## 2ac at: framework (2:20)

CLAIMS ABOUT “SHOULD” ARE OVERDETERMINED. IT INDICATES A NEED FOR POLICY ACTION IN PROPOSITION. WE MEET THAT.

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Merely by convention, some teachers and writers have insisted that the word “should” is a necessary and a suﬃcient indicator of a policy proposition. This convention, however, is arbitrary and does not mirror ordinary language usage. The term “should” is one of many terms that can signal a logical requirement for a plan of action.

ERROR REPLICATION – dividing past counterfactual from the present crushes decisionmaking

**Johnson & Sherman ‘90** Marcia K. Johnson is a Sterling Professor of Psychology at Yale University. Steven J. Sherman is Chancellor's Professor of Psychological and Brain Sciences at Indiana University, Bloomington. “Constructing and Reconstructing the Past and the Future in the Present,” in E.T. Higgins & R.M. Sorrentino (Eds) HANDBOOK OF MOTIVATION AND COGNITATION, p. 510

Counterfactuals are thus important in determining affective reactions to actual events and to judgments of responsibility and causality. (Perhaps one reason why we are more angered by betrayals by people we trust than by people we do not trust is that we can so easily imagine trusted people as behaving otherwise.) More than this, counter factual generation is important because it affects the ways in which we think about the past and about the future. Without considering alternatives to reality, we must accept the past as having been inevitable and must believe that the future will be no different from the past. The generation of counterfactuals gives us flexibility in thinking about possible futures and prepares us better for those futures. Along these lines, Taylor and Schneider (1989) have proposed a theory of coping that focuses on the mental simulation of past, future, and hypothetical events. Such event simulation serves problem-solving and emotion-regulating functions for stressors by increasing the perceived validity of the imagined experiences, providing a framework for organizing experience, and providing a mechanism for mustering helpful emotions. In this way, counterfactual generation and the mental simulation of events can help in coping with ongoing, anticipated, or past stressful events.

It is thus clear that after-the-fact counterfactual reasoning affects feelings and judgments about the past, the present, and the future. Before-the-fact reasoning, in the form of expectancies, hopes, and wishes, likewise affects these feelings and judgments, as we have seen.

Limits cause lock-in – Historical analysis of solar energy policy must be able to CHALLENGE existing frameworks of policy formation and their presentist orientation – only direct contestation of existing frames avoids depoliticization

Laird 1

Solar Energy, technology policy and institutional values

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IMPORTANCE OF THE CASE The broad importance of energy to all aspects of life in industrial societies needs little discussion. Energy is part of every major technological activity, from agriculture and manufacturing to transportation and telecommunications. The roots of energy policy stem from the U.S. government's deep involvements in energy technologies, resources, and markets, an involvement that goes back over a century and shows no indication of disappearing.30 The government has been and continues to be involved in the research and planning for future energy resources. The Cold War powerfully influenced federal government R8cD priorities, and energy, especially nuclear energy, technologies figured prominently in those programs.31 The Cold War influence went beyond picking R&C.D priorities. As Stuart W. Leslie has argued, the military security orientation of such programs led technology and science policy in particular directions, emphasizing state-ofthe-art high performance often at the expense of technologies that could have important applications in the civilian economy.32 Such planning for the future seemed an immediate and pressing matter during most of the 1970s. It seems less so today, although there is no reason that it should. Planning for the future should not wait until a crisis strikes. Recent price increases remind us that the current low prices and ample supply of oil will not last indefinitely. A recent survey of studies of recoverable crude oil argues that world oil production is likely to peak somewhere between the years 2007 and 2014, and this conclusion does not assume any political events that will interrupt production.33 Energy could be a front-page issue again before long. Solar energy - or renewable energy, as such sources are usually called now - has the potential to be a major part of the world's energy sources as fossil fuels decline in production. As we will see, advocates have long depicted renewables as the resource that will enable the continuation of industrial civilization after the era of fossil fuels, and a recent spate of books and studies have updated and promoted that conclusion. Private analysts, solar and environmental advocates, government agencies such as the fomier Congressional Office of Technology Assessment, and some industry groups argue vigorously that renewable energy will be the cornerstone of future energy systems.34 Thus, understanding the history and dynamics of solar energy policy is important for understanding the possible changes in a technological system of great importance, now and in the future. Energy policy mostly focuses on existing sources of energy, their accompanying technological ensembles, and the conflicts of their associated regional economic and political interests. For example, the coal industry for years opposed increasing the quotas of imported residual fuel oil, typically used for home heating, into the United States, fearing that such imports would cut into their market share.35 In this type of conflict, well-established economic interests argue over policies that would affect their shares of wealth and income. The technologies and market structures involved are mature, the various interests have close, long-term relations to government agencies, and everyone acts as if they have a clear idea of which policies will advance their economic interests and which ones will not. In contrast, policy debates over solar energy are arguments over the shape of a large future technological system. Such policies necessarily confront immense uncertainties about interests and outcomes. This class of policies affects, in addition to energy, many of the most consequential technological systems of our time, including environmentally clean manufacturing, rapid changes in agriculture wrought by advances in biotechnology, and the linkages and developments in telecommunications and information technologies. Policies that governments adopt now will influence billions of dollars of investment in complex technological systems that will become constitutive parts of our society for years to come. The approach I take to this case thereby provides insights for analyzing some of these other issues. CRITIQUE OF THE POLICY-MAKING PROCESS Those who wish to challenge prevailing public policy must be able to challenge the sets of ideas that underlie the status quo. A democratic technology policy cannot content itself with giving citizens a set of cookie-cutter choices but must instead empower them to contest the underlying judgements and ideas that constitute those choices.36 Woodhouse and Collingridge stress that intelligent democratic processes must take into account the views of diverse partisans, lest unwise policies go unchallenged. Clearly, partisans who cannot challenge institutionalized ideas have very little scope for challenging policies in general. Hajer argues persuasively that substantial changes in policy require the dominance of new discourse coalitions, which entails institutionalizing new ideas.37 Langdon Winner addresses the problem that philosophical and other theoretical analyses seem to have little effect on the technologies that our societies produce, even when some actors in the system recognize that ethical and other normative issues will be greatly affected by the new technologies. Winner concludes that "the trouble is not that we lack good arguments and theories, but rather that modern politics simply does not provide appropriate roles and institutions in which the goal of defining the common good in technology policy is a legitimate project."38 This study takes Winner's critique seriously and asks why various technology policy processes, including those that provide channels through which advocates can participate, do not provide the deliberative institutions and roles that Winner calls for. In constructing technologies we do construct our future, and so our policies for the future, if they are to be democratic, require that citizens be able to challenge the institutionalized ideas that underlie the status quo.

