

Legitimation in Decision Making

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Legitimation in Decision Making¹

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This paper is concerned with legitimation. This is one of several areas associated with the decision sciences that has benefited from Howard Kunreuther's work, especially policies and strategies related to societal concerns in coping with low-probability, high-consequence events. A short summary of the descriptive theory of legitimation could be stated as follows: predictable effects on decision making result from the credible anticipation that one will be held accountable for the consequences of one's decisions and the process that led to them. The parallel prescriptive theory of legitimation supports the notion that it is both sensible and desirable to subject some aspects of decision making to *ex post* review, both to justify outcomes of choice and to provide affected stakeholders with *prima facie* assurance that their interests have been considered. In this essay, I examine a few of the underlying strands of research that have examined descriptive and prescriptive theories of legitimation and then briefly note the challenges of legitimating policies related to climate change. I conclude with a brief comment on both the substance and style of Howard Kunreuther's contributions to research on legitimation.

Legitimation and Decision Making

For a single decision maker, Figure 1 shows the ingredients of choice under uncertainty following Kleindorfer, Kunreuther and Schoemaker (1993)—hereafter abbreviated as KKS. Legitimation is the stage following the choice of alternatives. However, the process of legitimation may begin before outcomes are fully observed, as in the current climate change debate, which I discuss in more detail below. Legitimation refers to the process by which choices are explained *ex post*, making sense of these both to the decision maker as well as to other stakeholders. The anticipation of required legitimation *ex post* can be expected to have a significant effect on choice itself, as well as on the espoused theories used for belief and value formation. The basic argument is that legitimation leads us to use “accepted models” or particular data that are in common use for particular types of decisions. In this way, if a negative outcome occurs, one can take shelter in the company of fellow travelers. The idea of relying on friends and neighbors for heuristic rules of choice (Kunreuther et al., 1978) was a precursor of our broader analysis of legitimation in KKS. Moreover, notions of fairness and justifiability based on “what others are observed as giving or getting” is fundamental to everything from tax systems to labor agreements to executive compensation.

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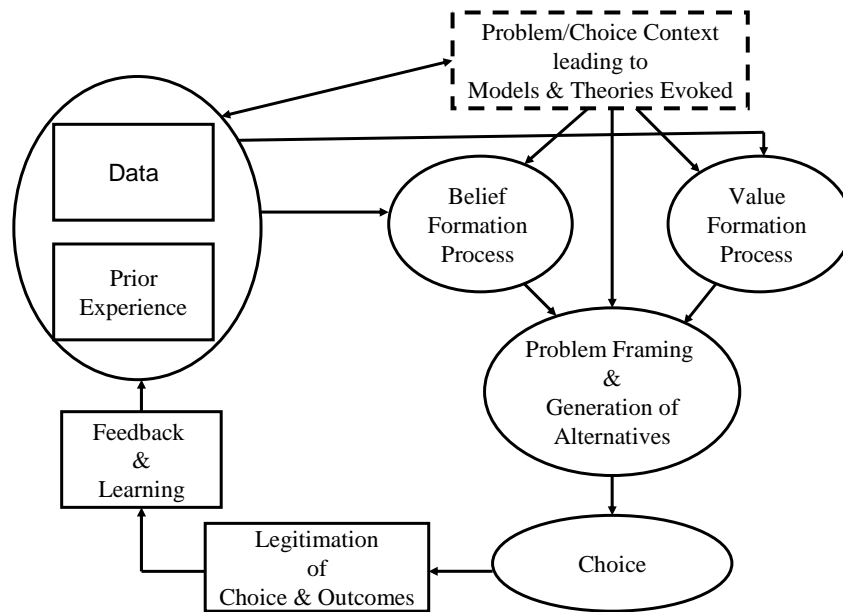


