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DEMOCRATIC EXPERTISE AND PUBLIC PURPOSES¹

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As laudable as it is to want to improve knowledge gaps and overcome obstacles to knowledge utilization following a disaster such as Katrina, there is a nontrivial risk of going awry unless one's thinking is grounded in the basic realities about how expertise serves (and fails to serve) public purposes. This paper summarizes work on the subject of democratic expertise, applies the ideas to the Katrina case, and suggests way that expertise might be better integrated with lay inquiry/action to yield more intelligent public decision making.

Professional Analysis as Adjunct to Ordinary Knowledge

Cognitive psychologists and media scholars have fancy words for explaining human attention, perception, recall, and utilization of information, but the essence of their findings is that humans are not very good information processors.² Equivalent observations about formal organizations come from organizational sociologists, bureaucratic politics specialists, and others who study organizational culture, communication, and decision making. Organizations can make up for individuals' shortcomings, but also can enshrine, focus, and/or magnify the information-processing errors to which individuals are prone.³ So the starting point for thinking about knowledge utilization is to recognize that people and organizations are often bad at it.

¹ I apologize for citing so many of my own writings and those of my mentor Lindblom in the footnotes, but space is tight, I figure workshop participants want to get to know each other, and I'm using this paper as a vehicle for pulling my thinking together.

² R. P. Abelson, "Social Psychology's Rational Man," 58-89 in Stanley I. Benn and G. W. Mortimore, eds., *Rationality and the Social Sciences*, Routledge Kegan and Paul, 1976; Lee Ross, "The Intuitive Psychologist and His Shortcomings: Distortions in the Attribution Process," 173-219 in Leonard Berkowitz, ed., *Advances in Experimental Social Psychology*, vol. 10, 1977.

³ Herbert A. Simon, *Administrative Behavior*, 3rd ed., New York, The Free Press, 1976; James Q. Wilson, *Bureaucracy: What Government Agencies Do and Why They Do It*, New York, Basic, 1989; Graham T. Allison and Philip Zelikow, *Essence of Decision: Explaining the Cuban Missile Crisis*, 2nd ed., New York, Longman, 1999.

Fortunately, most public decision making primarily proceeds not by analysis, but by delegation of authority to act, interactive negotiation, seat-of-the-pants decision strategy, and everyday understanding. This is not a problem to be solved, it is simply the way things have to be given the structural conditions of human life: limited time, small brain/big problems, causal uncertainties, ubiquitous disagreement. Properly arranged and conducted, political interaction leavened selectively by formal analysis can reach sensible decisions more quickly and more acceptably than analysis alone ever could.⁴

Within this framework, social relations and contexts shape the demand for formal knowledge. Knowledge is rarely if ever just a matter of experts finding something out and telling others. Even for factual revelations as simple as “You have an elevated white count,” a substantial set of prerequisite and corequisite assumptions, methods, shared historical perspectives, and trust in laboratory protocols is crucial to having the knowledge claim count as such. Unlike the relatively simple physician-patient dyad where there is usually a disposition to seek and partly follow the expert’s advice, in many contexts people do not believe they need help, partly because they have no picture or a hazy one of what issues they should be addressing. An especially telling example was the half-century delay before nuclear weapons’ experts began to incorporate damage from post-detonation firestorms into their models of the weapons’ damage. Highly professional organizations, doing what they do well and systematically excluding most else, “may build a poor representation of the world – a self-reinforcing fallacy that can have serious consequences.”⁵ Inadequate fireproofing of the World Trade Center arguably resulted from a similar syndrome. We all know about the shaping of cognitive habits by disciplinary trajectories insulated via organizational dynamics, yet when it comes to discussing events such as Katrina, we tend to relapse into the hope that minor retargeting of expert inquiries and communications can make up for contextual constraints unfavorable to knowledge search and utilization.

⁴ For a general analysis of why it often is advisable to proceed via strategic coping much more than by analytic understanding, see Charles E. Lindblom and Edward J. Woodhouse, *The Policy-Making Process*, third edition, Englewood Cliffs, NJ, Prentice Hall, 1993, especially chapter three, “The Limits of Analysis.” An early analysis, still worth reading and pondering, was Charles E. Lindblom, “The Science of ‘Muddling Through’,” *Public Administration Review* 19, Spring 1959, 78-88, widely reprinted. The argument is developed in greater detail in David Braybrooke and Charles E. Lindblom, *A Strategy of Decision: Public Evaluation as a Social Process*, New York, The Free Press, 1963, together with Charles E. Lindblom, *The Intelligence of Democracy*, New York, The Free Press, 1965.