Rigged debates – The framework constraints of 70s energy policy disguised the normative commitments of path choices. The artificial FRAMEWORK constraints empirically worked to RIG DEBATES

Laird 1

Solar Energy, technology policy and institutional values

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J U.S. energy policy makers held remarkably consistent normative and technical ideas (sometimes called values and beliefs) about energy technologies lor over three decades. Both types of ideas shaped the problem frame that officials used in thinking about energy policy. Policy elites ^who thought about the future and about new energy sources conceptualized their problems in terms of economic benefits and national secu' rity. Notions of economic benefits changed over time, from the idea that energy should be chcap to promote maximum economic growth to more refined notions that energy markets ought to be efficient to get optimal economic performance. Nonetheless, both notions point to getting energy at the lowest possible price. Discussions of national security emphasized importing oil from sources that would not be interrupted by political acts. Precisely how policy makers expressed their values and beliefs depended on the contingent circumstances iu which they found themselves, but both sets of dominant ideas made for a problem definition that greatly disadvantaged solar advocates. Because of its high market prices, solar was hardpressed to compete with fossil fuels, and because of its diffuse nature, it did not fit into the existing energy production system the way nuclear power promised to do. Although policy makers began to include an assortment of environmental protection values into their frames, that did little to alter the situation^ ' In addition, normative and technical ideas interacted in complex ways, and the boundary between them was ambiguous and contested.1 For example, consider the apparently empirical notion held by a White House aide about the infeasibility of solar energy as a major energy " source. As cited in the previous chapter, this aide took from a discussion k. with Congressman Mike McCormack what the aide called a "Solar fact" , that getting one percent of rhe country's total energy from solar would require converting ten percent of all houses to solar, and would cost S70-105 billion.2 The aide called this a "fact," the most solidly empirical of appellations. And yet. contained within this alleged fact were a number of normative and questionable empirical assumptions. It assumed empirically that the price of solar systems would not go down much. It also assumed normatively that the United States should remain a very high-consumption society, which in itself contains assumptions about the technological possibilities for energy efficiency and rhe normative desirability of ever-increasing material consumption. Changes m any of these underlying ideas would change rhis apparently simple "fact." At a more aggregate level of policy discussions, the normative and empirical ideas became just as enmeshed. As I showed in Chapter 5, Nixon administration officials regarded high levels of energy consumption as normatively desirable, as indicators of a good and progressive society.' The empirical fact of high energy consumption became a normative standard. Thus the official energy policy frame made sustaining and enlarging that consumption more than just preserving the empirical status quo; growing energy consumption was a valued social goal, nor just an empirical fact. This problem frame stacked the odds against solar energy in normative as well as empirical terms. By this normative standard. the sorts of technological changes rhar would most cnhance solar energy's prospects, particularly large improvements in energy efficiency, look normatively undesirable, whatever their technical feasibility. Conventional energy policy analysts held these intertwined empirical and normative goals deeply, as shown by their bitter attacks on Amory Lovins when he challenged that problem frame, as detailed in Chapter J l or thirty-five years solar advocates presented their technologies that used a variety of renewable energy sources as a way to exploit a vast, inexhaustible, but diffuse, resource. Most of them for most of the period did not think that creating a solar society entailed significant social or political change. Hoyt Hottel, Maria Telkes, Farrington Daniels, and rhc other early solar pioneers of the 1940s and 1950s all soughr to make solar affordable, largely with the assumption rhat it would plug into the existing energy systems, replacing fossil fuels, and enabling socicty and polity to continue functioning as before, with greater security and, perhaps, less pollution. Most of them saw no contradiction in promoting research and development in both solar and nuclcar power, or solar and synthetic fuels, and their only complaint was that nuclcar got an unfairly large portion of federal subsidies. A few of them, such as Daniels and Eugene Ayers, sometimes hinted that a substantial changc in such a major technological system would affect more than how one heated a room or lit a lamp. Bur for most of these advocates, solar energy technology offered just