Figure 1: Beliefs, Values, Choice and Legitimation

An interesting example of the consequences of legitimation is evident in Howard Kunreuther's extensive work on siting of hazardous facilities (e.g., Kunreuther and Linnerooth, 1983; Easterling and Kunreuther, 1995). This research found that technical decision analytic models of experts were often eschewed in favor of more qualitative and participative models.³ While these participative processes might rely on technical support in the background, the foreground was entirely devoted to understanding the concerns of affected parties in terms that were meaningful to these parties. In one sense, such participation reflects an attempt to counter the mistrust of technocrats noted by anthropologists like Michael Thompson (1983) and sociologists like Ulrich Beck (1992). This mistrust is directly connected to the legitimation process in post-modernist philosophy, e.g. in the extensive discussion of hermeneutics by the German philosopher Jürgen Habermas (1973). Indeed, the central question treated by Habermas and his colleagues in the Frankfurt School of critical social theory is the inherent tension between truth-seeking and open access to existing institutions that have the power to interpret knowledge within a particular domain.⁴ In the siting of hazardous facilities, the use of qualitative and participative processes rather than purely technical approaches represents the anticipated difficulty of justifying experts'

³ Kunreuther (1983, p. 216-217) provides an interesting example of this in the context of the California LNG terminal siting problem in the early 1980s. He quotes a senior official as being very clear that the commissioners of the California Coastal Commission were not interested in a detailed analysis of the problem "because they did not want to be explicit about their reasons for making their decisions".

⁴ The same point is made in the history of science by Thomas Kuhn (1996). For Kuhn the "primacy of paradigms" was not just a statement about the stability of existing intellectual frameworks in particular fields of knowledge, but also about the stakes in maintaining allegiance to the status quo of individual scientists who control access to the processes and institutions that validate claims and methods of inquiry in their respective fields.

estimates of risk to non-expert stakeholders.⁵ When these stakeholders are powerful, as the local community is in many countries in hazardous facility siting problems, then acceptance and understanding in their terms becomes more important than compliance with some objective benchmark of risk. Nonetheless, one can detect here the tension in legitimation between playing to the crowd, in a manner that may resonate with unsophisticated or even selfish motives, and providing well-intentioned guidance based on solid science, that may be more difficult for stakeholders to swallow. In particular, the usual distinctions between descriptive, normative and prescriptive theory (e.g., as described in KKS) apply just as much to legitimation as to any other phase of decision making.

Economic regulation is another salient example where legitimation plays a key role. Such regulation is typically implemented to protect consumers or third parties from monopoly exploitation or from risks they cannot reasonably be expected to understand or control in sectors such as banking, insurance, pharmaceuticals and energy. Many books and research papers have been written on descriptive and prescriptive theories of regulation.⁶ In comparative assessments of regulation, one often sees words like “transparency”, “independence” and “openness” evoked as important ingredients for establishing the credibility of a regulatory agency’s approach. The underlying theme is that openness to experts from all sides of an argument will eventually produce better data, better models and better decisions than closed proceedings, especially if these are embedded within a broader bureaucracy or ministry of government that buffers accountability. The conditions under which such openness can be expected to lead to improved decision making is an interesting question which interacts with other element of the problem (such as problem complexity, availability of feedback, level of knowledge of stakeholders). Generally, however, the pursuit of this openness, which Habermas calls “communicative rationality”, is viewed by regulatory theorists (but not necessarily by regulators) as the primary means of avoiding lock-in to provincialism, cronyism and bad theory.

Individual Decision Making and Legitimation

Let me revisit the experiments on individual decision making of Curley, Yates and Abrams (1986) from the perspective of legitimation theory. Curley et al. used the Ellsberg Paradox setting (Ellsberg, 1961) for their experiments, but they added the following wrinkle. Subjects assigned monetary values to the various choices in the Ellsberg Paradox setup (where a higher monetary value for one choice over another was interpreted as preferring that choice). After they made a number of such monetary value assignments, some of these choices were selected at random and “played”, where “played” meant that they were actually given their monetary value or the corresponding Ellsberg (ambiguous = A or non-ambiguous = N) lottery. They would therefore see the results of their choice between the A or N lotteries. In addition, for some

⁵ The disparity of risk estimates between experts and non-experts has been convincingly demonstrated over the years by Paul Slovic (1987). However, even knowing that there are differences between these estimates is usually not enough to “fix the problem” since different demographic groups may have different drivers of their risk perceptions which lead to controversy among these groups both on the perceptual field and over the resulting best alternatives. This is in addition to any differences these groups may have in their value structures, as examined by Keeney (1992).

