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I like to think of myself as a boundary spanner—bridging between “hard” science and “soft” skills. The bridge metaphor is attractive, but it probably implies more precision than I deserve (urban sprawl comes more to my mind). My “professional” degrees are in Civil Engineering (an undergraduate degree from the University of Utah; and a master’s and Ph.D. from Brigham Young University). I also have an undergraduate degree in English from the University of California at Berkeley, and master’s degrees in Instructional and Performance Technology, and Technical Communication from Boise State University. I plan to complete an undergraduate degree in philosophy this fall, and have begun coursework toward a master of fine arts degree in creative writing. I’ve been teaching soil mechanics and structural analysis and design at Boise State, since the creation of its College of Engineering in 1996. I have been teaching university core classes in the moral and social implications of engineering since 2003.
Marginalizing Dissent:
Engineering and the Public Hearing Process

Abstract: In a core class for non-engineers at Boise State University, I focus on helping students understand the impact of engineering decisions on their individual and communal lives. I attempt to de-mystify engineering design, but also try to explain the engineer’s over-reliance on convergent thinking, and the dissonance response of engineers to project opposition (denying, marginalizing, or baffling the opposition through intentionally turgid language and the appeal to “special” expertise). We discuss Habermas and Discourse Ethics, and as one of the principal assignments, I have them attend and report on the public hearing required to enable federal funding for some local engineering project. The Idaho Department of Transportation, and the Ada County Highway District, because of their funding source and extensive range of projects, are the two main providers of hearing opportunities.

The interesting thing is that the public hearings of both these agencies have moved from the town meeting model, and to the open house/poster session format—spreading the hearing over several hours, with individual stakeholder participation limited (by the call of nature, so to speak) to a portion of the designated time. While the new model allows for more intimate interaction between staff and stakeholders, it sharply curtails interaction between stakeholders themselves (stakeholders as a whole are fragmented into much smaller groups). Is this a blatant attempt to hijack the public discourse (weakening dissent by limiting the mutual support of dissidents)? Is it reasonable to attribute the drawbacks of this policy change to insensitivity rather than malice? Or perhaps contrary, are the benefits of the new format sufficient to justify the inherent reduction in dialogue between “civilians”? This paper will examine the change in public hearing format in light of the evolving, “historic” view of political thought; Hegel’s appeal to zeitgeist (world-process) and the universal (administrative) estate; and Habermas’ notions of deliberative politics.

Let me begin with two related premises that are simply the opinion of the author:

- the ostensive, legislative intent of the federal public hearing requirement is to empower stakeholders—giving them access to information, an opportunity to formulate informed opinions, and the power to change the proposed local use of federal funds before those funds have been rendered into mortar and steel; and
- the esoteric, agency intent of the local public hearing is to demonstrate that a measured effort has been made to allow the previously unconsulted public an opportunity to impact the minds responsible for the proposed use of federal funds.

Project designers have technical expertise, but need to stay in touch with the larger picture of local social concerns. Local stakeholders need to be adequately informed, and gain a sense that their concerns are being considered. Ethical deliberations regarding changes in the public
hearing process might be better understood within an evolving “historic” paradigm of social contingencies; in light of Hegel’s view that political decisions (such as those involving engineered public works) should be controlled by a knowing bureaucracy (Hegel’s “universal estate”); and in consideration of public will-formation as an aspect of the “deliberative politics” discussed by Jürgen Habermas.

**The Historic View of Social Development**

At the Renaissance blossoming of Western culture, science moved from a principal reliance on ancient, “deductive” disciplines (e.g., geometry, astronomy, and optics) to a reliance on the more “empirical,” Baconian sciences (e.g., Galileo’s two “new” sciences of dynamics and strength of materials). The parallel shift in *moral* theory was away from a divine, eschatological, “first principle” explanation—to an inductive reasoning from the empirical observations of nature. “Natural Rights” theory—perhaps finding full-flower in Thomas Jefferson and our own Declaration of Independence—was the attempt to ground ethics in scientific observation. But while technology made natural observations increasingly precise, and nature seemingly determinate; *moral* behavior had to be indeterminate (“ought” implies the freedom of choice). We could always catalogue moral observations (moral anthropology), but any *objective* basis of free morality had to transcend determinate experience.

Hume’s problem of induction—that there is no “good” (*i.e.*, deductive) reason to believe that unknown events will follow the pattern established by known events—caused serious problems for Natural Rights theory, and Kant’s “two realm” explanation (the phenomenal realm of determined behavior, and the noumenal realm of freedom) was an attempt to found moral theory on man’s historic (*i.e.*, social) being, rather than in his natural (animal) behavior. But Kant recognized that political development toward increasing freedom (his Universal Cosmopolitan State) was driven by the natural animosity between *individuals*, and the analogous, *deadly* posturing between individual states. This required humans to purchase political progress at a horrendous cost in human suffering, and was one of the reasons that Kant refused to turn against the French Revolution after it initiated the Reign of Terror.