⁵ Lynn Eden, *Whole World on Fire: Organizations, Knowledge, and Nuclear Weapons Devastation*, Ithaca, NY, Cornell University Press, 2003.

The context-based difficulties actually are somewhat worse than depicted above, as illustrated by the predicament of those living near locally unwanted land uses such as the Hanford nuclear reservation. Such LULU neighbors might well benefit from a different allocation of research and communication energies than, say, nuclear vendors and Department of Energy bureaucrats are prone to seek; but people in impacted communities tend to be quiescent, and when they are not, the LULU insiders generally resist efforts to renegotiate priority setting. The same basic phenomenon occurs in many realms: the very people who might improve inquiry and outcome by diversifying negotiations are typically marshaled out of action by those who predominate under prevailing mobilizations of bias.⁶

Even without such active resistance, would-be users themselves often impede the application of expertise to everyday life choices. Most purchasers of automobiles and major appliances do not read *Consumer Reports*, so only a minority end up obtaining a very good combination of attributes for the money they expend. A substantial fraction of home buyers purchase one of the first few houses they visit, rather than patiently comparing a great many, despite it being one of the most significant choices they make. Most voters do not spend significant time learning about candidates and referendum/initiative issues on the ballot. So whatever else one may want to say about “knowledge utilization,” it is essential to recognize that there will remain a huge gap between information available and what actually is used – until would-be buyers are more psychoculturally predisposed to seek out the information that is available.⁷

A third basic reality is that substantial decision-making authority in market-oriented societies presently is delegated to “private” actors and institutions. Corporate executives actually are better understood as quasi-public officials, in the sense that they make choices about technological innovation, investment, pollution (non)control, and other matters fraught with public import. However designated, buyers and sellers in market exchange normally have little incentive to take account of their effects on third parties, and so-called private-sector decision

⁶ E. E. Schattschneider, *The Semisovereign People: A Realist's View of Democracy in America*, New York, Holt, Rinehart, and Winston, 1960.

⁷ Public quiescence has been studied best by Murray J. Edelman, *Politics as Symbolic Action: Mass Arousal and Quiescence*, Chicago, Markham, 1971. Also see his *The Symbolic Uses of Politics*, Urbana, University of Illinois Press, 1964, and his *The Politics of Misinformation*, New York, Cambridge University Press, 2001.

making therefore rarely gives appropriate weight to public considerations. This problem is especially marked in relatively weak states with weak labor organizations, such as the U.S.⁸

Moreover, the privileged position of business gives corporate elites and their government/society allies a unique position from which to communicate about what business “needs” to keep the economy out of recession. This normally melds seamlessly with historical patterns of privilege for the affluent and powerful, who join via socializing institutions to confuse and otherwise mislead citizens. Significant impairments thereby develop in many people’s capacities and tastes for inquiry, impairments added on top of limitations due to biology, time, and energy. University professors suffer from such impairments to a degree, but often to a lesser degree than the modal citizen; and, whatever our own degree of impairment, we often fail to understand the extent to which contemporary inquiry reflects a legacy of intended and unintended actions over centuries that combine to limit inquiry capacities. Moreover, the limits are not random: many people specifically learn not to ask for more than what political and economic elites are prepared to give: Food stamps, yes; redistribution of income and wealth, no.⁹

Fourth, because public decision making is conducted by partisans with differing conceptions of the public interest, knowledge claims inevitably will be taken up and deployed in a partisan context. Excessive partisanship can cause trouble, of course, but partisans’ drive to get what they want also is extraordinarily helpful in activating the potential intelligence of democracy. For example, in striving to form majority coalitions partisans must take some account of what would-be coalition partners consider important, and the negotiations often lead to outcomes more widely acceptable than what analysis or decree would have produced. To become usable in partisan negotiations, knowledge claims normally must be adapted to actually assisting some subset of partisans in order to get them to want to deploy the information/ideas. I return to how this might be applied to Katrina issues.

Fifth, real-world decision making on important matters usually proceeds under uncertainty. To provide usable knowledge, therefore, both the choice of research directions and the communication of research results need to focus on improved coping with uncertainties. General

⁸ On the privileged position of business, see Charles E. Lindblom, *Politics and Markets*, New York, Basic, 1977. On shortcomings of market systems as mechanisms for public choice, see Lindblom, *The Market System: What It Is, How It Works, and What to Make of It*, New Haven, CT, Yale University Press, 2000; and Woodhouse, “Bringing Consumption into Democratic Theory and Practice,” American Political Science Association, 2003.

