8 Balancing Expert Power: Two Models for the Future of Politics

Stephen Turner

The puzzle of the political significance of expert knowledge has many dimensions, and in this chapter I plan to explore a simple Oakeshottian question in relation to it. To what extent is the present role of expert knowledge similar to that envisioned by the "planners" of the 1940s who were the inspiration for Oakeshott's essay, "Rationalism in Politics" (1947-48)? This role, as Oakeshott and many of its enthusiasts portrayed it, was to replace politics as hitherto practiced with something different. Rationalism thus depended on a theory of the "politics" it sought to supplant, though it rarely attempted to articulate this theory. In the context of the time, there was no need. In the 1930s, economic depression and the inability of party politicians in the British parliament to agree on measures to deal with the economic situation provided endless negative examples of "politics" standing in the way of action, and a sharp contrast with the state activism of Hitler, Mussolini, and Stalin. In the postwar period, the planners had their chance, and the modern British welfare state was born. Much of what this state did applied ideas of Fabian Socialism, which had presented itself as objective, rational, and expert. But as an administrative fact, the welfare state had no need of the ideology of planning, and the discussion faded. The question I wish to address here is this: expertise forms a much larger part of governance than it did in the time of the "rationalism" of the planning movement; does this mean that rationalism has arrived by stealth, that is to say in practice, without appealing to the overt ideology of rationalistic planning? This is a question of the place of expertise in our politics, and thus a political question.

In its original form, planning was an attempt to replace politics, which it understood as irrational, with the rationality of planning. This ideology died, but the importance of technology, technical decisions, expertise, and science in relation to what formerly were thought of as political matters increased enormously. So did the role of discussion of such issues in politics itself. One can discern two basic patterns of political response to the enlargement of expertise. One involves the proactive management of expert knowledge by legislative

bodies; the other is more reactive, and involves popular protest against decisions and initiatives that arise primarily from experts in state bureaucracies. These patterns are not well understood, and are closely linked to specific national political traditions. But they are important as prefigurations of the future of politics: expertise will play a larger and larger role in political life, and the response to it will provide more and more of the drama.

I will consider two very different cases, one which conforms to the saying, extant since the 1930s, "experts on tap, not on top," and one which exemplifies the expert on top, but in a world with political limitations. The cases vary on many dimensions: one is European, the other American; one relates to high politics, and to a rare historical moment of stark, consequential decision, the other to an application of planning; one involves a strong tradition of political accountability, the other a tradition of bureaucratic independence from politics. The political outcomes differ as well. In the first case, the experts attempt to assert control and are rebuffed; in the second, they are forced to compromise. My aim is to better understand the conditions of these responses, and the deeper political significance of the difference between the two patterns, a significance, I will suggest, that is in accordance with a more traditional understanding of the stable political orders of the past in terms of balances of power.

Four Kinds of Politics

Let me simplify the discussion of politics by introducing some simple idealtypical distinctions. "High politics" is the politics of leaders. It involves agonistic decision making, and, more generally, decision making in the face of inadequacies of comprehension, typically, it is decision making in the face of opponents whose actions create uncertainty as the product of lack of reliable information or sources. This can be distinguished from politics in the sense of the politics of representation, and especially democratic representation, the politics of formal or informal roles of speaking and acting for some particular group, or, as is ordinarily the case, a faction or subgroup of a group. Complaints about the intrusion of politics into policymaking often refer to the intrusion of this kind of politics of factional representation. A third kind of politics is bureaucratic: this is the use of bureaucratic discretion by state officials, which may be for idealistic goals, to enhance their own power, protect turf, serve the interests of some constituency, encourage cooperation or agreement among stakeholders, or to protect themselves from popular protest or political interference by elected officials. A fourth kind involves protest and disruption, typically by formal or informal NGOs focused on a single issue or decision.

High politics is the place where the familiar language of "the political" is least prone to obliteration. Yet it is also a setting that places particular, and ex-

traordinary, demands on knowledge. Leaders typically act in situations of uncertainty and incomplete information, typically of conflict, when the intentions of their enemies and the reality of the situation are unknown, and in which, and this is perhaps the most important feature, there is relevant information, for example, secret information, which is open to question with respect to its reliability. In these cases, the leaders must necessarily rely on their assessments of the knowledge claims of others and of their veracity, competence, and the adequacy of their understanding of the situation. High politics, in short, is about situations of conflict or of seriously consequential decision-making in which the participants have neither the leisure nor the capacity to wait before acting, necessarily involving epistemic judgments of the knowledge at hand. High politics in this sense is not restricted to the classical situations of warfare and diplomatic strategy. But these are good places to begin.

From the point of view of politics, the epistemic side of these issues has traditionally been invisible. Experts, in particular, have usually played a small role in the kinds of political and biographical narratives that traditionally serve as a basis for our understanding of the nature of politics. Discussions of the decision making of leaders themselves have typically focused on the agonistic aspects of politics, the calculations that leaders make in relation to adversaries and rivals. This is understandable. The choices and tactical and strategic decisions of adversaries and rivals are the largest of the uncertainty with which decision makers in politics are compelled to cope. Experts have not played a starring role in these narratives, or been treated as adversaries, simply because, though there are interesting exceptions, they usually are not themselves rivals to power nor do they possess means of altering the contingencies faced by the leader. To paraphrase Napoleon's famous remark on the Pope, they have no battalions. Experts traditionally have played an opposite and less dramatic role. The reliance on experts by politicians is designed to reduce uncertainties or answer questions about what possibilities are open to the adversaries and to the political figure, leaving the decision making to the leaders themselves.

This invisibility is continued on the side of writings on expertise itself. Narratives on the side of experts typically involve stories to the effect that the correct advice of an expert was not taken. To a great extent then, expert stories are histories written by losers, or people who believe that outcomes would have been better if past decisions had been made differently. The narratives of successful experts are peculiarly nontriumphalist in character, consistent with the pose of expertise itself to be merely offering the facts and not to be engaged in manipulation or agonistic struggle with rivals. The expert's story is commonly one of a struggle to speak truth to power through the fog of committees, bureaucratic resistance, and, in some cases, over the voices of expert rivals who

are motivated by erroneous views, hobby horses, professional jealousy, and so forth.

