doing to the places we’re spraying?”⁷³ In Alaska today, beaches that had been sprayed with dispersants reportedly demonstrate greater continued ecological damage than beaches that were never “cleaned.”⁷⁴ Down on the Gulf of Mexico there are not only reports of dolphins dying with bloody hemorrhages around their blowholes and in their internal organs, but dispersant workers have started to pass blood in their urine, as well.⁷⁵

Dispersants in the water column not only kill marine mammals, fish, and other larger life forms, but may have even greater long-term ecosystem effects. The BP Deepwater Horizon blowout occurred at the Gulf of Mexico’s season of maximum larval production for fish, shellfish, and the myriad smaller life forms that support the fecundity of the Gulf.⁷⁶ Dispersants make the oil miscible, hanging in subsurface curtain plumes of tiny droplets of heavy oil-cum-dispersant that can directly contaminate or be consumed by whatever they touch.⁷⁷ “Clouds of larva, billions, even trillions of them, are drifting in that water column,” a federal biologist told the author.⁷⁸ “They move up and down according to temperature and light, and when they hit those plumes of suspended subsurface oil, it’s all over for them.”⁷⁹ The genetic damage to ecosystems in Alaska is still tangible. Herring populations and the

⁷² See Ott, *supra* note 63, at 29, 32–33.

⁷³ Interview with oil clean-up worker in Valdez, Alaska (Aug. 19, 1989).

⁷⁴ Interview with Dr. Riki Ott, toxicologist and author, in La. (Aug. 9, 2010).

⁷⁵ See Hannah Rogers-Ganter et al., Recommendations for Better Protecting Human Health in the Wake of Offshore Oil Spills, D.121, at 2 (Nov. 5, 2010) (unpublished research memorandum), available at <http://www.bc.edu/environmentallaw> (follow “Boston College Law School Land & Environmental Law Program Submission to the National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling” hyperlink); Maryann Tobin, 2010 Oil Spill: Dolphins Suffer Internal Bleeding, Rescued Birds Fly Back to Oil Spill From Tampa, Examiner (June 8, 2010, 12:12 AM), <http://www.examiner.com/animal-welfare-in-tampa-bay/2010-oil-spill-dolphins-suffer-internal-bleeding-rescued-birds-fly-back-to-oil-spill-from-tampa>.

⁷⁶ William R. Freudenburg & Robert Gramling, Blowout in the Gulf: The BP Oil Spill Disaster and the Future of Energy in America 12 (2011).

⁷⁷ David Biello, *Massive Oil Plume Confirmed in Gulf of Mexico*, Sci. Am. (Aug. 19, 2010), <http://www.scientificamerican.com/article.cfm?id=masive-oil-plume-confirmed-in-gulf-of-mexico>.

⁷⁸ Telephone interview with federal biologist in Fla. (June, 2010) (interview was confidential).

⁷⁹ *Id.*

major Alaska herring fishery have never recovered,⁸⁰ and Prince William Sound's primary pod of orca killer whales has not had a successful reproduction since the spill.⁸¹ If the Alaska Commission's recommendations had been heeded it is likely that dispersants would play no part, or a significantly reduced role, in spill response. Instead, spill response would focus on adoption of advanced skimmer oil capture technology,⁸² nontoxic coagulants which can operate in the subsurface water column as well as on the surface,⁸³ high-volume separation and retrieval systems,⁸⁴ and even short term combustion approaches,⁸⁵ in addition to greatly enhanced prevention.⁸⁶ But it was not to be.

⁸⁰ Exxon Valdez Oil Spill Tr. Council, *Exxon Valdez Oil Spill Restoration Plan: 2010 Update – Injured Resources and Services 27–29* (2010), available at <http://www.evostc.state.ak.us/Universal/Documents/Publications/2010IRSUpdate.pdf>.