⁹ Analyzed in much greater detail in Charles E. Lindblom and Edward J. Woodhouse, *The Policy-Making Process*, 3rd ed., Englewood Cliffs, NJ, Prentice Hall, 1993.

ideas are not altogether useless, but such knowledge claims tend to be less helpful in public decision making than are claims adapted to assisting would-be users in allocating their limited funds and otherwise acting in the face of uncertainties. Intelligent trial and error in the face of uncertainties involves early and diverse deliberation, initial precautions such as containment, erring on the side of caution in the face of unacceptable risks, deliberately accelerated negative feedback such as obtained by premanufacture testing, building in flexibility to make changes, careful monitoring by diverse partisans, and incentives for error correction.¹⁰ Experts often have something to contribute to thinking through these matters, but their inquiries rarely are targeted explicitly toward developing information and ideas helpful for thinking about how to utilize intelligent trial and error in risk contexts such as that of coastal Louisiana. Yet coping with uncertainty is precisely the business that most of us are in most of the time, and knowledge that is ill-suited to the task arguably ought not be called *knowledge* at all.

New Orleans: An Historical Counterfactual Thought Experiment

The realities of knowledge-in-context discussed above help explain why there was under-utilization of the *Times-Picayune* “Washing Away” series, the Hurricane Pam simulation, and many other pieces of information pertinent to hurricane preparedness. No doubt there were additional professional inquiries that should have been conducted, but the term “knowledge utilization” distracts more than captures the essence of the problem, for intelligent and timely action rarely is primarily a cognitive matter involving “better information.” The Katrina problem was produced by forces more or less coextensive with the politics, economics, culture, stratification system, and psychology of the U.S., Louisiana, and New Orleans.

Nevertheless, to outsiders looking on in retrospect it seems that a broad spectrum of New Orleans’ residents would have had a keen interest in averting a hurricane disaster. Assuming that residents of coastal Louisiana were not that much stupider than the rest of us, there must have been substantial barriers to translating their latent “need” for safety into manifest deliberation and action. Some of the barriers standing in the way of that translation can be discerned by thinking through what it would have taken for a majority coalition to have recognized their

¹⁰ Joseph G. Morone and Edward J. Woodhouse, *Averting Catastrophe: Strategies for Regulating Risky Technologies*, Berkeley, University of California Press, 1986. E. J. Woodhouse and Dean A. Nieuwma, “Democratic Expertise: Integrating Knowledge, Power, and Participation,” in Matthijs Hisschemoller et al., eds., *Knowledge, Power, and Participation in Environmental Policy Analysis*, New Brunswick, NJ, Transaction Publishers, 2001.

shared interest, and acted effectively on it. Toward that end, join me in a small thought experiment. Working backward more or less chronologically, what sorts of changes in behavior at critical junctions would have helped avert Katrina by creating a different context for relevant inquiries and a different demand for available knowledge?

1. Suppose that dissatisfaction with Homeland Security's approach to airport security became endemic in late 2004, and the Bush administration had been forced to appoint as Secretary not Michael Chertoff but retired GE CEO Jack Welch. He proceeded to install a seasoned business executive to remake FEMA as a first responder in both terrorist and other emergencies. The agency responded quickly and sensibly in the aftermath of the hurricane, although constrained by various systemic irrationalities and by inherent difficulties in federal-state-local cooperation.

2. The revitalized FEMA followed through on the 2004 simulation known as Hurricane Pam, leading to maximum feasible disaster planning in the months prior to the hurricane.

3. There happened to be a hurricane scare in New Orleans just prior to publication of the *Times-Picayune* series "Washing Away," and in an almost fad-like way the conjunction galvanized New Orleans and Louisiana residents, interest groups, and government officials into a fresh look at the city's flood mitigation and recuperation capacities.

4. More people within the Army Corps of Engineers and other flood control organizations learned sooner that anthropocentric flood control efforts of the 20th century were having problematic effects, and began to redress the problems sooner.

5. Relevant congressional committees put pressure on the Corps and on FEMA to do more for hurricane readiness.

6. The switch in 1996 to a preference balloting system meant that most Nader votes in 2000 actually ended up as Gore votes, and he won the election. Rather than a war in Iraq and massive tax cuts, Gore joined with a wide spectrum of legislators to generously fund FEMA and other disaster-related agencies.