In consequence, writing about high politics is normally writing with the expertise left out, while writing about the effects of expertise on politics is writing about failures to be listened to. The successful influence of expertise on politics, that is to say cases where expert opinion actually alters the decisionmaking process, are typically invisible because they are treated as part of the normal activity of politicians seeking to determine the facts of the matter before making decisions which are interesting as decisions because they relate to contingencies rather than fact. Perhaps the most interesting and most fully elaborated example of this complicated relationship is the case of Churchill's science advisors during World War II. This is especially interesting because it was the subject of a set of Harvard lectures by C.P. Snow who was highly critical of Churchill's preferences for a particular science advisor, Lord Cherwell, over the figure whom the science establishment most closely supported — Henry Tizard, known as Tizard the Wizard — along with his complaints about the consequences for the war effort of Churchill's reliance on Cherwell. The issue is almost completely invisible in the many elaborate histories of Churchill's conduct of the war. These accounts nicely exemplify the narrative problems I have mentioned here, but the absence of the topic nevertheless points us to some very fundamental issues about the nature of politicians' reliance on expertise and the conditions under which that reliance occurs. There are, however, cases where we can reconstruct the role of experts, and learn something about the ways in which expertise constrains and fails to constrain politics.

Dropping the Atomic Bomb: Expertise as High Politics

The atomic bomb decision was one of great secrecy and it involved a relatively small number of persons who produced a report that led to the decision to drop the bomb. This committee, known as the interim committee, included a number of high-level scientists and military officials, each of whom brought both some kind of expertise to the committee and a great deal of experience in making decisions. The committee was not "political," but advisory, but it would be wrong to see these activities as somehow free from ordinary considerations of political responsibility. The main player in this decision, James S. Byrnes, was later Secretary of State, but was, in the course of this decision process, actually a private citizen with no powers of command at all. Byrnes nevertheless operated in terms of a very well-developed historical tradition of political responsibility. At the end of the First World War, Congress had instituted a wide ranging committee of inquiry into the conduct of the war. This inquiry Byrnes not only believed could be repeated but was likely to be repeated, as

he constantly reminded the other members of the committee of scientists and military men who were charged with making advisory recommendations. According to the memoirs of one of them, James Bryant Conant, this was not among the considerations that had entered into the discussion before it reached the level of the committee (Robertson, 1994; cf. Hershberg, 1993: 232).

If we focus on this committee and its actions, we can see it as engaged in high politics and as a location within which high politics occurs. The participants in the committee operated under the constraints of the information available to them and the form in which this information was available to them. In their possession were a series of reports that were the collective products of other bodies, largely analogous to their own but more specialized in character. There were reports from the scientists and military reports that were estimates, for example, of casualties likely to be suffered in an invasion of Japan.

The peculiarities of expertise narratives become clear when one considers the status of these reports in the eyes of the members of this committee. The reports were not taken as fact, or as truth spoken to power. The committee members understood that the documents in front of them were themselves political products in the sense that they were the results of negotiations designed to produce agreements about the content. They knew that there was a tendency to indirectly exclude certain opinions from consideration by the very process by which particular groups of experts were constituted, so that the product in all likelihood did not represent the full range of reasonable opinion. They knew that individuals suppressed their disagreements within committees for various reasons such as producing consensus leading to a kind of blandness or mediocrity in the final product. They knew also that groups of experts have particular known as well as unknown biases and that the reports were likely to reflect those biases. Documents of the kind that they were dealing with were, after all, written for their effect, written to be used, and written in the light of their potential uses. One could often discern in them, and adjust for, the document's biases in support of a particular outcome desired, though not stated as desired, by the committee authors. Their attitude toward these reports was nicely put by George W. Bush when asked about the government report on global warming. Bush replied that yes, he had seen the report put out by the bureaucracy, which is to say a report which he treated as motivated by a particular identifiable set of interests and biases.

In the case of the bomb decision, and indeed in the usual cases of high politics, nominal supreme power is invested in some individual, and this sets the general tone of the process. Decision making operates in terms of specialized advice relating to particular decisions or plans that are, more or less by the definition of high politics, not a matter of open public knowledge or discussion. This is not to say that advisors, leaders, and decision makers are not

attentive to public discussion, but that they operate in situations removed from immediate public discussion and typically can expect informed public scrutiny or investigation only long after the fact and after the outcomes of the decisions have become known.

Trust plays a role in the politics of advice that differs from its role in the politics of election campaigns and legislative politics. The individuals involved in high politics are preselected for their trustworthiness and the identifiably of their biases. Unpredictable people generally do not rise to high levels of responsibility or high advisory roles for precisely this reason. Persons with strong known positions often do, especially if they are capable of departing from an doctrinaire position in the face of new facts, so that in a peculiar way their agreement carries special weight. A considerable amount of competition for power consists in competition to advise, to define the framework of decision, to have control over the sources of expert information presented, and so forth.

When one begins to think of the environment within which the committee operated, it is evident that it involved the elements that I have identified as characteristic of high politics. There were enemies about whose behavior there was a significant degree of uncertainty. In this case there were two main uncertainties, one of which involved the bomb itself, another of which involved the question of the consequences of other courses of action, notably the choices between the uncertain effects of either dropping the bomb without warning, dropping a demonstration bomb with a warning and a demand for surrender, or not dropping the bomb at all and opting for an invasion.

The historical controversy over the decision has focused mostly on the existence of casualty estimates associated with the fourth option, and particularly a report which claimed that casualties would be relatively modest, thus making the dropping of the bomb itself unnecessary. This particular report is worth considering as a typical case of the kind of material with which such decisions are made. The report was itself the product of a more or less well-understood process with more or less well-understood biases. The report obviously could not be taken as a certain prediction, nevertheless the very existence of the report posed problems from the point of view of the consideration of political responsibility. Byrnes, and as a consequence the members of his committee, anticipated the possibility of a systematic Congressional review of the relevant decisions after the war which would have included the existence of this report.