⁶ The *Journal of Regulatory Economics* provides an excellent entrée to the economic issues of regulation, which will be my major focus here.

experimental treatments, subjects in the ‘high knowledge’ condition were told that they would be shown (after their choice was made) the actual number of black and yellow balls (the ambiguous state of the world in the Ellsberg setup). Subjects in the ‘low knowledge’ condition would not know the number, but would just be shown the actual outcome of drawing a ball from the urn. Finally, in some instances the actual draw of the urn (and their choice of bets) would be publicly revealed in front of their group of fellow subjects, while in other instances the outcomes would only be privately revealed to each individual. However, in both treatments, the group was never informed of the actual number of black and yellow balls, even when the individual was.

Curley et al. recorded the differences that subjects were prepared to pay to avoid ambiguity (this ambiguity premium” was just the difference between what they were prepared to pay for the non-ambiguous choices under the Ellsberg setup relative to the ambiguous choices). The results of the experiment were that there was no significant difference between the ‘high’ and ‘low’ individual knowledge states (i.e., no significant differences if the subject was informed of the number of black and yellow balls after choices had been made). However, there were significant differences in the ambiguity premium between the ‘private’ and ‘public’ conditions of group observability. When the group could observe the playing of the ambiguous lottery, and this was known in advance, subjects were prepared to pay significantly more to avoid the ambiguous outcome. One explanation for this, based on legitimation theory, is that when subjects anticipate the need to be able to explain (or even reveal) to others the amount of money they had been willing to pay for these lotteries, ambiguity becomes even more undesirable.

In a related paper, Heath and Tversky (1991) examined differences in choice between risks that were based on “objective probabilities” and those based on subjective events, such as the outcome of sporting events or elections. They found that those who thought of themselves as experts in a field preferred to bet on their judgments rather than on equivalent chance events (i.e., chance events that had the same probability of a positive outcome as what the expert predicted for the judgment event in question), while the opposite was true of those subjects who viewed themselves as lacking expertise in a particular area. One explanation for this phenomenon is that those who thought of themselves as “experts” understood that they would be able to justify their choices better, both when the outcomes of these choices were positive as well as negative.

The area of social norms has obvious connections to legitimation in decision making. As explored in KKS and in the vast preceding work in sociology (e.g., Rokeach, 1973), social norms serve as jointly recognized reference points which define and reinforce acceptable behavior among members of a group (Fehr and Gächter, 2000; Bicchieri, 2006). As such, actions, and or outcomes, that an actor anticipates will be observed by group members could intuitively be affected by any social norms held by the group members for that decision context even when no one in the observing group can formally sanction non-compliance.

This line of thinking that has been subject to experimental work over the years. For example, Simonson and Nye (1992) designed several studies to determine whether accountability (‘anticipation of required justification’) would affect decision making, and they found this to be so. Their studies also show that decision biases may not be reduced by accountability alone, because it is not performance that subjects seek under conditions of accountability but rather the favorable opinion of those able to observe their behavior. In a similar vein, Haidt (2001) shows

in his experimental work that observability alone (the existence of an “audience”) can affect decision processes, though the extensive antecedent work of Cottrell (1968) underscores the findings that anticipation of evaluation has rather different effects on behavior than passive observability per se. This body of research suggests that observability of behavior, together with expected valuation and social norms, act together to alter reasoning processes and decision outcomes. Environmental cues that draw attention to norms and to norm compliance by others in the reference group are a further factor affecting behavior. For example, Krupka and Weber (2008), extending the earlier work by Cialdini et al. (1990), demonstrate experimentally that environmental cues that draw attention to a social norm have an important reinforcing effect on norm compliance.