7. When President Reagan died of complications from the assassination attempt, the Republican Party was taken over by market-oriented ideologues influenced by contemporary economics. They proceeded to cut subsidies to business and to introduce environmental taxes that internalized the full social costs of goods and services. This led to an overhaul of federally supported disaster insurance, which touched off cancellations and dramatic increases in homeowners' premiums in areas potentially impacted by hurricanes. Willingness to undertake

risks fell, not because of increased knowledge but because of the financial disincentives. Developers cut way back on building in perilous coastal locations, banks became stingy with mortgages, and the market for such housing generally “dried up.”

8. Historical ethnic inequalities in housing markets were substantially reduced by stringent enforcement of fair housing legislation in the 1970s and thereafter, leading to a much reduced concentration of African Americans in risky areas of New Orleans.

9. Socioeconomic inequalities were significantly reduced by the adoption of the Nixon administration’s negative income tax proposal, so that many more of those exposed to hurricane risks had adequate resources to escape the rising waters.

10. Energy security came to be interpreted in the period after 1973 as requiring reduced reliance on private automobiles coupled with dramatically improved public transit; so there were sufficient transportation options to remove every New Orleans’ resident from harm’s way.

I had intended to work through some of these examples, revealing chains of changes in thought and action that would have been necessary to lead up to the revised history. But I’m out of time and space, and, in any case, it should be fairly self evident that far more than shifts in a few experts’ research and public communication would have had to be involved. Complex social outcomes including technosocial catastrophes normally are vector outcomes of complex structural forces including ingrained habits of thought, institutionalized incentives, and organizational cultures -- with a little bit of formal knowledge stirred into the mix. Given the starting conditions, the range of normal outcomes is sure to include some catastrophes.¹¹

Improving Hurricane-Relevant Knowledge in Context

Because knowledge utilization occurs in a historical, political, and economic context, then, significantly improving utilization requires improving the context. Over the long-term, therefore, it seems to me that the best hope for improving the intelligence of public decision making is to be found within the earlier categories discussed in section one: reshaping political, economic, and other social institutions and capacities. Political inequality, the privileged position of business, and the impaired thinking characteristic of elite-dominated societies are among the main categories of reshaping that would enhance both intelligence and fairness. Hence, scholars ought to be documenting and calling for such changes as one of their highest-priority activities.

¹¹ Charles Perrow, *Normal Accidents: Living with High-Risk Technologies*, New York, Basic, 1984.

However, while waiting for the revolution, one can still try to think about what expert communities might learn from the Katrina disaster. For, in the short- and medium-term, experts are pretty much forced to work within the constraints of the society we have inherited, which means that reducing knowledge gaps and improving knowledge utilization must focus on the later categories in section one: orienting expertise toward improved coping with disagreement and with uncertainty.

To make the most of that limited leverage, the trick is to orient inquiry and knowledge claims toward helping partisans engaged in public decision making operate strategically in the face of inadequate knowledge and disagreement. One implication is that experts not try to operate as masterminds able to produce knowledge good for all – which is rarely feasible – but instead to aim to assist particular groups to play more effectively their roles in political interaction.

Another way of putting the above is to say that the workshop's deliberations about interdisciplinary knowledge production and utilization could benefit from better balancing the cognitive with the social components of what one calls "knowledge." Cognition and knowledge in the wild certainly can be aided by expert assistance in many cases, but it probably requires experts to modify their inquiries and advice giving so as to connect better with the kinds of knowledge that might be of greatest utility. That knowledge typically is a form of common sense, and attempting to reduce its flaws is probably the most promising route to a better world. But it is a hard road, and it is uncongenial for most experts to face up to the fact that the kinds of human capital they have worked hard to develop are, for the most part, not the kinds that the world most needs.