Hume’s objection to social contract theory (the collectivization of Natural Rights) was that governments more typically formed as a result of usurpation and conquest, rather than consent. Such a reality seemed to preclude “bloodless” revolutions. In a similar way, Burke complained that Natural Rights seemed to support imposed ideologies (such as those of the French Revolution), where ideologues try to pursue their own happiness by destroying everything (and everyone) that fails to conform to their ideology (*i.e.*, the Reign of Terror). This acceptance of human suffering as a necessary component of social progress seemed to coalesce in the world-process theories of Hegel.

**Hegel and ‘World-Process’**

Hegel’s view (early 19th Century) of the cultural movement toward perfect freedom entails the creation of a universal estate to manage affairs for the agricultural and commercial (immediate and formal) estates, under the administration of a Civil Society. Civil Society itself is the second movement of his Ethical Life: created as families dissolve into the self-dependent players of a market economy, and leading ultimately to a constitutional state, international law, and something on the order of the Federation of States proposed by Kant. The three estates grant
representation to individual families (under the husband, as the family head) and recognition. The administration of Civil Society, assuming that justice prevails, develops unity and allows everyone personal freedom under an Ethical Life.

However, Hegel was not a fan of universal suffrage, and felt that unified families, focused under the leadership of a father and self-renewing as each successive generation of children established their own families, might move beyond the constraints of “civil society” thinking, and develop free, ethical institutions within the modern state. Since women (according to Hegel) find their substantive destiny in the family, while men have their substantive life in the state, the assumption of justice and unity might not bear too close scrutiny (unity achieved at the injustice of institutionalized gender inequality is no unity at all). While perhaps inconsistent with 21st Century America, there is some appeal to Hegel’s Civil Society reference to dedicated estates.

First of all, engineers have a much better understanding of the physical requirements of their projects. While engineers are certainly not above being swayed by self-interest, most engineers are sincere in their respect for the public welfare, and want to see that welfare enhanced by their projects and through their expertise. Hegel may be right, and decisions concerning engineering projects with federal funding may be best left to the discretion of caring engineers; but this begs the question of why there should be public hearings at all.

Nietzsche, in his response to von Hartmann’s manipulation of Hegel’s “world-process,” agreed that ethics could not be based on any chimerical allusion to Natural Rights. But while Rousseau, Kant and Hegel posited a moral foundation in man’s historic (social) nature, and the inevitable movement toward global freedom, Nietzsche felt that an optimistic allusion to history and “world-process” would prove similarly fruitless. He agreed that his supra-historical view was nihilistic, and morally debilitating, but none-the-less felt his to be the inevitable conclusion of adequate reflection (and that the inevitable chaos would be embraced by “great” men—who would thus become noble, blonde beasts). The progress of historicism through the 19th Century, culminating in the supra-historicism of Nietzsche, seemed callously willing to accept human suffering as the inevitable price of moral (political) progress.

Unfortunately, the period of contemporary (“historic”) political thought seems characterized by the kind of painful ideologies that it was all-too willing to accept (e.g., the French Reign of Terror, the contemptuous injustice of Social Darwinism, and the 20th Century clash between fascist and socialist political systems). Accepting benefit from such suffering seems slightly immoral in itself. But if pain and suffering has driven us to an ever-deeper appreciation of freedom, then perhaps it has led logically (in a Hegelian sort of way) to the kind of practical inclusiveness posited by Discourse Ethics.

Assuming that the need for public hearings is legitimate—we need informed stakeholders (the ostensive premise) and grounded administrators (the esoteric premise, at least to the extent of culpable deniability)—it would seem that public discourse should be enhanced beyond anything envisioned by Rousseau, Kant, Hegel, or Nietzsche. This being the case, a more meaningful analysis of the changing public hearing process might include a discussion of Discourse Ethics, as envisioned by Jürgen Habermas.

**Discourse Ethics**

Ethical social behavior seems to hinge on issues of distributive and retributive justice, and where Rawls felt that a sufficiently well-ordered society would agree to his two Principle of Justice, Habermas seems skeptical that actual human beings would be so willing (or find it sufficiently
compelling) to discount their own self-interest to a moral principle. In the absence of full agreement, the next best alternative would be facilitating procedures aimed at public will formation. Whether or not a society such as our own might qualify as “well-ordered,” it is fairly clear that we each have divergent talents and interests, supported by varying levels of eloquence in appeal, and/or bristling threat advantage. But in the (moral) interest of justice, the rules of discourse need to maintain social cohesion long enough to allow the evolution of more just social institutions.