⁸¹ Brandon Keim, *Unique Killer-Whale Pod Doomed by Exxon Valdez*, *Wired Sci.* (Mar. 24, 2009, 11:45 AM), <http://www.wired.com/wiredscience/2009/03/valdezwhales/>. In light of the extremely long-term latencies in the aftermath of the Exxon Valdez, and current reports of continuing major die-offs in the Gulf, it is difficult to sustain the contention made by Kenneth Feinberg, administrator of the BP Deepwater Horizon Disaster Victim Compensation Fund, and others, that the vast majority of harms from the BP spill will essentially have been realized in one more year's time, by 2012. See Catherine Clifford, *Gulf Oil Spill victims offered 3 years' damages*, *CNNMoney.com* (Feb. 2, 2011), http://money.cnn.com/2011/02/02/smallbusiness/bp_claims_feinberg_final_payments/index.htm (Feinberg's facility "predicted that the region will fully recover from the disaster in 2012," with the possible exception of oyster harvesting, which was granted four years of damages). Cf. Suzanne Goldenburg, *Has BP Really Cleaned up the Gulf Oil Spill?*, *Guardian* (London), Apr. 13, 2011, <http://www.guardian.co.uk/environment/2011/apr/13/deepwater-horizon-gulf-mexico-oil-spill> ("In the past year, [marine scientist Samantha] Joye – as well as other independent scientists – has repeatedly challenged the official version of the oil disaster put forward by the White House and other administration officials. . . . In December, Joye's team knocked down another White House claim – that the vast majority of the oil was gone – when she discovered a thick coating of oil, dead starfish and other organisms on the bottom of the ocean, over an area of 2,900 square miles.")

⁸² See Alaska Comm'n Report, *supra* note 1, at 105–06. Some scientists have argued that it is preferable and less damaging to keep the oil on the surface. If oil stays on the surface rather than mixing deep in the water column it is retrievable by the kind of effective surface technology currently used in Europe; if submerged by dispersants then the oil cannot be retrieved. Telephone interview with Jeffrey Admon, NOLA Steel, Inc. (Nov. 10, 2010) (discussing Dutch North Sea skimmer boom arm technology in North Sea operations); see also Eli Kintisch, *Gulf Oil Spill: An Audacious Decision in Crisis Gets Cautious Praise*, *Science*, Aug. 13, 2010, at 735, 736 ("NOAA Administrator Jane Lubchenco says one of the worst case scenarios involving longer exposures due to dispersed oil – big losses of spawning bluefin tuna populations – may not be detectable for years. That's led some scientists to suggest that letting the oil rise to the surface would have been a better move, as it could be more easily collected.")

⁸³ See Alaska Comm'n Report, *supra* note 1, at 107.

⁸⁴ See *id.* at 105–06, 197.

⁸⁵ See *id.* at 125.

⁸⁶ See *id.* at 127.

Today, as the EPA has quite belatedly hastened to test an array of dispersants, the agency's tentative conclusions about dispersant toxicity are cast into grave doubt by the Alaska experience. Tested dispersants appear in most cases to have been subjected only to short-term, high-dose acute toxicity tests of the dispersant alone, rather than completing the normal range of tests for toxicity, capabilities, and efficacy,⁸⁷ with inconsistency in testing the dispersant and oil mixture—the form in which the substances occur in impacted waters.⁸⁸

A number of oil industry contingency response functions in the Gulf of Mexico, as in Alaska, are consigned under official contingency response plans to industry-created service organizations.⁸⁹ In the Gulf of Mexico, primary dependence is placed upon industry-created pooled response management corporations—the Marine Preservation Association (MPA) and the Marine Spill Response Corporation (MSRC)—and these entities tend to adopt procedures and technology

⁸⁷ See Juliet Eilperin, *Oil Dispersant Does Not Pose Environmental Threat, Early EPA Findings Suggest*, Wash. Post (June 30, 2010, 9:01 PM), <http://www.washingtonpost.com/wp-dyn/content/article/2010/06/30/AR2010063004358.html>. HPV Chemical Hazard Data Availability Study, Env'tl. Prot. Agency, <http://www.epa.gov/hpv/pubs/general/hazchem.htm> (last updated Aug. 2, 2010) (“There are six basic tests which have been internationally agreed to for screening high production volume (HPV) chemicals for toxicity. The tests agreed to under the Organization for Economic Cooperation and Development’s Screening Information Data Set (OECD/SIDS) program are: acute toxicity; chronic toxicity; developmental/reproductive toxicity; mutagenicity; ecotoxicity and environmental fate.”). Testing that uses only acute toxicity parameters does not give reliable data on real world toxicity. Interview with Dr. Riki Ott, *supra* note 74.