another way of securing tlie status quo against the end of fossil fuels. They sought a new technological system to prevent the social changes that would accompany scarcity. By the 1970s a new type of solar advocate emerged. These activists came to the technology from a part of the environmental movement that believed that the fundamental structures of society and politics - those concerned with industrial and agricultural production, housing, settlemenr patterns, and transportation - were, in some deep sense, flawed.4 These ecological advocates did not simply want any and all solar technologies. They sought technologies that would reinforce and be more compatible with a qualitatively different society and politics, one in which ecological sustainability and local community self-reliance would displace increasing ecological damage, bureaucratic centralization, and anomic. For them, making a drastic change in the energy technology system would l>c akin to making a legislative change for all of society.5 Whether the technologies they sought would have given them the society that they desired is not the point here. Rather, the point is that their social goals and ideas about technology as a social force led them to a very different framing of the energy problem and solar's role in it. Within their problem frame, solar was not only a feasible solution to the energy problem, it was the only desirable solution, rhe only energy technology ensemble that would encourage and strengthen the sorr of society thar they desired. In their frame, issues such as high initial costs and an immature industry were problems to be solved, not barriers to policy. This shared meaning of solar energy technologies bound together ecological advocates as a social group and drove their choices, leading them to champion smaller, more decentralized solar technologies and to reject schemes like the solar-powered satellites." The problem frame that came out of this meaning led them to regard problems like costs as secondary considerations, just the opposite of conventional frames. Top-level policy makers never shared thar framing of the problem or the normative values that went with it. Their public pronouncements and written internal debates show no hint that they ever even considered rhis alternative problem frame and set of values. The presidents and their top aides - in every administration - talked about energy almost exclusively in economic and national security terms, with occasional references to narrowly construed environmental values. Even in rhc Carter administration, no oiK' outside of the Council on Environmental Quality (CEQ) gave any sign that they even thought about some of the more radical alternatives, and they never committed them to paper, suggesting thar such ideas were nor welcome in policy deliberations. These facts suggest a new inrcrprctarion of solar energy policy, particularly its rapid rise and fall in the 1970s. The conventional explanations for energy policy and solar's failure to establish itself within ir do not explain all of the events recounted here. It was not enough that solar was expensive and its future costs were uncertain. That could bosaid of all future energy technologies, including nuclcar energy. And it f. was not enough that the Reagan administration was ideologically hostile to solar energy. Solar advocates began losing their battles for support while President Carter was still 111 officc, and the ideological explanation „ begs the question of why Reagan and his people evinced such hostility to solar energy. The association of solar energy with the ecological wing of the solar movement was a phenomenon of the 1970s, not what one mighr have predicted in the 1950s or 1960s. Perhaps most importantly, the events analyzed here require us to reexamine the pluralist account of solar energy policy. Pluralism must, to explain events adequately, incorporate the importance of ideas, normative and empirical, being institutionalized into official problem framesy SOLAR ADVOCATES' LIMITED INFLUENCE ON POLICY ("Standard notions of American pluralism claim that any organized interest group can influence public policy by mobilizing rhe appropriate polit- / ical resources, such as votes, money, public opinion, and the like. From ^ this perspective one can evaluate a group's influence or effectiveness by ^ the extent to which it gets those policy outcomes that it desires. By thar measure, rhe solar movement, particularly the ecological wing of it, ^ appeared very powerful and effective for a brief period in the late 1970s. '' The question is why it both rose and then fell with such speed. The advocates pushing solar energy did not suddenly lose public support or their ability to argue their case.