One of the contested topics of this historiography of the bomb is the fact that the more optimistic parts of the expert committee work that was submitted to the interim committee, notably these low estimates of the expected casualties in an invasion which might have led to the bomb not being used, were ignored. Yet in light of the consideration of the expectation of review, the dis-

missal of those estimates takes on a somewhat different meaning. Decisions, in wartime, to expend the lives of even this number of expected casualties when these casualties could be avoided would, at least to many people, seem to be not an act of peace but an act of culpable stupidity. If the bomb had never been dropped at all and remained as a speculative threat, or if the bomb was dropped only for the purposes of demonstration rather than actually employed in combat, and the Japanese had ignored the demonstration and resisted an invasion at great cost in lives, a decision to give a demonstration would have been culpable. In any case, it was the responsibility of the committee to assess such reports. Evidently the low estimate of potential casualties in an invasion was dismissed because the estimates of minimal enemy resistance were starkly in conflict with new facts on the ground in Okinawa, where very stiff resistance was being put up by the Japanese — stiffer resistance because Okinawa was understood by the Japanese not merely as a holding but as a physical part of Japan. The committee members might reasonably have concluded that there was a significant probability that casualties would be far higher. This is a typical example of lay knowledge being used to evaluate and correct expert claims in light of purposes and issues about which experts were not expert. The committee also needed to ask whether the technology would work.

Both bombs worked perfectly. But the committee was not faced with this fact but with the possibility of failure, a possibility not unknown in warfare and one which the technical experts on the committee were highly cognizant of. Byrnes himself, of course, was not a technical expert, and in any case the scientists who were so confident about the powers of the bomb were expected to be biased in favor of confidence about the effectiveness of the bomb and their opinions were reasonably discountable by men of experience. Some things that were "known" were unknown to the committee. For example, the possibility of the severe radiation sickness on the part of the people not killed by the direct blast. This was "known" in the sense that someone had actually made this prediction, but it was not part of any of the material available to the committee, so the committee had no ground for considering it.

This committee was a paradigm case of a successful extension of a pre-existing tradition of democratically responsible high politics. The committee ignored the attempt by scientists to determine the decision. One of the concerns of Byrnes especially was to justify the huge cost of the Manhattan Project to congress. He anticipated that serious questions would be raised about this expenditure had the bomb not been used, or its use withheld. And these would indeed have been serious questions. The first responsibility of a liberal democracy ought to be toward the lives and well-being of its own citizens, especially those it compels to risk death on the battlefield. Every penny that went for the bomb was a penny not spent on some other weapon that would have saved

the lives of Americans. The scientists never asked this question — they had no sense of political responsibility to the population that had already paid for the bomb in casualties that would have been prevented had the money and effort been spent on other weapons. That the committee chose differently from the scientists is a sign of their recognition of their political responsibilities; that they knew what these responsibilities were, and had confidence that their advice would be judged retrospectively to be correct, is evidence of a predictable system of democratic political accountability. They knew the precedents, could anticipate the questions, and acted accordingly. And this predictable character made their advice and role invisible - where the expert becomes visible, something has gone wrong. Not surprisingly, historians large ignore such advice. In a sense, this is appropriate. The committee did not exert power so much as correctly anticipate the considerations that would have been central to a congressional inquiry, which itself would have been motivated by an anticipated congressional, and thus public, debate. So here the locus of power is public debate, to which the committee deferred by anticipating its likely content.

The committee calculated correctly about the problem of a congressional inquiry: the success of the bomb in ending the war precluded the questions that failure would have produced. This was the dog that didn't bark — but it was very much part of the story. Byrnes anticipated the kind of congressional inquiry that might have followed a decision to hold the bomb in reserve and chance an invasion. A large and highly motivated group of families of the troops who would have perished in the invasion would have asked whether the decision makers had the blood of these soldiers and marines on their hands. The risk of very high casualties was impossible to rule out. If the families of the dead were told that the decision had been made because a group of scientists involved in the development of the bomb were squeamish about its use, or that they were willing to use it against Hitler, but not Japan, the political consequences would have been enormous. The question "who lost China?" poisoned political debate for a generation, and it was a large part of Lyndon Johnson's motivation in the Viet Nam war to avoid a similar question. The "political consequences" were, moreover, "democratic." The leadership knew that the representatives had the power to hold them responsible: the fallout that they wished to avoid was from their own citizens, and from the elected representatives who would be sure to exploit the inevitable questions to advance their own careers. Thus the decision was a paradigm case of democratic accountability.

Yet the decision produced a remarkable result in the fourth kind of politics: the "Scientists' Movement," which included the creation of a variety of organizations which attempted to influence policy and claim special expertise about atomic matters, or to serve as a forum for discussions of weapons policy

and science policy. This is, of course, a well-documented episode. In terms of the ideal-type classification of politics presented above, it is an example of a protest movement that claimed expertise, a claim bolstered by the fact that its leading participants were contributors to the development of the bomb itself. The political effect of the scientists' movement was substantial, though unintended. Byrnes' reaction, that the scientists were political idiots intruding on matters that were not their domain, was institutionalized. Figures such as Oppenheimer were suspected of subordinating their scientific advice to political purposes, and removed from positions of influence. Politicians were alerted to the anti-democratic potential of scientists' movements, especially when scientists were in a position to use their claims to special expertise to bring about policy results that suited their ideology. The response served to assure that scientists' claims would get special scrutiny, and provided, surprisingly, a new model for relations between science and politics, in which the scientists' claims to expertise, which were extensive and continued to be extensive for decades, were marginalized by the construction of bureaucratic systems that formalized, and limited, roles for scientists in relation to policy, and assured that military bureaucracies had their own expertise. Many naval officers, for example, were sent for training in nuclear physics.

Eventually the scientists' movement petered out, though it survives in such organizations as the Union of Concerned Scientists. But the movement continued not as a pure scientists' movement, but as an adjunct to the extreme Left. It drew force from a popular Ban the Bomb movement that was especially strong in the UK. In the United States, some scientists continued to speak out and make apocalyptic pronouncements about the nuclear threat and the need to disarm, a posture welcomed by the Soviet Union and in one case rewarded with the Lenin Peace Prize. As a coda to this discussion, it should perhaps be observed that this was a case in which the democratic process was "right" and the scientists in the movement were "wrong." According to the conventional wisdom of international relations thinkers today, the scientists were wrong on every important count. The possession of even a small number of nuclear weapons by a country proved to be a successful deterrent: not only to nuclear warfare as such, but to any kind of warfare between states with nuclear weapons. The results of nuclear weaponry, on this view, have been unambiguously pacific, producing a sixty-year peace among major powers that stands in sharp

^{1.} The question of Oppenheimer has been discussed at great length, even becoming the subject of a Broadway play. The decisive moment for Oppenheimer as a scientific advisor, however, was his opposition, on technical grounds, to the "Super," the hydrogen bomb, which he claimed would not work. At this point, the question of whether his political views influenced his technical advice became impossible to leave aside. When he was proved wrong, it became impossible to continue to trust him (Thorpe, 2006).

contrast to the first forty-five nuclear-free years of the 20th century, in which great power conflict, punctuated by ineffective arms restrictions treaties, were the norm. Nuclear weapons and the threat of deterrence made the treaties of the post-1945 period meaningful because they were backed by force, rather than threats that were known by the relevant belligerents to be idle.