Individual psychology, following Freud and the development of self-knowledge, has also addressed the issue of legitimation. For example, Freud (1925) developed the concept of “ego-ideal” which was a child’s conception of what its parents consider to be morally appropriate and an important element for the child’s developed super-ego. In the psychology of decision making, this same idea of evoked ideals is captured by the set of role models, some actual and some constructed, that are triggered in particular contexts, and that act to condition our decisions. Gergen (1972) and Elster (1986) have explored this theme in describing the process by which an individual may show up variously in the guise of alternative or multiple selves that are evoked by different problem contexts or environmental cues. We are at one and the same time our mother’s child, parent, grandparent, spouse, professor, ordinary citizen, and so on, and each of these roles may be played off against a different background of learned behaviors and social norms that condition us in these respective roles and provide legitimation for our actions. When we undertake an action, and especially when it is observed by others, certain roles and role models are evoked in us. An intriguing examination of this nexus between action, reflection and conditioning role models to legitimate choice is the theory of “possible selves” developed by Markus and Nurius (1986). They advance a cognitive framework that envisages each individual as having not just a set of “now selves” but also a set of “future possible selves”, which collectively serve to embody the individual’s ambitions, concerns and legitimation reference points in much the same way as Freud’s psychoanalytic ego-ideal. Which of these possible selves is evoked as the image of desirable behavior/selves and undesirable behavior/selves is both a subject of interesting content for evaluation of an individual’s decisions as well as a focus for psychotherapeutic intervention to assure that these evoked selves are aligned with a healthy working self, and not autonomous psychic entities that arise unconsciously in ways that give rise to self-damaging behavior and neurosis.⁷

The point of all these studies is that the nature of anticipated legitimation can have significant effects on the decision process and outcomes of choice.

⁷ In the area of decision processes, Simon (1967) proposes a similar idea of constraining future possible selves by current cognitive and emotional commitments. This was later brilliantly elaborated for the area of self-control and addiction by Schelling (2006).

Climate Change and Sustainability and Legitimation

Let me now turn to the application of these ideas to a topic likely to be center stage in the policy and research agenda for some time to come, namely climate change and sustainability. The recent exchange of views among economists triggered by the Stern Report (Stern, 2008) suggests some of the characteristics of the problems associated with this issue. These include huge uncertainty, large time lags between actions and effects, and massive complexities and knowledge gaps in the underlying science.⁸ For legitimation, these characteristics imply heavy weather for both validation of policy actions as well as individual choice. Let me note a few of these.

Aggregate valuation of alternative options: As the problems here are very long term in nature, and beyond the temporal reach of market-based instruments, political choices will be fundamental in determining policies. The whole edifice of science in support of political choices is the center piece of hermeneutics and legitimation. In this sense, climate change policy is the paradigmatic example of the legitimation crisis formulated by Habermas (1973).

Individual valuation of alternative options: In participating in the democratic processes underlying political choices, how should the views of citizens be shaped, informed and represented in the political process? In terms of shaping or informing them, the fundamental legitimation issue of “who should guard the guardians?” (Leonid Hurwicz, 2008) arises. In terms of representing values and preferences of citizens in the political process, direct methods such as contingent valuation are likely to be impractical because of the very characteristics (uncertainty, complexity and large delays between action and outcome) of the climate change problem (Fischhoff, 1991). How to shape, inform and represent individual preferences in this context remains a largely open question.⁹

Intergenerational equity, irreversibility and intertemporal choice: Legitimation problems are particularly difficult in this context because it is impossible to bring all the affected parties into the decision context at the time policy choices are made. The special problems of intergenerational equity and irreversibility have been at the heart of the climate change debate, just as they were for radioactive waste (Easterling & Kunreuther, 1995). More generally, the “precautionary principle” and the whole sustainability debate itself has been focused on the central question of what it actually means for present generations to live in such a manner as not to disadvantage future generations.

Low-probability, High-consequence events: Added to the above are the continuing perplexities of risk management and mitigation associated with the low-probability, very high-consequence outcomes of climate change. Howard Kunreuther’s primary contributions to the social sciences have been in this area, and several other papers in this conference examine these. Suffice it to

⁸ See Munasinghe (2007) for a detailed discussion of these characteristics in the climate change and sustainability debate, as well as the manner in which these have been digested by the Intergovernmental Panel on Climate Change, for which Dr. Munasinghe has served as Vice Chair for a number of years.