\* Instead, the values that ecological advocates / asstxiatcd with solar energy and the solar movement were in stark contrast to the conceptualization of the energy policy problem by top-level , decision makers. The official problem frame, and the values thar drove it, did not change, despite the considerable efforts of the solar movement to argue for an alternative. Thus the history of solar energy policy presents anomalies to pluralism. Prior to rhc energy crisis, prominent scientists, engineers, and businessmen advocated for solar energy, beginning after World War II and continuing for over twenty years. Wcll-placcd wirhin the rcchnical, government, and business community, these advocates should have been influential among important policy analysts and makers. On numerous occasions they were able to make their case to legislative and executivebranch officials, including some cabinet secretaries, members of the House and Senate, and, in a few instances, ro the president via his top aides. Many of the advocates spoke with the authority of impeccable technical credentials, exemplified by Farrington Daniels, a veteran of the Manhattan Project, member of the National Academy of Sciences, and president of the American Chemical Society. By the middle 1950s such advocacy became formalized with the creation of the Association for Applied Solar Energy (later becoming the International Solar Energy Society and the American Solar Energy Society), broadening solar's constituency to include business people, bankers, and so on. So why were these groups not more successful? Part of the explanation certainly lies in unfortunate contingent circumstances, such as President Truman's firing Interior Secretary Julius Krug only weeks after Krug had decided to launch a very large solar energy research program. Part of the explanation lies in unpropitious structural circumstances, such as the steady drclinc in energy prices in rhe 1950s and 1960s. And parr of the explanation lies in traditional interest group analysis. Solar energy did not have the same level of business, scientific, military, or congressional support that nuclear power enjoyed. But these factors do not constitute an adequate explanation. To develop a better one 1 have focused on recent policy literature that argues for the importance of ideas, both empirical and normative, in shaping and changing public policy. The case study itself - the history of solar energy policy - demonstrates the importance of ideas, particularly the importance of institutionalizing new problem frames and rhc technical and normative ideas that go with them. Absent institutionalizing new ideas, substantial, sustained changes in policy remain unlikely. Prior to the energy crisis, most energy policy concerned disputes between diffcrcnr fuels and rhc different regions of rhc country thar produced and consumed them. With policy makers accepting a problem frame based in such disputes, solar energy had little to offer cxccpr as a possible alternative in the distant future. However, since analysts and policy makers expected future energy demand to be immense, it seemed that future alternatives needed to produce large quantities of bulk energy, a task for which most people considered nuclear power to be better equipped. Policy advisors did frequently note that the governmenr underfunded solar R&D, especially compared to nuclear power, bur, absent a pressing crisis, nuclear s better fir wirh existing problem frames, along with its greater political resources, kept the subsidies flowing, while solar only got research targeted to auxiliary goals, such as NASA's funding for the development of photovoltaics for use on its satellites. The beginnings of the energy crisis in 1970-1971 coincided with the rise of institutionalized environmental protection values in the form of new legislation and the Environmental Protection Agency to implement that legislation. Those ideas had some effect on energy policy, but not enough to put solar energy at ccntcr stage. Nonetheless, Presidents Nixon and l ord began pouring money into all alternative forms of energy. including solar, quickly increasing solar R&I) budgets, sometimes as a response to Congressional initiatives. That said, the definition of the energy problem, the way it was framed, as discussed at length in earlier chapters, changed little, merely acquiring a sense of urgency from the energy crisis. Solar energy policy in the Carter administration shows the difference between successfully pressuring for a policy and successfully institutionalizing a new set of beliefs and values associated with some technology. Those years marked the time when the solar movement was the closest it ever came to being a mainstream movement, claiming to provide a feasible solution to an urgent problem. At rhc very time that solar technologies were commanding increasing resources, the ecological wing ol the solar movement became increasingly influential in policy circles. The Solar Lobby and related groups began to form a very effective pressure group for solar energy, and they clearly got most of what rhev wanted out of Carter's solar Domestic Policy Review process. But ir is equally clear that high-level policy makers never took the advocates' values or framing of the problem seriously. The advocates' political and social issues were never part of official discourse or debate. Even advocates' particular conceptions of environmental concerns never penetrated discussions in the White House. Policy makers simply never accepted, at least not in writing or in policy, the notion that the environmental problems related to energy suggested a deeper critique of existing energy, social, and political systems.