⁸⁸ Studies have demonstrated that the mixture of crude oil and dispersant is more toxic than either the dispersant or crude oil by themselves. See Robert A. Perkins et al., *Comparative Marine Toxicity Testing: A Cold-Water Species and Standard Warm-Water Test Species Exposed to Crude Oil and Dispersant*, 42 *Cold Regions Sci. & Tech.* 226, 227 (2005). Even low-dose exposures to chemicals can be very dangerous. See generally Nicholas A. Ashford & Claudia S. Miller, *Chemical Exposures: Low Levels and High Stakes* 3–10 (2d Ed. 1998), available at http://drclaudiamiller.com/Articles/Chemical_Exposures_Low_Levels_and_High_Stakes_2nd_Ed.pdf. Additionally, for clean-up workers from the Exxon Valdez oil spill, “[m]oderate chemical exposure was also associated with a greater reported prevalence of chronic airway disease and symptoms of multiple chemical sensitivity.” Annie K. O’Neill, *Self-Reported Exposures and Health Status Among Workers from the Exxon Valdez Oil Spill Cleanup*, at iv (2003) (unpublished MPH thesis, Yale University), available at http://rikiott.com/pdf/oneill_thesis.pdf.

⁸⁹ See, e.g., *Home*, Marine Spill Response Corp., <http://www.msrg.org> (last visited Apr. 15, 2011); *Why MPA*, Marine Preservation Ass’n, <http://www.mpaz.org> (last visited Apr. 15, 2011). In both areas, the primary funders and providers of response equipment and operations are often industry entities. See Tatarenkov, *supra* note 65, at 1.

that serve industry agendas rather than public interests.⁹⁰ The delegation of official functions to private entities creates inherent tensions—between serving the avowed civic public goals of maximizing safety and effective incident response on one hand, and the pressing business agendas of the industry partners on the other. Financial interest, media-management interests, and market ratings measured in quarterly performances all militate in favor of narrowed goals and strategies, for example, the continuing use of dispersants.⁹¹ This problematic internal culture figured heavily in the Alaska Commission's conclusions and recommendations and is directly and problematically presented in Gulf of Mexico operations, and in contingency response planning with industry-constituted risk and response management corporations.

In both Gulf megasystems, industry pressure and agency lassitude combined to lessen operational vigilance and risk-preventing design, and to undercut the preparation and implementation of effective responses when disaster struck.

III. RCACs: An Innovative Expansion Beyond the Traditional Di-polar Model, and Challenges Encountered

Of the fifty-nine commission recommendations in the wake of the Exxon Valdez, heavy industry lobbying during passage of OPA-90 blocked or diluted many of these recommendations.⁹² The emerging story of Gulf of Mexico deepwater drilling frustratingly reflects how beneficial it might have been if those Alaskan recommendations had been implemented nationally in the wake of the Exxon Valdez.

Beyond its recommendations for comprehensive prevention policy and operational safety commitments,⁹³ the Alaska Oil Spill Commission urged that government and corporate performance standards specifically require BAT—best available technology, a fundamentally rational suggestion that could have made a significant difference in the Gulf of Mexico.⁹⁴ The Alaska Commission also recommended that enhanced state and local regulatory involvement be encouraged ra-

⁹⁰ See Tatarenkov, *supra* note 65, at 2; *Becoming a Customer*, Marine Spill Response Corp., <http://www.msrmc.org/Membership.htm> (last visited Apr. 15, 2011).

⁹¹ See Tatarenkov, *supra* note 65, at 3–4.

⁹² See Oil Pollution Act of 1990, Pub. L. No. 101-380, 104 Stat. 484 (codified at 33 U.S.C. §§ 2701–3207 (2006)).

⁹³ See Alaska Comm'n Report, *supra* note 1, at 129–32.

⁹⁴ See *id.* at 135 (Recommendation 7).

ther than preempted.⁹⁵ Recommendations at the federal level included calls for mandatory corporate safety reporting, minimum personnel levels, revised insurance antitrust exemptions, and an intensified vigilance role for the Coast Guard.⁹⁶

In addition to seeking “regulatory vigilance in government agencies” and “corporate attitudes that put safety first,” a prime innovation of the Alaska Commission, only partially integrated into OPA-90, was the proposed creation of institutionalized citizen watchdog councils – RCACs.⁹⁷ These councils, made up of citizens representing interests that would be grievously harmed if risk-prevention and incident response measures fail, aim to break up tendencies toward complacency, collusion, and neglect within the industry-agency management model that characterizes the field.⁹⁸ Integrated into several Commission recommendations,⁹⁹ this structural reform innovation in effect pluralized the di-polar governance model. Citizen councils would strategically institutionalize a functional, informed viewpoint on operations and risk from the external perspective of potentially-impacted members of the public.

