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Nuclear Power: Rebuilding Trust in an Audit Agenda

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Research by Pew Research Center and separately Radiant Energy Group has indicated a growing public attraction towards nuclear power. Yet, despite continuing advancements in nuclear power, public support for nuclear power feels to have limped behind pace. Progress in technology and transparent respect for rights both human and environmental appear to underdetermine concomitant progress in the support for nuclear power. By translating Onora O'Neill's book Autonomy and Trust in Bioethics to the nuclear space, this text briefly attempts to look at why.

Strangers at the Bedside

Paternalistic traditions of nuclear power may have undermined trust between the nuclear state and the public. We see windmills; some of us are fortunate to have solar panels on our roofs; even coal has a sense of ownership through family ties. Yet, nuclear power feels external, it is for the most part unseen, and when seen it is seen it is often from afar, behind steep fences topped with barbed wire. It doesn't feel 'ours'. The refrain of the nuclear power critic describes a feeling of being imposed upon, i.e., a loss of autonomy.

Autonomy has many definitions. Absence of external causation (Dworkin), self-mastery (Faden and Beauchamp), and capacity for independent decisions and actions (O'Neill) being but a few. Nuclear power implementation could be considered to fail all three, and thus is perhaps considered deserving of a loss of trust. And yet, individual autonomy is known to be discordant with public environmental discourse:

- The perceived imposition of risk fails the absence of external causation, but this overlooks the assured imposed risks of maintaining the status quo. A status quo of carbon emissions (an externalized risk for most of the developed West), energy insecurity, blackouts, and so on.
- Self-mastery is a non-starter: we cannot expect each member of the public to acquire advanced knowledge in nuclear engineering, nor to fully internalize their energy demand.
- Finally, independent decision and action are discordant with a communal society. Individual autonomy belongs to rights, whilst trust belongs to relationships and mutual obligations.

The energy industry is necessarily paternalist-leaning, yet this should not undermine professional trust in the (nuclear) state; they have an obligation to the public.

> *If we view autonomy as mere, sheer independence, its merits will be highly variable."*
>
> **—Onora O'Neill**

Objections and Obligations

Discussing energy provision in terms of rights can lead to a proleptic approach which only gestures towards illusory and weakly defined gains. Instead, insistence on obligations connects their complementary rights with definable actions. Whereas rights can lead to a conflicting hierarchy, obligations are less individualized and thus resistant to ethically questionable individual autonomy. The Millian line of avoiding harm risks subordinating and marginalizing some individual autonomy for others; individual autonomy can thus lead to an externalization of risk.

'Do no harm', the obligatory mantra of the healthcare professional, is likewise the unspoken mantra of the nuclear power critic. This nevertheless incoherent interpretation of the precautionary principle demands that any and all innovations that may harm (the environment) should be prohibited. Very few changes are guaranteed to have no ill effects, and fewer still guarantee in advance to be harm-free. The status quo is itself a cause of harm. The comparison of the definite with the conditional is an unfair change of goalposts and an incoherent basis for debate. Often nuclear power is forced to rectify a conditional, whilst solutions which externalize risk need not do the same for a definite. What then is the precautionary principle to prescribe when both change and the status quo are judged incorrectly?

The modern risk society—not heightened levels of risk but instead heightened perceptions of risk—hamstrings nuclear power development. A risk society nevertheless places trust. We trust institutions to act professionally regardless of individual will. The obligation of the state to provide energy thus needs to be placed outside the unstable and incoherent influence of the precautionary principle. For the consumer energy market, ubiquitous informed consent becomes unattainable since no public can be equally and accurately informed of all externalized risks for all energy forms. The propositional attitude of consent further masks the risk profile of our options: we are not consenting to foreseeable consequences, nor are we often able. How then is a risk society to place trust when individual goodwill is irrelevant and the consumerist vision of informed consent is intractable?