COUNTERFACTUALS ARE INEVITABLE AND INCREASE NEG GROUND – policy, economics and the law requires counterfactuals and there’s historical and empirical data on our aff

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Based on the temporal frame of these hypothetical resolutions, affirmative and negatives burdens change. For the Vietnam resolution, the affirmative would be bounded by the historical policies followed by the Kennedy, Johnson, and Nixon administrations. Claims could be empirical or probabilistic. Empirical claims would be verifiable in terms of historical data. Probabilistic claims would be speculative in nature. Negative claims could point to "actual" disadvantages stemming from the affirmative policy. Additional negative claims could speculate on policy alternatives. For example, the affirmative could argue the "domino theory" that all countries in southeast Asia would have fallen to the communists if not for US intervention. This claim is an example of a counterfactual conditional. This proposition takes the generic form "If it had been the case that C (or not C), it would have been the case that E (or not E)" (Fearon, 1991, p. 169). Debating historical propositions would entail extensive use of counterfactual logic. Historical analysis inherently involves a level of counterfactual reasoning. Murphy (1969) argues that "counterfactuals were an essential method of historians; these were by their nature (are) unverifiable propositions" (p. 15). The fact that they are unverifiable has led to criticism of counterfactuals as a form of logic. Thus, standards need to be applied in the assessment of counterfactual scenarios. Standards for Debating Historical Propositions? It should be noted that counterfactuals are a common model of logic. Their use transcends both specialized and general argumentative fields. Counterfactuals are commonly used in a variety of scholarly disciplines. Fearon (1991) states that "scholars in comparative politics and international relations routinely evaluate causal hypotheses by discussing or simply referring to counterfactual cases in which a hypothesized causal factor is supposed to have been absent" (p. 169). Conterfactual reasoning is common in legal argumentation. Counterfactual thinking is related to plaintiff compensation. In this context, "jurors are presented alternative event scenarios by the opposing parties" (Bothwell & Duhon, 1994, p. 705). Research indicates that there was a significant relationship between counterfactual thinking and plaintiff compensation (Miller & McFarland, 1986; Bothwell & Duhon, 1994). Counterfactuals are common to the study of economics. Murphy (1969) argues: that we cannot judge any economic policy without counterfactuals, we cannot estimate consumer surplus, we cannot calculate the effects of a tax or a subsidy, the removal of international trade barriers, indeed we cannot judge any recommendation to change the status-quo unless we consider the alternative state of affairs. (p. 18) Counterfactuals are also common in generalized fields of argumentation. Landman and Manis (1992) found "that personally relevant counterfactual thought is commonly engaged in by people outside the laboratory" (p. 476). Roese (1994) argues that "the ability to imagine alternative, or counterfactual, versions of actual events appears to be a pervasive, perhaps even essential, feature of human consciousness" (p. 805). Given the widespread use of counterfactuals, evaluation of counterfactuals can be extrapolated from existing standards. Meyer and Conrad (1957) argue that even though "counterfactuals cannot be directly tested, it is possible to consider the statement within a valid deductive system, independently of the acknowledged falsity of the conditional clause" (p. 540). Such a derivation is clearly an intuitive one and is not a matter of formal logic (Murphy, 1969).

## Cap and Trade CP

Counterfactuals that isolate to economic or reductionist ideology fail

Laird 1

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WEAKNESSES OF CONVENTIONAL ANALYSES

Despite their surface appeal, conventional analyses based on interest groups, simple notions of ideology, or rational economic calculations all fail to explain adequately the detailed chain of events in solar energy policy. A simple pluralistic look at the interest groups that supported solar energy could lead one to believe that it would have been generously supported and a high priority for policy makers, contrary to the actual history of solar policy. In addition to solar advocacy groups themselves, solar has gotten the enthusiastic backing of well-known environmental groups since the 1970s. Particularly vexing for interest group theory is that solar advocates' political resources stayed roughly constant during the time that solar policy was changing radically. To respond that the groups gained and then lost their influence in that short period of time (roughly 1974 to 1980) merely restates the question to be answered.26 Solar has also enjoyed the strong support of the general public. Indeed, for decades public opinion polls have shown solar energy and energy efficiency to be the public's top choice for the energy technologies in which the government should invest for the future.27 These polls, which political leaders allegedly watch so closely, clearly do not translate into public policy in any simple way.

A simple ideological explanation also fails to explain these outcomes. It is not enough to say, for instance, that President Reagan was opposed to solar on ideological grounds. Support for solar energy was declining sharply in top policy circles while President Carter was still in office. Moreover, the simple ideological explanation begs the more important question: Why were the values associated with solar technologies so anathema to conservatives? In earlier decades solar technologies had been championed by conservative advocates, and understanding how solar came to have particular values imputed to it requires a much longer and deeper historical perspective.

Rational economic calculation also fails to explain the government's actions. Policy makers faced great uncertainty when trying to decide about future energy options. We must base our explanations of their actions in terms of what knowledge was available to them at the time that they made their decisions."8 In the early decades after World War II, solar's economic and technical feasibility appeared no more uncertain than other energy options into which the government was willing to invest massive resources, most especially nuclear power. Moreover, the government changed its policies in ways that were not justified by shortterm fluctuations in fuel - especially oil - prices, as will be detailed in later chapters. For example, from 1980 to 1982, government solar research and development (R8cD) funding fell drastically while the price of oil rose or declined only slightly."9 My criticisms of simple ideological, interest-based, and rational economic calculation frameworks for understanding solar energy policy suggest that a full analysis needs a different approach, though, to be sure, those traditional variables will crop up repeatedly in my account.

The analysis here, by emphasizing the interaction of ideas with interests and institutions, will give us a better understanding of the reasons for the volatile fate of solar policy and how it fits into energy policy more generally. This analysis will also suggest how those who favor solar energy can better go about seeking policy support for it.