Bureaucratic Rationality Meets "Power"

Much of the literature on experts has focused on very different kinds of decisions, on what is, in effect, municipal decision-making on controversial technologies or public works, or regulatory decision-making, which is part of bureaucratic politics. So one issue is how the different kinds of situations of decision making compare and relate to one another. Many of the studies of decision making involving expert knowledge and the actions of representative governments at the municipal level have concluded that expert knowledge has little or no effect on the decisions that are made; experts are powerless and politically inconsequential (Collingridge and Reeve, 1986). On the face of it, this is a somewhat puzzling thesis given that, in the course of making domestic policy, municipalities and national governments are characteristically surrounded by experts, commission reports by experts, and employ experts in the course of implementing decisions. The role of experts in these settings is obviously far greater today than it was even in the most recent past. Before 1940 in Britain, for example, there was an extensive discussion of the problems of using experts to make decisions about the siting of telephone lines, a problem that resulted from the technical limitations of "long-line" telecommunications service. The puzzle, which vexed the civil service for decades, was this: could a lower ranking technical expert override or dictate a decision by a higher ranking civil servant who had no technical competence? The issue could take this form only because of the extreme rarity of reliance on technical experts. Today this situation is completely different, in all modern countries. Even such a mundane decision as locating a road commonly requires feasibility studies, impact statements, and so forth, all legislatively mandated and all produced by experts. Yet it is also the case that the decisions that are ultimately made are not always those which the expert advises.

Another novelty that relates to these decisions is that there is now a process, sometimes formalized, of public participation which includes negotiations with stakeholders and not infrequently involves public protest that influences decisions made either by elected officials or bureaucrats responsible to elected officials. Sometimes this process produces street politics, protests, or activist movements which seek to close down the projects. The ubiquity of this kind of political response is relevant to understanding the deeper political signifi-

cance of the notion of public participation. Not infrequently, these protests and movements succeed, and governments and bureaucracies withdraw proposals or modify them, sometimes in order to survive politically.

The relationship between bureaucratic politics and protest politics is not accidental, as we shall see shortly. But to understand the relationship we need to go beyond the imaginary defined by rationalism, which took as its implicit target the politics of representative democracy, routinely targeted in the 1930s — especially by scientists on the Left who were attracted by the idea of planning — for its inability to come to decisions, implicitly as a result of being driven by interests and paralyzed by conflicting interests.

In 1994, Bent Flyvbjerg published a study of a city planning effort in the Danish regional center of Aalborg. The book has been praised as equivalent to the writings of Machiavelli in its depiction of contemporary politics. The case is interesting as an example of a particular kind of expert politics. But it is also interesting, and exemplary, as the expression of a residual form of the rationalism rejected by Oakeshott, and its continued presence in academic writing, as well as representing a strong articulation of the working ideology of the Danish City planning bureaucracy and, by extension, the ideology of urban planning generally.

The Aalborg city planning story begins with a collaborative effort by a number of bureaucrats in different bureaucracies, each of which had both significant regulatory and funding power in the city of Aalborg. They produced an agreement on an ambitious plan of urban transformation which was pushed through the political process, and in the view of its protagonist, and indeed of Flyvbjerg himself, was undermined and transformed beyond recognition, and derationalized, in the course of its implementation. The story, as Flyvbjerg tells it, is one in which power trumps rationality. His theory is this: Rationality is weak and power is strong but rationality under particular kinds of conditions can break through and become the basis not only of decision making but the full implementation of the rational decisions themselves. These rationality permitting conditions can be readily disrupted by those who have power and are in a position to undermine rational outcomes for their own irrational "reasons," meaning "interests."

The protagonists of reason in this case are Aalborg city planning bureaucrats whose primary concern in the initial stake for this project was with the key element of removing private vehicles from the city center and supplanting it with more rational, meaning collective, forms of transportation. This involved creating a central bus terminal facility in the center of the city, and through a complex process a particular city square called Nytorv was transformed. The theory behind this transformation was that people would give up car use if convenient bus service existed. Convenience was in large part defined as a short

wait between transfers. A strong effort was also made to facilitate access for bicyclists. The cyclists' association was, although a weak political player, one of the strongest supporters of this plan, and implicitly served as Flyvbjerg's model of rational agreement with the plan.

One can ask, and indeed Flyvbjerg does ask, what political tradition operated in this decision process. The answer Flyvbjerg does not give is one that I will give now, simply to explain the situation. Danish bureaucracies, and indeed Scandinavian expert bureaucracies generally, resemble German bureaucracies in that they are only loosely supervised by elected officials, hold many discretionary powers, are expected to (and do in fact) play a leading role in the creation of cartel-like relationships of cooperation between various stakeholders in relation to particular decision-making processes. The "stakeholder model," much discussed by Tony Blair, in this particular tradition is a model characterized by long-term flexible relations of mutual dependence. Bureaucracies have the power to punish and disrupt the activities of noncooperators through regulation. So it is this asymmetric power of the bureaucracy, rather than straight bargaining, that is the basic power relation.

Put more straightforwardly, the "stakeholders" not only have a stake in their own aspirations and desires but are dependent on the bureaucracies that have discretionary power over them, strive to preserve working relationships with them, and, indeed, see the interventions of the bureaucracies favorable to their interests as an important strategic means. The bureaucracies not only strive to generate, in a cartel-like fashion, commonalities of interest but are themselves the embodiment and subject of long-term relationships that are in the interests of those who are governed by them.

These bureaucracies, especially in their regulative and subsidy-granting mode, are expertized bureaucracies; they possess distinctive technical training, usually of a kind not shared by the stakeholders themselves, for example in city planning or transportation analysis. Even where this expert knowledge is not a monopoly it predominates and is supposed to be the basis of the discretionary actions of the bureaucracies, which are not understood to be despotic and tyrannical power holders but rather experts who are professionals constrained by the canons of professionalism and technical competence. Expertise predominates in the soft discipline of a bureaucratic system of career advancement in which success is, practically speaking, success in accordance with the expectations of one's professional peers in the planning bureaucracy. There are, for example, awards for planning successes, and the Aalborg plans received the European award in city planning.