RCACs – authorized in OPA-90¹⁰⁰ but limited to Alaska waters by Capitol lobbying¹⁰¹ – have become a significant but largely unher-

⁹⁵ See *id.* at 137–39 (Recommendation 11). An expressed congressional intent not to preempt state and local regulatory action would avoid the industry arguments that undercut Alaska’s protective regulations in *Chevron U.S.A., Inc. v. Hammond*. See No. A 77-195, 1978 A.M.C. 1697, 1712–14 (D. Alaska June 30, 1978). The Commission also noted the particular utility of interstate compacts. Alaska Comm’n Report, *supra* note 1, at 142 (Recommendation 18).

⁹⁶ Alaska Comm’n Report, *supra* note 1, at 149–51 (Recommendations 31–33).

⁹⁷ See *id.* at 139–40, 186.

⁹⁸ *Id.* at app. M 6–9. In framing its citizen council recommendations, the Commission was building upon the suggestions of Rick Steiner, former Professor at the University of Alaska, Anchorage. Plater, *supra* note 3, at 11,046.

⁹⁹ Alaska Comm’n Report, *supra* note 1, at 131 (“Recommendation 3: Citizen knowledge of risk. Because many individuals and communities are placed at risk by modern oil transportation systems, citizens should be involved in oversight arrangements at every level of government”); *id.* at 139 (“Recommendation 12: Oversight council. A citizens advisory council should be established in the Office of the Governor and given responsibility for overseeing the safe transportation of oil, gas and other hazardous substances”), *id.* at 146 (“Recommendation 26: Regional advisory committees. A system of regional advisory councils should be formalized under state authority to oversee harbor administration, state and federal regulation and private safety functions”), *id.* at 163 (“Recommendation 49: Enlarged community role. A substantive role should be given to the affected communities in any response system”).

¹⁰⁰ 33 U.S.C. § 2732(d) (2006).

¹⁰¹ *Id.* § 2732(b), (d) (authorizing the creation of two RCACs only in Alaska). It is of course difficult to pin down the intrigues of Capitol lobbying, but Alaska Commission Executive Director Havelock, who went to Washington while OPA-90 was being debated

alded product of the Exxon Valdez disaster. The RCAC model could well be integrated into a post-Deepwater Horizon management system for the Gulf and other oil production areas.

Currently there are two RCACs in existence in the United States, both of which are independent but industry-funded: the Prince William Sound RCAC (PWS-RCAC) and the Cook Inlet RCAC (CI-RCAC).¹⁰² For over twenty years, both the PWS-RCAC and the CI-RCAC have addressed environmental protection and oil spill preparation within their respective communities with little recognition from the outside world¹⁰³ and varying degrees of success.¹⁰⁴

OPA-90 stipulates that industry funding for the Alaska RCACs is a basic requirement for the validity of contingency plans in the waters they serve.¹⁰⁵ The PWS-RCAC is funded on an annual basis by the owners or operators of terminal facilities and tankers operating in Prince William Sound at a price-adjusted budget of up to \$2 million.¹⁰⁶ The CI-RCAC receives funding up to \$1 million.¹⁰⁷

A. RCAC Achievements

Over the past twenty years, each RCAC has achieved significant accomplishments in improving oil spill prevention and limiting the environmental impact of the oil industry within the region. Their achievements include: PWS-RCAC research and public advocacy resulting in tanker escort tug requirements to enhance safe transit

in Congress, said that given the lobbying that accompanied the legislation, it is reasonable to assume that it was the lobbying that resulted in RCACs not being extended to regions beyond Alaska. Interview with John F. Havelock, *supra* note 27.

¹⁰² See Horton, *supra* note 17, at 2.

¹⁰³ A study by George Busenberg appears to be the only serious analysis of the RCAC form. See generally George Busenberg, *Citizen Advisory Councils and Environmental Management in the Marine Oil Trade* (1997) (unpublished technical report based on Ph.D. dissertation, University of North Carolina at Chapel Hill), available at <http://www.circac.org/documents/pdf/emc/CACEnvironMg.pdf>.

¹⁰⁴ See *id.* at 65 (identifying factors which affect the success of RCACs).

¹⁰⁵ 33 U.S.C. § 2732(k)(1).