## 2ac at: Kritik

#### Recognizing contradictory ideas in the context of technological determinism improves communication and discussion to break down technoscience

Rosales 2009

Janna Metcalfe, thesis submitted in conformity with the requirements for the degree of Doctor of Philosophy Department and Centre for the Study of Religion University of Toronto, “WHEN THE “TWILIGHT OF JUSTICE” MEETS THE “DAWN OF NANOTECHNOLOGY”: A CRITIQUE OF TRANSHUMANISM AND THE TECHNOLOGICAL IMPERATIVE IN THE LIGHT OF GEORGE GRANT’S MORAL PHILOSOPHY,” https://exams.library.utoronto.ca/bitstream/1807/17824/6/Rosales\_Janna\_M\_200906\_PhD\_thesis.pdf

For those who cannot give up that transcendental framework, the contradiction between the good and the triumph of the will lives itself out in the kinds of visceral “nerveracking situations of justice” (Grant, 1984/1998, pp. 440-441) from which we make sense of being, whether that entails taking a stance on reproductive ethics, euthanasia, nuclear energy, cybernetics, eugenics, germ-line genetic engineering, or molecular manufacturing. While one may be tempted to seek definitive resolutions to ethical dilemmas or to gloss over evidence of contradictions when deliberating over the issues, the efforts of both Grant and Simone Weil demonstrate that trying to pay due credit to contradictory ideas is not necessarily “evidence of a discreditable intellectual weakness” (Forbes, 2007, p. 201). Sometimes reality shows us incompatible truths that no amount of intellectual refinement or methodical reasoning can dispel; in this case the point is not to skim over or hide the inconsistencies, but rather, in the true spirit of a dialectical approach, to identify both complementarity and irreducible differences between ideas. To recognize contradictory ideas, as Weil (1956) insists, is to “experience the fact that we are not All” (p. 411). This too is an experience with otherness, one that is better apprehended through love rather than a logic that simply seeks consistency. As I stated in chapter 1, Grant considered the dialectical method to be grounded in eros, in that to know a thing is also to love it. I think nanoethics can benefit from this interpretation of the dialectical approach because currently the terms of engagement are set up more as a struggle between opponents, where there are debates to be won and lost, whether between Drexler and Smalley, Kurzweil and Joy, Hughes and Kass, transhumanists and bioconservatives. Too much emphasis on out-arguing one’s opponent and refuting contradictions closes down on channels of communication and excludes more constructive ways to frame the discussion. As a case in point, Langdon Winner (1986) observes that our debates about technology, society, and the environment often take a narrow view of what constitutes an acceptable discussion, usually drawing on concepts of efficiency and risk to define the parameters (p. x). What Grant does is bring challenging concepts to the table as a way to lift us out of an exclusively technoscientific mindset.

We solve apocalyptic predictions – that’s our scenario planning impact

Energy paths can’t be explained by pure economics

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Solar Energy, technology policy and institutional values

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In light of the conferences, technical and popular publications, the creation of new institutions outside of government, and the intermittent /4 / interest of senior government officials, why was there so little official action on solar energy before the 1970s? The customary explanations of if »M 0,; Hf' short­term policies or markets do not hold up to closer scrutiny. Clearly, I due to the relatively high cost of solar energy from the 1940s through the 1960s and the declining prices of fossil fuels during the same period, the research, development, and diffusion of solar technologies would have required the support of some institution Willing and able to take a very View of the future needs for energy resources. While one often hears the glib complaint that governments never take long­term perspectives on policy issues, in fact such institutions and leadership were very much in existence in the decades after World War II. These long» term investments showed up in Republican and Democratic administra tions alike, such as Eisenhower’s initiative on the Interstate Highway System, Kennedy’s support of a greatly expanded space program, and ]ohns0n’s Great Society programs.1 Although always constrained by budgets, all of these administrations invested in future-oriented projects, ones that required a certain amount of vision and commitment to the nation’s development. Solar technologies could have been, but were not, included among them.

Another standard reason given to explain the failure of solar energy to develop in these years focuses on the lack of any pressing short-term need for it. Although conditions Changed at the end of the johnson administration, abundance and decreasing prices in most parts of the energy market characterized the postwar period to 1968. This situation, framed by conventional thinking of the day, left solar without a problem to solve and made solar technologies too expensive in comparison to conventional technologies. The economics of solar Certainly made it very difñcult to develop a consumer market composed mainly of individuals putting solar devices on their homes, or of industrial markets in transportation or manufacturing.2