The city of Aalborg also has an ordinary political process, a case of the politics of representation, including a mayor and several aldermen who were

not only formal decision makers but who were often in a position to either facilitate the activities of the bureaucracy or, in some cases, impose their own particular preferences on the planning process. In this case, there was a socialist mayor, who for some years was known as the "bus mayor" because of his devotion to public transportation. This mayor, like other politicians, sought to leave as his monument a vastly expanded system of public transportation. The party system, as it operated in Aalborg, involved representation by various parties and operated in a generally consensual way, not surprisingly, given the predominant political role and power of the various expert bureaucracies.

The villain of Flyvbjerg's piece is the Chamber of Commerce, which ordinarily operated in a cooperative way in the system of long-term relations of mutual dependence described here, but which objected to various features of the proposed plan, supported others, and worked in various ways to modify the plan, correct aspects of the plan, insist on emergency alterations to the plan. Its main aim was to protect its members against the perceived risk of excluding private automobile traffic from the city center. The Chamber of Commerce issued various reports, the arguments and claims of which repeatedly changed, but each of which was designed to show that downtown merchants would suffer considerable losses if cars were restricted in the fashion envisioned by the plan. In the end, they proved to be the most rational of agents — they succeeded in weakening these provisions so significantly that they got what was for them the best of both worlds: an expanded public transportation system that increased commercial traffic from bus travelers, though at great cost to the municipality, and the accommodation of the private automobile so that no significant losses of business occurred.

The original plan, however, was left in shambles, so that this result could be understood not so much as the successful outcome of a process of stakeholder politics but as the simple irrational destruction of a rational and progressive exercise in comprehensive city planning. This is Flyvbjerg's interpretation, and he characterizes the outcome as the result of an underlying political tradition of several centuries in which merchants and merchant associations exert ultimate power in towns. In the case of the city plan, Flyvbjerg argues, the merchants once again forced the city politicians and city administrators as well the planning bureaucracies to serve their interests; in this case, not only at the great expense of the cost of the transport plan and the construction involved in it, but also at the cost of the lost elements of the original plan: ideas in the areas of housing and about the creation of bicycle paths that were ultimately not implemented. These more ambitious elements of the plan were disrupted and abandoned or modified because they no longer fit the revised plan.

Rationality or Bureaucratic Power?

Flyvbjerg draws a series of Nietzschian aphorisms from this result, which bear repeating here.

- 1. "Power defines reality."
- 2. Rationality is context-dependent, the context of rationality is power, and power blurs the dividing line between rationality and rationalization.
- Rationalization presented as rationality is a principal strategy in the exercise of power.
- 4. The greater the power, the less the rationality.
- 5. Stable power relations are more typical of politics, administration, and planning than antagonistic confrontations.
- 6. Power relations are constantly being produced and reproduced.
- The rationality of power has deeper historical roots than the power of rationality.
- 8. In open confrontation, rationality yields to power.
- Rationality-power relations are more characteristic of stable power relations than of confrontations.
- 10. The power of rationality is embedded in stable power relations rather than in confrontations (1998:227–37).

These maxims express the weakness of rationality in the face of power. For Flyvbjerg, this weakness is a threat to democracy that can only be overcome by "more participation, more transparency, and more civic reciprocity in public decision-making" (1998:235).

One is struck by some peculiarities in this treatment and this conclusion. Begin with the obvious point — that Flyvbjerg seems not to expect that the problem of democratic participation is the responsibility of the elected representatives involved in the decision. For him, their proper role is to cooperate with one another and with bureaucrats. "Democracy" is identified not with an open. conflictual, representative politics, but rather with the public interest as defined through the bureaucratically dominated stake-holder model. "Participation" is something to be produced through the stake-holder model by involving larger numbers of groups in the cooperative effort supporting the project. "Civic reciprocity" is his code term for cooperation in projects which are mutually beneficial but in which each side potentially gives something up for the greater rationality of the project itself. The bicycle club, which was co-opted into the supporting stakeholders for the project by the promise of an extensive network of bicycle paths, on this reading, is cooperative, in that it exchanged

public support for the project for the beneficial outcome it would produce for its members. The Chamber of Commerce, in contrast, failed to live up to the code of civic reciprocity, because it opposed the project once it decided that its benefits were insufficient. One might think that cooperation goes both ways, and that it was the fault of the bureaucrats that the deal seemed insufficiently tempting for the usually cooperative Chamber of Commerce. From the point of view of the politics of representation, the very fact of their opposition and the public character of the battle they waged against the plan, especially in the newspapers, is a paradigm example of successful public participation. But Flyvbjerg does not see it this way, in part because he understands the plan to be rational and opposition therefore to be irrational, in part because for him the "public" is by definition opposed to the "private" interests of the Chamber.

Flyvbjerg is thus no devotee of explanatory symmetry. He supposes that there is such a thing as a rational city plan, and that this is the sort of thing that a city planning bureaucrat with the requisite technical skills, acting in his competence as a planner, could produce; that other people's rationalities, the pursuit of their own private interests, for example, or alternative conceptions of the public interest, are, because they fail to accord with this plan, by definition irrational. Because they are irrational they are explicable, to the extent that they are explicable, as a matter of error and the insistence of the agents in this political process on their own ideas and their own ideas of their own interests. Thus it follows that the insertion of these erroneous ideas into the process is an expression of power. The insertion of the ideas of the bicyclists, in contrast, conforms to reason, and thus is not an expression of power.

At no point does Flyvbjerg consider that bureaucracies are themselves in the business of power, and at no point does he consider their activities, such as the creation of a plan and attempt at inducing cooperation among others, as an exercise of power. Without saying so, he identifies reason with the collective reason or social reason represented by the planners and private reason with unreason. To be sure, he spends a great deal of effort showing the inconsistencies and self-servingness of the claims of the merchants' association and their misuses of research. He also identifies failings in the decision-making processes, and inadequate uses of research by the planning bureaucrats themselves, and their failures to deal effectively with their merchant enemies. But the treatment is asymmetric: the bureaucrats fail to live up to the high calling of rationality; the merchants are knaves.