Trust Versus Trustworthiness

Often, society looks to reliability, yet this is neither necessary nor sufficient to place trust. When representatives of an industry are shown to be untrustworthy, this does not necessarily lead to lack of trust in that industry. Nevertheless, judgements of past reliability in nuclear power throttle trust. Judgements about reliability are often based on limited and inconclusive evidence, noting the lateral translations of the failures of one nuclear reactor type to a different alternative. The greater challenge is therefore mis- and disinformation. The historic perceived non-communicative and apathetic response of representatives of the nuclear power industry underwrites this challenge. Remedy through an openness agenda is noble, though can grant only salutary effects on trustworthiness. Society instead demands trust in the procedures by which it decides upon a nuclear power system. An audit and regulatory environment are foremost the vehicles by which this procedural trust is achieved.

An audit agenda, however, can build trustworthiness but not necessarily trust. Legislation and regulation are a beginning, displacing traditional relations of trust with stronger systems to secure trustworthiness. Economizing trust in such a way nevertheless risks deepening distrust: more formalized procedures compound levels of bureaucracy, potentially obscuring accountability. Further still, the acceptance of status and authority (an argument for placing trust even when evidence is scant) is rendered more difficult as institutions become increasingly complex. A regression of distrust becomes the corollary. The audit principles must therefore be complemented with practical judgements that tie in, not bolt-on, ethical, legal, and social implications. Legislation and regulation which lack these obligations and their corresponding rights risk losing trustworthiness. Modern regulatory bodies pursue these principles diligently, yet they are not alone sufficient.

Democratic Legitimation

Unanimous consent is unachievable in real-world conditions, all the more so given that both the incidence and exposure of risks are unclear. The situation is not readily improved by providing further information. No amount of citing complicated risks helps without also citing the same for all alternatives, nor can we compass the entire distribution of different externalized risks. Opinion polls, consultations, and citizens juries—agencies to derive democratic legitimation—are each vulnerable to increasing the exposure only of the actively engaged stakeholders, whilst potentially only doing more to inform than to legitimate. Distrust remains, unaided by the presence (perceived or otherwise) of lobbying. The subsequent lack of well-informed debate, focus, and representation persists to undermine democratic legitimation.

The perceived increase in trust afforded by democratic legitimation is perhaps driven by a sense of collective autonomy. Yet this may still override minority dissent. Once more the precautionary principle collapses under partial information about possible hazards. All ways of living contain unconsented-to risks, the change being the incidence and exposure: traditional farming (scarcity, infection) versus modern farming practice (undetected chemicals); traditional local energy (insecurity, high cost) versus global energy (global warming). Neither status quo nor change, nor any combination, inflicts zero risks. To avoid marginalizing minority dissent under the foot of democratic legitimation requires appreciation of such trade-offs in both incidence and exposure. It requires empathy.

Building Trust in Nuclear Power

Trust in nuclear power is defined by the Cassandra Problem: it struggles with misplaced mistrust. An excess of credible sources exists to resolve or at least allay the mis- and disinformation perennially charged against nuclear power. Regardless, these sources are perennially overlooked. This is down, in part, to a lack of trust, regressively hedging bets against an already hedged bet. Large costs due to stringent over-engineering are owed in large parts to heightened perceptions of risk. Why, the sceptic may ask, are such large costs and such stringent engineering required were nuclear power safe and the decisions trustworthy? Sheer complexity of information and competence means educating and informing cannot be the starting point in building trust in nuclear power and its underlying decision-making by states.

The challenge is not to be fully informed but relevantly informed. The solution is thus to step back from educating and instead first develop interest, care, and a sense of ownership. Fostering care towards a solution inspires one to appreciate externalization of risks in both incidence and exposure. Being invested in a problem inspires one to ask the right questions. Both cases apply not just to change, but to the status quo. Though sufficient resources are in place internally, and obligations are well-understood, nuclear power actors (state and otherwise) would do well to concede internal efforts to build trust in nuclear power as the solution, and instead inspire care for the problem in all its dimensions. This includes concerted efforts towards establishing institutional trust.