Part of this would be breaking through to users as they are now configured. By recognizing that people operate using cognitive heuristics, including remembering partly on the basis of how vivid an idea is, experts might take great care to deliver knowledge claims vividly. Hurricane preparedness information could be delivered via tidal-wave graphics, but was not – until after Katrina. Making knowledge relevant to user experience also would usually mean working through intermediaries in a multi-step flow of persuasion: Tell African-American ministers that their people are going to bear brunt of the storm, and they are in a position potentially to cause trouble for city government. Tell civic leaders that their tax base is going to be shot to hell in a major hurricane. Make knowledge newsworthy by staging mock disaster weekends, so that journalists and editors will pick up on it and give it prominent play. Tell opinion leaders such as

presidents of local universities that their campuses will never recover (as Tulane's PhD programs probably will not). Tell candidates running to unseat incumbents that constituents can be activated by showing incumbents failing to do their jobs vis a vis the threat. If there is a feud among local, state, and federal politicians, work the knowledge to be a token in that game. In other words, make the knowledge serve partisan purposes. I presume that very different sorts of experts would be credible with the ministers than with the civic leaders, and the issues on which a geographer could advise would be different from those on which hydrology or civil engineering might have something to say. So by no means can any expert choose any client; there must be various kinds of matches.

What about advising the above partisans or others in coping with uncertainties? One tactic is to create bottlenecks too small for big disasters to get through: Triple-hulled oil tankers are an exemplar. Captains will still get drunk; storms will capsize; executives will cut maintenance budgets; and shipping organizations generally will still do a great many things badly. But the oil will mostly stay out of the ocean because it's too hard for hulls to be breached. A somewhat complementary procedure already is in place in a number of vulnerable areas: Require buildings to be constructed according to standards designed to withstand worst-case or nearly worst-case threats. California earthquake standards are one exemplar, as are post-Hurricane Andrew codes in Florida that require houses in certain areas to be constructed on stilts with an expendable first floor that can wash away without ruining the most valuable parts of the structure. Wind flexibility for tall buildings, fire-resistance standards for commercial carpeting, and many other standards extant in various domains of technosocial life have the same basic intention.

The basic spirit of containing or limiting damage also finds some resonance in the requirement that nuclear power plants cannot operate without an emergency evacuation plan for the surrounding region. Imagine if no further construction could occur in coastal areas until an evacuation plan had been submitted and approved; imagine furthermore that the moratorium kicked back in every five years until an updated plan was approved. It would do nothing to stop property damage, but there would be less worry about people being trapped by natural, human, and organizational foibles. If an especially risk-averse set of commissioners or other officials were put in charge of approving such plans, all the better. Note, however, it is improbable that hurricane experts would be the ones to notice the possible analogue, which validates Frodeman and Mitcham's interest in catalyzing interdisciplinary, problem-focused inquiry.

Where might such a tack lead, one that combines a focus on uncertainty, partisanship, and interdisciplinary inquiry? It leads down a chain of reasoning toward figuring out what actor networks would need to come into existence in order to bring about changes, and then toward reframing the types of knowledge claims that could be helpful. For instance, it would be worth knowing that a thousand tons of toxic materials might be released by a flood covering thirty square miles; but it is a lot better to know that it would cost \$1 billion to reduce the amount by 75 percent (hypothetical numbers); and it may be even better to know that emerging constitutional interpretations suggest that federal-state navigable rivers compacts provide a basis for states to sue federal authorities to obtain such funds.

Such inquiry should not be thought of as exclusively or even primarily involving academic researchers. Insurance companies, banks, and other businesses collectively deploy enormous talent. Figuring out how they could potentially be enrolled in public inquiry and even in decision making is not easy, partly because such organizations obviously are in competition with each other, and hence have incentives to keep information proprietary, to not cede market share by being too cautious, and otherwise to behave as so-called private sector actors. Still, the financial industries have high-powered talent, techniques, and databases, and constitute an underutilized resource, perhaps especially in the U.S. compared with the more consociational and corporatist systems. If there were a way to reduce all companies' risks in a competition-neutral way, the insurance companies and banks might be more willing and able to collaborate with public sector authorities in urban planning and disaster preparedness.

In closing, it may be worth reminding ourselves that many experts are essentially in the business of enabling risky behavior. Organic chemists extended greatly the capacity of business executives to distribute toxic materials across the face of the planet; physicists and engineers have been crucial in helping create carpal tunnel syndrome, in encouraging addiction to TV and computer screens, and in accelerating segmentation of family life. Civil engineers and architects and urban planners conjointly helped pave over, build, and otherwise create many of the risks involved in Louisiana. Most generally, new technoscientific capacities enable business executives and buyers to engage in behaviors previously impossible, and many of these behaviors create or extend risks. So while it would be foolish to abjure the assistance of expert communities in helping to understand and solve social problems, it is equally shortsighted not to

notice their roles in problem creation. In fact, impeding experts' abilities to *cause* problems may be a more promising strategy overall than trying to enroll them in problem solving.