The asymmetric treatment of the main players in this drama, namely the planning authority and the merchants, means that the rationality of the plan is never dissected, its ideology is never analyzed and no consideration is given to the possibility that the outcome was perhaps better than the outcome intended by the planners, which would imply that the political process here worked in a

quite prosaic way to successfully accommodate different viewpoints and different claims to expertise, however messy these claims may have been. So we get a strange silence about the validity of the claim that the experts embody reason and, at the same time, an implicit acceptance of their own claim that the plans that they recommend are strictly and essentially the product of their expertise as planners and not a matter of, as Weber uses the term, their "ideal interests" or their ideological commitment to a planning strategy that others do not necessarily acknowledge as wholly legitimate or disinterested.

The fact that the questions aren't asked means the conclusion, that reason is only able to triumph in stable relations between political players, follows because by definition relations become "unstable" in the face of conflicts about beliefs and interests in which the two parties decide that it is more in their interest to destabilize the relationship than to continue it. This is the moment when politics breaks out, even in the setting of the middle-sized municipality, such as Aalborg. In this classic bureaucracy-dominated political system, the costs of destabilization are high if one is engaged in ongoing relationships of dependence with the bureaucracy, and less costly if one is not. Protestors taking to the street in a "manifestation" of public opposition is an attempt to destabilize, but one in which the protestors typically have no continuing relation of dependence to protect or risk. The Chamber of Commerce did have such a relation, and the risks of noncooperation were significant.

This is the usual relationship of the Germanic and Scandinavian expert bureaucracy to their citizens and, although Flyvbjerg naturally does not say so, it is a relationship deeply rooted in the predemocratic past of these societies that was essentially unchanged by the transformation of authoritarian politics into formal democracy. That, say, the royal authorities and the merchants of a city like Aalborg traditionally worked out a relationship of mutual accommodation in light of their recognizable and unmysterious mutual dependence seems hardly to be a novel or problematic claim; that their interests sometimes conflicted, that they took different views of particular problems, and that they worked this out in a sense does amount to a political tradition, though not a democratic one. The fact that the bureaucratic powers later acquired the ideology of planning and "rationality" does nothing to change the fact that they possessed, and continued to exercise, the prerogatives of the older order of state bureaucracy.

Democracy without Politics?

The central distinctions on which Flyvbjerg's arguments rest are variants on the familiar thematic ideas that Oakeshott called "rationalism" — that decisions made "normally" do not require antagonism, the clash of interests, or

differences of opinion and belief, but can be handled best by a bureaucracy with a "democratic" bias, open to the desires of citizens and with their "participation." What does participation mean in this context? The same formulae were employed in Oakeshott's time, for example by Barbara Wootton, who held that a better way to make decisions than politics within the British tradition was a new form of consultation with advisory committees, namely tribunals, "through which the ordinary person can make known where the planned shoe pinches; through this machinery he can often stop the pinching" (1945:175). Implicitly, of course, in these tribunals the bureaucrats hold all the cards — they have the expertise, and they take the advice that they deem it reasonable to take. And this is true whether the ideology behind it is the elaborated one of "planning" or merely the ordinary retail rationalism of expertise. And it is assumed that ordinary representative politics, which was not sufficiently expert to produce or even intelligently supervise "planning," was irrelevant to the kind of public participation that was relevant.

One may ask the Sherlock Holmes question here: why did the dog, in this case the elected representatives, not bark? Wouldn't it have made more sense, and perhaps led to a more rational result, if the plan had been contested politically from the outset, that the stakes and interests of the stakeholders had been made clear in the course of political discussion, and some sort of workable compromise been hammered out? Why didn't the real politicians ensure that this happened? Wouldn't this have been real public participation? This is an "American" question, in that it assumes that the normal place for making decisions of this kind is in elected bodies, not bureaucracies. And the difference points to some deep differences in the way in which European politics works, questions that reflect different conceptions of politics, but also some fundamental institutional differences in the role of political parties. The "American" view of liberal democracy is this: the rough rationality of liberal democracy comes out of playing the political game, the game of legislation, with stakes. Political horse-trading is a crude market test — it reveals what one's stakes really are, and how strongly one believes what one believes, and at the same time allows the participants to learn the stakes, theories, and theories of others about who benefits, and who desires. Political discussion is a kind of epistemic leveler: everyone needs to make their case to the same audience of representatives, whose actions in turn are scrutinized by the press and the voters, and everyone has something at stake. But everyone also decides for themselves whether what they profess to believe is sufficiently well-grounded to fight and commit scarce horse-trading resources to: thus it is common, and often taken as a sign of hypocrisy, for political leaders to pay lip service to ideas that they do not believe in sufficiently strongly to commit resources to them. The realm of issues in which there are extensive and conflicting expert claims happens to be one in which this kind of discrepancy between what is professed and what is done politically is typically large. A good test of whether a politician believes in the pronouncements that are made about energy policy or global warming is the extent to which the politician will sacrifice other goals. The appearance of inaction is often the result of unvoiced skepticism. Thus what the epistemic market decides, as it operates in the context of horse-trading in representative democracy, will very often be systematically at variance with the pronouncements both of experts and representatives.

Continental critics of American democracy have typically been appalled at this process as it operates in the United States. They liked the idea of rational persuasion, but not the deal-making and interest-serving that was intertwined with it, and which they tended to see as venal and vulgar, and as a degeneration from the kind of aristocratic English liberalism of the early 19th century, which they admired.² In any case, their own experience of parliamentary democracy was quite different. The obvious differences were in political form, between a parliamentary system and a strong presidency, and between a weak bureaucracy and a strong one, but a basic one involved the role and character of political parties. European parties were class or ideological parties, with a strong degree of party discipline and party control of participation, enforced by party slate-making. "Representation" involved party first, for the party was in control of political careers.

In theory, parliamentary government was inherently more effective than the model of separation of powers in the United States. It avoided the possibility of conflict between the executive and the legislature by making parliament determine the leader. But in practice the organization of politics in terms of parties led to political paralysis. Party politicians had no incentive to compromise, or, in some cases, even to rule. They depended on their base, which was loval not because the party delivered the goods but because it expressed their ideological or class position. This produced its own form of hypocrisy. Parliamentary discussion was often largely performative. There was little creative competition for votes because there were few voters whose allegiances were up for grabs and whose beliefs were unknown or malleable. Parties were ideological. Stability, of the sort that Flyvbjerg regarded as a condition of rationality, was, in a practical sense, a result of this situation. Scandinavian politics in particular was characterized by long periods of party dominance and trivial party differences. Intense political contestation of the "American" kind was unheard of, in part because contestation that was unauthorized by parties had no place in parliament, and the range of issues parties chose to contest was small. In these circumstances bureaucratic solutions to political problems could be pursued uncontested as well, insulated by the double layers of party politics and parliamentary

quiescence. But there was another sort of *statis* that parliamentary party politics produced: the endless collapse and recreation of parliamentary coalitions. The strong Presidency created by de Gaulle's constitution of 1959 was designed to overcome the limitations of this kind of parliamentary politics. In this case, it purchased stability and effectiveness by elevating the leader above parliament.