¹⁰⁶ *Id.* § 2732(k)(2). A provision in subsection (o)(1) permitted oil companies to satisfy the requirements of the Act if they entered contracts that met specific funding and duration requirements with alternative advisory groups certified by the President to foster the general goals and purposes of the Act and to serve the communities and interest groups in the vicinity of the oil terminals. *Id.* § 2732(o)(1). The PWS-RCAC serving today is of that alternative advisory group form. *Id.*

¹⁰⁷ *Id.* § 2732(k)(3).

through the Sound's narrow passages;¹⁰⁸ research, advocacy, and funding for radar system enhancement to detect icebergs within the Sound;¹⁰⁹ research and advocacy leading to the installation of vapor controls to reduce air pollution hazards at tanker loading wharves;¹¹⁰ co-development of 148 geographic response strategies (GRSs) for protection plans for environmentally sensitive areas in Prince William Sound and Kodiak;¹¹¹ research and advocacy to understand and minimize the threat of non-indigenous marine organisms reaching Prince William Sound in oil tanker ballast water;¹¹² and general monitoring of terminal operations and contingency planning.¹¹³ Officers and members of the RCAC have a regular presence in discussions with industry and agency officials.¹¹⁴ In addition, the PWS-RCAC has, on a number of occasions, served as the confidential broker of whistleblowers' factual tips from within the industry and government agencies.¹¹⁵ CI-RCAC has helped to both shape forty-three GRSs tailored to protect specific sensitive areas within Cook Inlet and Kodiak Island from impacts following a spill, and created a photographic baseline of the Cook Inlet coast at low tide as, among other functions, a potential aid to oil spill first responders.¹¹⁶

The Obama Administration, the Gulf Commission, and coastal communities in the Gulf area have recognized and discussed the potential utility of an RCAC structure for the Gulf region.¹¹⁷ Based on

¹⁰⁸ Prince William Sound Reg'l Citizens' Advisory Council, *What We've Accomplished* 10 (2004), available at <http://www.pwsrcac.org/docs/d0013400.pdf>.

¹⁰⁹ Press Release, Prince William Sound Reg'l Citizens' Advisory Council, *Prince William Sound Iceberg Radar Project Comes Online* (Dec. 20, 2002), available at <http://www.pwsrcac.org/newsroom/021220.html>.

¹¹⁰ Prince William Sound Reg'l Citizens' Advisory Council, *supra* note 108, at 11.

¹¹¹ Joe Banta, *5 Questions About Oil Spills*, *Sea Briefs*, Summer 2010 (issue 2), at 2, available at <http://www.masgc.org/pdf/masgp/10-012-02.pdf>.

¹¹² Prince William Sound Reg'l Citizens' Advisory Council, *supra* note 108, at 12.

¹¹³ Prince William Sound Reg'l Citizens' Advisory Council, *PWS-RCAC Brochure 6* (2004), available at <http://www.pwsrcac.org/docs/d0013400.pdf>.

¹¹⁴ Banta, *supra* note 111.

¹¹⁵ "We get a lot of information from people, it's given to our staff, and we pass it on, but we don't give out the names." Telephone interview with Walter Parker, Board President, PWS-RCAC (Feb. 20, 2011).

¹¹⁶ Horton, *supra* note 17, at 3; see *Coastal Habitat Mapping*, Cook Inlet Reg'l Citizens Advisory Council, http://www.circac.org/joomla/index.php?option=com_content&view=category&layout=blog&id=18&Itemid=33 (last visited Feb. 8, 2011).

¹¹⁷ See BP Commission Report, *supra* note 3, at 212, 268, 281; Banta, *supra* note 111, at 2-3; Bill Capo, *Gulf Coast Residents Learn the Lessons from Exxon Valdez*, WWLTV.com (Aug. 10, 2010, 5:32 PM), <http://www.wwlvtv.com/video/featured-videos/Gulf-Coast-residents->

the BP National Commission Report's recommendations, it is possible that upcoming amendments to OPA-90 will include a broadened authorization for RCACs on the Gulf and other national coastlines subject to drilling.¹¹⁸

Had there been a Gulf RCAC, with representatives of the inshore and offshore commercial fisheries, sport fishing, tourism and recreation, it is unlikely that the recent rarefied technology of deepwater drilling would have been issued a permit without either an environmental review, acknowledgment of the potential for spills reaching beaches and shores, a practicable contingency plan, basic geological data from BP, or even considering the possibility of a blowout. Institutionalized representation of at-risk citizen interests and communities creates a dramatic change in the "low level of vigilance and a discomfoting level of comfort between the industry and...regulators."¹¹⁹