But this explanation fails to account for two historical realities. First, at least since the 1880s, U.S. energy markets have been in part political markets. Besides the traditional set of atomized small buyers and sellers Who constitute the microeconomists’ conception of a market, the production and supply systems that deliver energy to consumers have included governments at the national and state levels, large utility monopolies, large supply companies, and a variety of financial institutions. All of these institutions and their interests influence the prices that consumers see and the energy choices from which they may pick. Second, and perhaps more importantly, energy technologies could also be developed quite independent of consumer demand. Public policy makers in fact made immense investments in energy technologies in the United States and elsewhere and developed them extensively, all Without any real short-term economic incentives. In the most striking case, nuclear technology’s advocates succeeded in politically constructing it as the technology of the future.3

As discussed in Chapter 1, in the 1940s energy specialists had generally equated nuclear and solar energy as long-terrn alternatives to fossil fuels, regarding each as expensive but promising future energy technologies and calling for research and development in them. It Was in the Eisenhower administration that nuclear energy jumped into the foreground of energy policy, leaving solar behind. Advocates of nuclear energy managed to lay claim to the proximate future and billions of R&D dollars, While policy makers continued to relegate solar energy to the distant future, if they considered it at all. The rise of nuclear power is a complex story that involves scientists in and out of government promoting it, along with a special congressional committee, some officials of the fledgling Atomic Energy Commission (AEC), and a host of popular Writers.4 Even though some top officials remained skeptical of the need for a large government nuclear energy program, it continued growing in size. The “Atoms for Peace” speech did not turn around nuclear policy in one stroke, hut it did articulate publicly a policy frame in which nuclear power could play a significant role. In this speech civilian nuclear power became not merely the positive side to a troubling technology but rather part of an international process of spreading prosperity in a Way that would lessen the chances of another World War.5 EisenhoWer’s speech gave the idea of civilian uses of nuclear energy an enormous boost, and coverage of peaceful nuclear technology expanded into the popular media dramatically with almost entirely positive assessments.6

The rapid development and expansion of policies for nuclear technology, with its many technical and economic uncertainties, had nothing to do with solving short-term problems of energy supply. Indeed, solar energy had the support of some of the same people who supported nuclear energy development. For instance, Representative Craig Hosmer (R-California), who had introduced the earliest bills to support solar developments in the 1957~196O period, strongly supported Project Plowshare in the 1960s, a proposal to use nuclear explosives to dig canals, harbors, and the like.7 Yet solar research never received anything approaching the resources given to nuclear. Why Was nuclear so Successful and solar not? The failure of solar energy to attract more substantial policy support must lie beyond any scientific or objective assessment of its potential. Instead, the contrasting histories of nuclear and solar energy in the 1950s and 1960s demonstrate the symbolic and valuative components of policy making, as well as their interaction With public and private institutions that led in the nuclear case to massive investment in a technology. Despite a small constituency, interested bureaucrats, and a few sympathetic representatives and senators, the advocates of solar energy never made the pluralist penetration of policy making. As the Truman through the Johnson administrations tried to solve energy problems, three particular features of the energy problem definition contributed to the inability of solar advocates to make much headway in getting government support for solar energy. These were the emphasis on economic growth and free-market mechanisms, energy’s low priority for high-level policy makers, and the belief in the need for exponentially increasing supplies of bulk energy. In addition, solar energy suffered from the fragmentation of energy policy, which, coupled with the reigning problem definition, made it difficult for solar energy advocates to find an institutional champion Within government

#### Solar power necessitates decentralization and breaking up of energy monopolies

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(Hermann, Fmr. Asst. Prof. of Economics @ Technical Univ. of Stuttgart, Member of German Parliament, General Chairman of the World Council for Renewable Energy, President of EUROSOLAR, The Solar Economy: Renewable Energy for a Sustainable Global Future, Pg. 87-89)

The representatives of the fossil energy industry have been written out of the script for the renewable energy story, or allotted at most a secondary role; the market for renewable energy will no longer have a niche for conventional sources at least, not with turnover at high as it is at present. Conventional energy companies are bound to old fossil fuel structures by the sheer scale of their investments; their business models, based on large-scale industrial plant, will prove their own undoing in the transition to renewable energy. A solar resource base makes it impossible to retain or ever re-create the power structure that has hitherto prevailed in the energy sector. The extent to which industrial concentration and monopolization is inevitable with fossil fuels and avoidable or impossible with solar energy is compared in Table 2.2 The short supply chains for renewable energy sources will end the pressure to globalize that comes from the fossil resource base. The dense interconnections between individual energy companies and between energy companies and other industries that result from fossil fuel supply chains will no longer be necessary. Shorter renewable energy supply chains also make it impossible to dominate entire economies. Renewable energy will liberate society from fossil fuel dependency and from the webs spun by the spiders of the fossil economy.