Politics could be conducted in this way because there was an alternative to this kind of politics that was congenial to it. The state bureaucracy could function as problem solver, but also as — in a way nicely exemplified by Flyvbjerg's account — a largely autonomous power, negotiating with stake-holders, creating mutual interests, and testing, through the process of negotiation, the seriousness of beliefs and the centrality of interests. The state, in short, through its negotiations with stakeholders, supplants "politics." This is politics by other means, bureaucratic politics, a form that avoids the ordinary kind of political accountability. "Participation" without accountability comes to mean something essentially therapeutic — to participate is to have the satisfaction of expressing opinions without any direct effect. It provides the same kind of moral satisfaction as protest demonstrations, but in a prophylactic forum which creates the illusion of power without the substance that political conflict would give it.

The differences in the development of the "Left" response to nuclear weaponry in the United States and Britain (whose politics, with respect to the issues discussed here is a kind of half-way house between the United States and the Continent) exemplify the differences. Each country had an active scientific Left in the 1930s which supplied scientists to the war effort, and each produced strong opponents to nuclear weapons. But in the United States, these movements converted into attempts to use the authority of science to influence policy by issuing expert opinions on various technical issues in the public eye, or into attempts to influence congress and public opinion. In Britain, in contrast, the grand figures of science who objected to nuclear weapons spoke out in protests or wrote books presenting their personal views against nuclear weapons, and supported the mass protest movement for nuclear disarmament. None of this ever stood a realistic chance of becoming party policy, and as time went on, the forms of protest themselves became more extreme and self-marginalizing. When Lord Russell denounced Kennedy and Macmillan as the greatest monsters in history, the distance between this movement and the give and take of liberal democratic political discussion was obvious. Yet the campaign for nuclear disarmament did affect policy. Successive governments sought to mollify the sentiments it was based on, and remove the ancillary issues on which it traded, such as formal control of the button. It was, as its supporters believed, a form of politics. But its effects were primarily on the utterances of politicians, not their actions. Few people were convinced.

Carl Schmitt articulated this viewpoint in *The Crisis of Parliamentary Democracy* ([1923] 1988). but the same attitudes are found far more widely.

Demonstrations against genetically modified food, rationalized agricultural policy, and the like are also a form of politics. But the presence of this kind of politics is a sign of the unavailability of political accountability of the rough kind represented by horse-trading liberalism, with its implicit epistemic market. Instead there is a "yes" or "no" at the public level, as with the Aalborg plan. It is an open question whether the rationality of horse-trading liberal democracy is to be preferred to a bureaucratically dominated rationality punctuated by protests and operating under the threat of protests. Both use expertise, but in different ways. In the bureaucratically dominated stakeholder model, negotiation with a strongly epistemic component is a large part of stake-holder process. And these negotiations provide a forum for discussion in which degrees of belief matter. The outcomes may well mimic what a more market-like political process would produce. But they are typically more consensus oriented and less procedural.

The ubiquity of protests is closely paired with the substitution of bureaucratic politics for the political market. But just as the market itself resists bureaucratic rationalization by resistance in the form of shortages and surpluses, the bureaucratic rationalization of politics, and the substitution of "participation" for accountability, produces the politics of protest. The promise of rationality given by Flyvbjerg is conditional on "stability." The successful management of potential conflict by means of bureaucratically led negotiation is thus always done under a shadow, the shadow of the threat that politics, in the form of protests, will break out, and even in those societies most terrified by fear of politics, it breaks out regularly.

Rationalism promised to overcome the ills of the political marketplace of liberal democratic politics. But it produced its own nemesis in the form of protest politics. The attainment of "rationality" always occurs under the shadow of the possibility of disharmony, of popular manifestations of hostility, which are perceived as irrational and often are, in the sense that they involve suspicion, negation, and a kind of political irresponsibility available only to those who know that the consequences of their actions are only very indirectly related to what policy will actually be implemented. To protest is not to choose to accept the consequences of a choice, as in politics proper, but to protest the choice. These are the moral pleasures of political impotence. The long history of these pleasures on the Left and Right, and the fear that those who indulge in them will actually have power, defines this politics.

Administrative Traditions and Political Traditions

Oakeshott comments in "Rationalism in Politics" that the Germans do not have a political tradition, by which he is perhaps best read as meaning that they did not have a political tradition for representative rule or high politics outside of the practice of parliamentary party competition. The Germans certainly had a state tradition, and a tradition of professional governance that still has a strong hold not only in Germany but in Scandinavia, the tradition of *Staatswissenschaft*, which is the lineal source of the present "policy sciences" in the United States. It was intentionally imported by the Burgess in the course of founding the faculty of political science at Columbia in the 1870s and instilled in its students, who brought it to the rest of American academic life. A related "professionalization" project was promoted by the Rockefeller philanthropies. Bureaucratic traditions do compete with representative government, by leaving political traditions with less to do, and therefore few occasions for learning, establishing precedents, and applying itself to new circumstances. But the motivation for professionalizing and expertizing is reform, reform to correct the ills of "politics," meaning the ills of interest-based manipulation of decision processes, amateurism, and corruption, as well as incompetence.

We have become accustomed, through Foucault, to thinking of power/ knowledge projects beginning in hegemonic intellectual constructions, such as Bentham's model of punishment, and becoming an unseen and unnoticed part of the fabric of everyday administration, in this case in the modern disciplinary order. One could certainly tell this story about what Oakeshott calls rationalism. There was, in his time, no shortage of intellectual constructions promising to replace the political by the technical, including the grasp for power of the atomic scientists themselves, and as the example of Flyvbjerg shows, there are still ideologists of expert power with thinly veiled hegemonic ambitions. And in one respect rationalism was right: the sheer ubiquity of expertise in modern political life. It is also true, as Foucault would expect, that there are efforts to stigmatize the opponents of experts as irrational and retrograde. "Rationalism by stealth" would fit the Foucault model. It would occur where the line between the political and the expert is repeatedly redrawn in favor of the expert, and the moments in which a political tradition of accountability that applies to experts is exhibited and sustained are gradually diminished to a narrow few, and those who objected to this regime would be despised and ignored, but continue to resist. But things seem to be turning out differently. Expert power has produced its own nemesis, or rather revived the political forms in which other kinds of knowledge are constructed.