Habermas recognized that any viable community necessarily supports a plurality of reasonable, comprehensive views; but that while rights regulate our actions, they aren’t the kinds of things we can “possess,” like Rawls’ primary goods. The republican tradition of rights (after Rousseau) seems overly reductive to Habermas, while the competing, liberal tradition (after Kant) seems overly moralistic. Habermas feels that public and private autonomy (respectively, the right to political participation and the right to individual liberties) presuppose each other within an integrated system of rights. In our increasingly pluralistic society, discourse is the filter through which individual opinion becomes public opinion: the goal is to resolve conflict through communication and will formation, rather than through the compromise of individual interests, or reliance on violence and coercion. Public discourse validates social norms, by giving everyone an opportunity to test the norms.

To establish an ordered discourse, public will formation follows two distinct stages. During the initial stage, social norms can only claim validity if they would be accepted through the process of practical discourse by everyone (the Discourse Principle), freely accepting all foreseeable consequences (the Principle of Universalization). This stage of will formation is governed by four rules:

1. no one capable of relevant contributions may be excluded;
2. everyone must have an equal opportunity to contribute;
3. participants must communicate honestly (they must mean what they say); and
4. discourse must be free of internal and external coercion.

If discourse so constrained fails to produce a clear consensus, then the second stage of will formation is no longer constrained to the natural validity of the best argument, but to the artificial validity of whoever can organize sufficient resources to gather the needed support. Here, experts and counter-experts compete openly, in accordance with partisan interests. While associated constraints relax somewhat during this stage, there are still rules that need to be followed:

1. the achieved compromise has to provide more advantage than the alternative of no agreement;
2. the agreement has to exclude free riders;
3. the agreement has to exclude exploited parties; and
4. all groups must have an equal opportunity to press for their own interests.

The changing public hearing format seems to infringe primarily on the constraint to provide an equal opportunity to contribute (rule 2 or stage one, and rule 4 of stage two). However, it should not be construed that the public discourse is limited to the public hearing, and if groups
require organization to press for their own interests (under stage two) then the agency itself (with its own interests) has no particular obligation to help competing interests.

Perhaps the principal question is: does the public hearing process intend to support the 1st or 2nd stage of public will formation? Since the poster-session public hearing is meant to present considered options, it pretty clearly falls within stage two. The question then becomes: before the options have been explored and reduced by the agency, was everyone with the reasonable potential to be affected given an equal opportunity (under rule 2 of stage one) to contribute? While this does not appear to be the case, the timing of public hearings, in general, is perhaps more culpable than the “poster-session” format in particular.

To conform to regulations, the need for a public hearing is only anticipated when federal funds become pending, and those funds generally only become pending when a project has been identified and proposed. Projects (hopefully) derive from local need, and exist before any particular funding source has been identified. What is needed, seems to be regular “hearings” to initiate the direction in which public projects will be considered. In other words, there needs to be regular dialogue between the agency and the individuals it serves—to identify potential projects—before any funding source is considered. Unfortunately, with a representative (rather than a participatory) democracy (supported by trivialized political “campaigns” and insipid media coverage) this level of detail in public will formation seems unlikely.

Conclusions

In ancient Greece, a “tyrant” was not necessarily a poor ruler, simply one who had ascended to archon without being properly selected by the group. A tyranny can be very effective—Mussolini made the trains run on time; and a strong, if tyrannical department chair can preclude the kind of prolix squabbling that often debilitates academic department meetings. But tyranny can be particularly fruitless, simply because it denies the cross-pollination of interests and ideas. There is a symbiotic relationship in the brainstorming session of engineers that makes the whole (the output of the session) greater than the sum of its individual parts (the static ideas with which the process was begun). Needless constraints on social discourse are no less debilitating, and produce decisions that are improperly informed.

While we, as engineers, assume responsibility for the technical dimensions of our projects, rather than their political aspects, we shouldn’t just throw our hands up in the air and abdicate all responsibility for finding public consensus. Our statutory political support is clearly important, but we need to supplement it with our own efforts. In this regard, engineers need to be more visible with the public and provide a higher quality of interaction with anyone expressing a sincere interest in our work. Having participated in numerous public hearings, from both sides, I believe that the quality of interaction between engineers and the public is potentially superior with the new poster-session format. In the interest of public discourse and social cohesion, however, we need to do more to facilitate discourse concerning potential projects before those projects have been pre-selected. Correspondingly, we need to facilitate the expression of opposition, rather than find ways to make that opposition less salient.

Rousseau’s vision of popular sovereignty required acceptance or rejection of legislation proposed by a more “learned” source (perhaps he envisioned something like a “star-chamber” version Hegel’s universal estate). In contrast, Kant felt it critical for moral agents to propose, as well as accept or reject social axioms. Experts (such as engineers) do have a place in social decisions—it just isn’t necessarily the principal place.
End Notes