B. Challenges Posed by the RCAC Format

The Alaska experience, however, has demonstrated some intrinsic challenges to effective representation of societal interests external to dipolar industry-agency governance. First is the lack of subpoena power.¹²⁰ Lobbyists in Congress successfully blocked subpoena authority for the RCACs in OPA-90, just as they blocked the grant of subpoena power for the current 2010 Commission.¹²¹ Funding issues arise annually for CI-RCAC, which has to negotiate with the industry combine to

learn-the-lessons-from-Exxon-Valdez-100078984.html; Rhonda McBride, *Prince William Sound Council May be First of Many*, KTUU.com (Jan. 20, 2011, 7:24 PM), <http://www.ktuu.com/news/ktuu-prince-william-sound-citizens-01202011,0,5301633.story>.

¹¹⁸ See BP Commission Report, *supra* note 3, at 212 ("Local citizen support is important. . . . Any structure should therefore include a citizens' advisory council to provide formal advice and a direct line to citizens' concerns."); see also *id.* at 268-69 ("In the Gulf, such a council should broadly represent the citizens' interests in the area, such as fishing and tourism, and possibly include representation from oil and gas workers as ex-officio, non-voting members. The citizens' group could be funded by Gulf lease holders. The Commission further recommends that federal regulators be required to consult with the council on relevant issues, that operators provide the council with access to records and other information . . ."). In its report to the President, the National Commission on the Deepwater Horizon spill makes numerous such recommendations that would require Congress to supply further authority and funding under the OPA-90 framework.

¹¹⁹ Alaska Comm'n Report, *supra* note 1, at 186; see Horton, *supra* note 17, at 1.

¹²⁰ See Plater, *supra* note 3, at 11,046.

¹²¹ See *id.*; John M. Broder, *Investigator Finds No Evidence That BP Took Shortcuts to Save Money*, N.Y. Times, Nov. 9, 2010, at A16; Siobhan Hughes & Ryan Dezember, *Oil-Spill Panel Pushes for Subpoena Power*, Wall St. J., Sept. 29, 2010, at A8.

justify its budget each year.¹²² For a structural entity created to scrutinize industry and agency practices from an external public perspective, it is anomalous to require the scrutinizer to negotiate budget item approval from those being scrutinized.

Further, there has been strong evidence of RCAC co-optation in the case of CI-RCAC.¹²³ The PWS-RCAC, on the other hand, is almost entirely composed of citizen representatives who are inclined to extreme caution about risk.¹²⁴ Prince William Sound citizens and local communities are not deeply tied to the oil industry as many in the Cook Inlet area are, but rather to fishing and natural resources – livelihoods which are directly threatened by oil spills.¹²⁵ In Cook Inlet, however, the coastal communities are much more heavily dependent on oil payrolls,¹²⁶ and oil-industry-dependent community officials sitting on that RCAC have consistently blunted the inquiries and risk-monitoring functions of the Council.¹²⁷ De facto co-optation of council members can eliminate the independent perspective and therapeutic value of a citizen watchdog council, and collapse the external eye of the innovative citizen council model back into the old di-polar establishment. The politics of the CI-RCAC municipalities is strongly influenced by short term maximization of oil industry economic benefits, and tends to defer to the authority of corporate managers.¹²⁸

If there is a realistic risk that citizens' watchdog councils will be co-opted or suborned by pressures from the predominating industry

¹²² See Naomi Klouda, *CIRCAC Removes Shavelson*, Homer Trib. (Sept. 8, 2010), <http://homertribune.com/2010/09/circac-removes-shavelson/>.

¹²³ See *id.*

¹²⁴ See Horton, *supra* note 17, at 4.

¹²⁵ See *Valdez Impacts*, Alaska Oil & Gas Ass'n, <http://www.aoga.org/facts-and-figures/valdez/> (last visited Apr. 15, 2011) (showing that in 2007 the largest employer and largest industry within the Valdez Cordova Borough region was the fishing industry, accounting for significantly more direct jobs than the regional oil industry, and that the oil and gas industry contributed only \$53.4 million in payroll to the local residents, including all related businesses).