The older view of the Left and of the bureaucracy was that democracy meant rule on behalf of and in favor of the people, by reliance on expertise. The French Socialist leader Ségolène Royal was recently quoted as endorsing "the expertise of the people" against the expertise of the bureaucratic state. The occasion, the success of the protest movements in forcing the government to back down on a law allowing a new employment contract designed

to reduce joblessness, an attempt at "structural reform," is exemplary. The use of the term "expertise" to characterize this expression of popular conviction is telling. Its appearance in this context is as though the internal dialogues of the obscure discipline of science studies has burst onto the center stage of contemporary politics. The origins of Royal's use of the term are doubtless more mundane. But its use in the context of party politics in a rigidly partisan parliamentary system and strongly bureaucratically dominated state such as France signifies that the "stealth" aspect of expertise no longer exists. Political traditions are evolving to respond to and counter expertise, and to bring issues about expert claims, in which the quality of expert claims and the validity of the assumption of their disinterestedness are raised, into the heart of political life. That the response, even in the most state-centered political orders, such as France, is no longer confined to protest movements, is significant. The rational-ist dream was to abolish politics in favor of expertise; its result has been a new birth of politics.

The great stable political orders of the past operated in a state of tension or evolving balance, or stasis. The partners were typically groups or institutions which depended on one another but had different interests, and who could shift the balance of power between them without undermining the interests they had together. Flyvbjerg's example of the royal bureaucracy and the merchants is a case in point, as is the relationship between nobles and royals that made up the European order of the last millenium. Expert knowledge and its alternatives the knowledge of the protesters and of legislators in the political marketplace - also have the potential to be analogous to this kind of balance. Expertise typically knows something about a problem, but not enough to successfully turn it into a technical matter: global warming, economic development, and the other great problems of the present have this character. The hegemonic ambitions of the expert in these cases are frustrated not only by their ignorant opponents (who are not so much ignorant as in possession of knowledge from different epistemic pools or modes) but by the facts themselves and the failures of expertise the facts produce. Protest and the political horse-trading of liberal democracy provide not merely a reminder of the limits of expertise, but are balancers, which provide not merely a check but a dynamic partner to expertise. If we take what was right about rationalism, its sense of the knowledge intensity of future politics, and combine it with a recognition of the epistemic character of this balance, we have the rudiments of a new model of the future of politics.

References

- Collingridge, D. and C. Reeve (1986) Science Speaks to Power. New York: St. Martin's Press.
- Flyvbjerg, Bent (1998) Rationality and Power: Democracy in Practice. Chicago: The University of Chicago Press.
- Hershberg, James G. (1993) James B. Conant: Harvard to Hiroshima and the Making of the Nuclear Age. New York: Alfred A. Knopf.
- Maddox, Robert James (1995) Weapons for Victory: the Hiroshima Decision Fifty Years Later. Columbia, MO: University of Missouri Press.
- Mill, John Stuart (1861) Representative Government. http://eserver.org/philosophy/mill-representative-govt.txt
- Oakeshott, Michael ([1947-48] 1962) "Rationalism in Politics." Pp. 1-36, in Rationalism in Politics and Other Essays. London: Methuen.
- Robertson, David (1994) Sly and Able: A Political Biography of James F. Byrnes. New York: Norton.
- Schmitt, Carl ([1923] 1988) *The Crisis of Parliamentary Democracy*, trans. Ellen Kennedy. Cambridge, MA: The MIT Press.
- Thorpe, Charles (2006) Oppenheimer: The Tragic Intellect. Chicago: The University of Chicago Press
- Wootton, Barbara (1945) Freedom Under Planning. Chapel Hill, NC: University of North Carolina Press.

Knowledge Democracy

A 21st-Century Perspective

Nico Stehr



Copyright © 2008 by Transaction Publishers, New Brunswick, New Jersey. www.transactionpub.com

All rights reserved under International and Pan-American Copyright Conventions. No part of this book may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopy, recording, or any information storage and retrieval system, without prior permission in writing from the publisher. All inquiries should be addressed to Transaction Publishers, Rutgers—The State University of New Jersey, 35 Berrue Circle, Piscataway, New Jersey 08854-8042.

This book is printed on acid-free paper that meets the American National Standard for Permanence of Paper for Printed Library Materials.

Library of Congress Catalog Number: 2008019720

ISBN: 978-1-4128-0706-7

Printed in the United States of America

Library of Congress Cataloging-in-Publication Data

Knowledge and democracy: a 21st-century perspective / Nico Stehr, editor.

p. cm.

Includes bibliographical references and index.

ISBN 978-1-4128-0706-7

1. Democracy--Congresses. 2. Liberty--Congresses. 3. Expertise--Congresses. 4. Politics, Practical--Congresses. 5. Knowledge, Sociology of-Congresses. I. Stehr, Nico.

JC423.K58 2008 321.8--dc22

2008019720

Contents

	Preface Nico Stehr	
	ivico Sienr	vii
	Introduction: Is Freedom a Daughter of Knowledge? Nico Stehr	1
	Part 1 Knowledge and Freedom as a Two-Way Street	
	Introduction to Part 1 Steve Fuller	9
1.	Two Concepts of Freedom: Implications for the Question of Knowledge	
	Thora Margareta Bertilsson	13
2.	Do We Need Self-Knowledge in Order to Live as Free Citizens? Stein Ringen	25
3.	Death, Justice, and Freedom: Does Global Knowledge Change the Rules? Or, Freedom's Family Romance Charles Lemert	39
	Part 2 Rethinking Democracy: Are Societies Becoming Less Democratic and Citizens Less Knowledgeable?	2
	Introduction to Part 2 J. Rogers Hollingsworth	51
4.	Knowledge and Democracy: Is Freedom a Daughter of Knowledge? <i>Erhard Busek</i>	59
5.	Trust Matters: Democratic Impingements in the City of Knowledge Uli Schreiterer	65
6.	What May the Sheep Safely Know? Reiner Grundmann	85
7.	Science Democratized = Expertise Decommissioned Steve Fuller	105