#### Fossil fuel energy monopolies depoliticize society

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Fossil-fuelled power corporations present more than just an acute environmental danger. Their control of electricity supplies and their influence on the mineral resources industry, plus the support of the large investment banks, makes them the most powerful element in the economy as a whole**.** They hold all the cards they need to construct a comprehensive commodity supply and media empire. They are closely bound up with the fossil fuel extraction and processing industry, and by extension with the chemicals industry. This latter has not only ensured that agriculture remains dependent on its supplies of fertilizers and pesticides. It is also harnessing biotechnol\*ogy and patent law to massively deepen this dependency, and it has extensive links with the food-processing industry. The power corporations have links to the waste management indus\*try, and are currently seeking to bring the municipal water utilities under their control. They are attempting to erect toll\*gates on information and media networks. They are systematically taking over all the former public sector supply networks, but with no trace of public accountability or control. They are wreaking havoc on the environment, democracy and the free market**.**  Even if this is not their explicit intention, the power corpo\*rations are well on the way to becoming a uniquely powerful cartel. To this end they have no need of grand strategic visions. They merely have to follow, step for step, the economic logic of their existing supply chains. In this respect, their behaviour is as 'normal' as that of other firms; it is simply that the oppor\*tunities open to them and the resultant consequences are comprehensive and crushing. It is an unparalleled failure of political institutions that they not only do not oppose this development, but are even seeking to advance it.

## 2ac at: objectivism

#### Their internal link is terrible causality and empirically denied

**Amy 7,** professor of Politics at Mount Holyoke College, (Douglas, “More Government Does Not Mean Less Freedom,” Government is Good, <http://governmentisgood.com/articles.php?aid=18&print=1>)

The minimal-government crowd uses this “more government = less freedom” formula to make all sorts of alarmist claims. For example, **some suggest that every increase in government power is a step down the road to totalitarianism and repression.** This is a favorite argument of many conservatives and they use it to oppose even small and seemingly reasonable increases in government programs or regulations. For example, they argue is that if we allow the government to insist on background checks to buy guns, this will lead to mandatory gun registration, which will eventually lead to confiscation of guns, and this will put the government in a position to repress a disarmed and helpless citizenry. Or they suggest that legalizing assisted-suicide for terminally ill patients will only set the stage for government euthanasia programs aimed at the handicapped and others. Or they fear that mandating non-smoking areas is merely a step toward outlawing cigarettes altogether. Or they contend that if we allow environmental regulations to restrict how an owner deals with wetlands on their property, we are going down a road in which property rights will eventually be meaningless because the state will control all property. This seems to be the view of the conservative judge Janice Rogers – one of George W. Bush’s appointees to the federal judiciary. In one of her opinions, she railed against local restrictions on the rights of real estate developers in California and concluded that “Private property, already an endangered species in California, is now entirely extinct in San Francisco."6

In his book, Defending Government, Max Nieman has labeled this argument the “Big Brother Road to Dictatorship.” It suggests that the expansion of government powers in the U.S. during the last 75 years has been inevitably leading us down the path toward totalitarianism. But as he has noted, **there is really no valid evidence for this theory. If we look at how modern dictatorships have come about, they have not been the product of gradually increasing social programs and regulations over property and business.** As Neiman explains:

It is common among conservative critics of public sector activism to characterize government growth in the arena of social welfare, environment, consumer and worker protection, and income security as steps toward the loss of liberty and even totalitarianism. Many critics of the emergence of the modern social welfare state … have tried to convey the sense that the road to totalitarian hell is paved with the good intentions of the social democratic program. …There is no record, however, of any oppressive regime having taken power by advancing on the social welfare front.Lenin and Stalin, Mussolini, Mao Tse-tung, Fidel Castro, and Chile’s Pinochet did not consolidate power by gradually increasing social welfare programs, taxes, and regulation of the environment or workplace. **Rather, these assaults on personal freedom and democratic governance involved limitation on civil rights and political rights, the legitimization of oppression and discrimination against disfavored or unpopular groups, and the centralization and expansion of military and policy forces. Hitler did not become the supreme ruler of the Nazi state by first taking over the health department**.7

#### The kritik double turns itself – prioritizing individual liberties creates authoritarianism and tyranny

Robert **Locke**, writer for the American Conservative, March 14, **2005**, Marxism of the Right

**Empirically, most people don’t actually want absolute freedom, which is why democracies don’t elect libertarian governments**. Irony of ironies, **people don’t choose** absolute **freedom**. But this refutes libertarianism by its own premise, as libertarianism defines the good as the freely chosen, yet people do not choose it. Paradoxically, **people exercise their freedom not to be libertarians**. The political corollary of this is that since no electorate will support libertarianism, **a libertarian government could never be achieved democratically but would have to be imposed by some kind of authoritarian state, which** rather **puts the lie to libertarians’ claim that under any other philosophy, busybodies** who claim to know what’s best for other people **impose their values on the rest of us. Libertarianism itself** is based on the conviction that it is the one true political philosophy and all others are false. It **entails imposing a certain kind of society**, with all its attendant pluses and minuses, **which the inhabitants thereof will not be free to opt out of** except by leaving.