¹²⁶ See *Kenai Impacts*, Alaska Oil & Gas Ass'n, <http://www.aoga.org/facts-and-figures/kenai/> (last visited Apr. 15, 2011) (showing that in 2007 gas and oil production within Kenai Peninsula Borough, where Cook Inlet is located, accounted for 4603 oil and gas related jobs within the region, and \$262.3 million in payroll to local residents – revealing that the largest employer in the region is the state government).

¹²⁷ See Klouda, *supra* note 122; Frank Mullen, Editorial, *CIRCAC's Time Has Passed*, Posting to *Point of View*, Homer Trib. (Sept. 22, 2010), <http://homertribune.com/2010/09/circac%E2%80%99s-time-has-passed/>; Horton, *supra* note 17, at 4.

¹²⁸ See Klouda, *supra* note 122; Mullen, *supra* note 127.

or agency establishments that the councils are designed to monitor and counter-balance, the RCAC structure can be neutered. If industry or agency whistleblowers who need confidentiality in passing publicly significant information to an RCAC know that the council has membership allied to their employers, the information-brokering role of the RCAC is nullified. The composition of RCACs thus must be constituted to assure their independence and critical external public perspective, leading to suggestions that citizen membership cannot be aligned with the di-polar establishments that the council entity is designed to counter-balance.¹²⁹

Institutionalizing the presence of independent at-risk citizen monitors, funded by the implicated industries, fundamentally changes the centripetal tendency of di-polar industry-agency structures, opening them to transparency, increased compliance, and care-enhancing public awareness. Adding this third leg to the di-polar default format for governance shifts the governmental geometry toward a Jeffersonian multicentric pluralism, where affected interests that were previously marginalized now are able to be actively involved in the governance process.¹³⁰ The new triangulation created by RCACs and other third-party empowerments can help avoid losing public and individual values in the tangles of the traditionally insulated di-polar political-economic marketplace.

Conclusion

In the aftermath of the Gulf of Mexico BP Deepwater Horizon blowout spill, the American governance system has the opportunity to harvest conclusions about causation—“why did this calamity happen?”—and about necessary fundamental changes in how we manage the extraction and transport of oil in the future. Poised against this corrective agenda is the natural tendency of the industry, and the com-

¹²⁹ See Horton, *supra* note 17, at 1. This memorandum suggested that, as in various pollution regulatory boards, membership can exclude direct and indirect representatives of the regulated entities. *Id.* at 5. Precedent for this proposition comes from the federal pollution statutes and cases like *Bayside Timber Co. v. Board of Supervisors of San Mateo County*, 97 Cal. Rptr. 431, 439 (Ct. App. 1971) (“It is an age-old principle of our law that no man should judge or otherwise officially preside over disputed matters in which he has a pecuniary interest. The rule is given expression in the law of trusts. It is against public policy to permit any person occupying fiduciary relations to be placed in such a position that he may be tempted to betray his duty as a trustee.” (quoting *Sims v. Petaluma Gaslight Co.*, 63 P. 1011, 1012 (Cal. 1901))).

¹³⁰ See Horton, *supra* note 17, at 1.

munities that depend economically upon it, to avert systemic changes that will potentially constrain ongoing economic patterns.

Vivid disasters create practical possibilities for systemic improvement, but only if systemic flaws are publicly perceived and systemic lessons learned. The *Exxon Valdez* oil spill in 1989, and the State of Alaska Oil Spill Commission Report of 1990, distilled some highly significant perceptions and recommendations for systemic improvements,¹³¹ but many did not translate into the federal OPA-90 legislation passed in response to the public dismay at the Alaska calamity.¹³² Those that were included tended to become suborned by the culture of complacency, collusion, and neglect that the Alaska Commission had identified as the precondition and cause of that disaster.¹³³

The Gulf of Mexico trauma presents yet another opportunity to learn from disaster. The ongoing work of the National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling shows hopeful signs of not squandering the learning-teaching moment.¹³⁴ And if there is to be a fundamental change in the current megasystem with its systemic deficiencies, it makes good sense to have the megasystem of the future include the structural innovation of an active citizen participant counterweight within the governance structure itself, to serve the public interest better this time around as we await an ultimately necessary shift away from fossil fuels.

¹³¹ See Alaska Comm'n Report, *supra* note 1, at 129-69.

¹³² See Plater, *supra* note 3, at 11,407.

¹³³ See *id.*

¹³⁴ See generally BP Commission Report, *supra* note 3, at 1-86 (analyzing the systemic failures which contributed to the disaster in the Gulf).