⁹ The general problem of prescriptive approaches to informing individual beliefs and values has been the subject of extensive study by Fischhoff (2007). In the area of policies that interact with individual choice, the subject of libertarian paternalism should also be noted, as developed in Thaler and Sunstein (2003).

say that from a legitimation perspective, the lack of easily interpretable feedback on climate change policies contributes to the ease of misinterpretation and denial of the noisy signals that arise from climate change. These need to be interpreted by panels of scientists, run through horrendously complicated models and qualified in ways that make the results nearly incomprehensible to all but a limited number of affected parties.

What guidance can research on legitimation theory provide us to inform this discussion? According to Habermas, we should engage in open discourse and attempt to promote communicative rationality, rather than holing up in our disciplines and attempting to legitimate the goodness of one or another policy by decorating our ideas with the plumage of intellectual certifications. At first glance, Habermas' call for a more democratic approach would appear to be an impossible recipe to follow, given the complexities of this problem. However, on reflection, are the ideas so difficult that individual citizens cannot be brought into the discussion? Can they not be made aware of the stakes in meaningful terms? Of the trade-offs for themselves and their grandchildren? Rather than speaking in terms of \$800 billion of NPV of the global GDP versus \$4 trillion (the types of economic numbers attached to the Stern report for various alternatives), could not the consequences of alternatives be expressed in terms that are meaningful to an individual in various parts of the world? I think the answer to these questions is most definitely yes. Moreover, given the magnitude of the stakes in this problem, it seems to me critical to bring in the citizens of the planet into a meaningful and urgent debate of these policies, which have the potential to significantly affect their lives and those of many generations to come.

Research on legitimation provides some guidance as to ways in which decision processes will be affected by alternative approaches to accountability, justification and observability. However, the characteristics of the climate change problem pose a particularly difficult problem with respect to legitimation. Truth and validation of theories, and the associated recommendations derived from them, are ultimately based on well-intentioned inquiry. However, from epistemology and the history of the philosophy of science we know that models of such inquiry, and the guarantors of truth in these models, take many forms. They range from simple consensus among affected parties, to deductive coherence, to correspondence with corroborative evidence, to survival against explicit rebuttal challenges.¹⁰ In the realm of climate change policy, we urgently need to recognize these alternative modes of inquiry, open them to public scrutiny and expose the fundamental limits of our knowledge as we take action.¹¹

Conclusion

As Howard Kunreuther has underlined in so many insightful ways, a broad search for optimal solutions seems not to be the first impulse of human decision makers. Our impulse seems rather

¹⁰ For a discussion and application of alternative models of inquiry in public policy, based on C. Wes Churchman's earlier work, see Mitroff and Kilmann (1978).

¹¹ Edward Singer (1923, p. 3) remarked in his essay "Esthetic and the Rational Ideal" that while there are always undefined concepts in any field of inquiry, "beauty" should not be one of those undefined concepts in the area of esthetics. In the same sense, in the area of sustainability, dedicated as it is to intergenerational equity, bringing the current generation fully into the debate on appropriate policies would seem to be a *sine qua non* for any approach that might be considered legitimate.

to be to use models and data that have worked passably well in the past, and that seem to be supported by many fellow travelers. If the models we use have been crowned with some formal dignity by academic or professional credentials or practices, so much the better. Most decidedly, this has not been Howard Kunreuther's approach to research. His emphasis has been on process rather than on more easily measured outcomes, and on procedural rationality rather than just distributive rationality (Simon, 1976). As I look back on his inspiring example, what strikes me most is the way he has implemented legitimation as a foundation for his own research. The research teams Howard has assembled for his major research projects typically represent specializations across several disciplines. Advisory committees of experts are assembled to challenge the work; technical committees are constituted to review the details of models and data used; and affected stakeholders are gathered at various junctures for input, criticism, commentary and dissemination of results.¹² In a word, Howard Kunreuther's own research process has been a model of promoting communicative rationality per Habermas. This process has produced interesting insights on why affected stakeholders think and act the way they do, and not necessarily as theory would otherwise paint them or their motives. It has also clearly promoted the legitimacy of the results of these projects.

Following this example, as researchers we might ask what is resolved by recognizing the key role of legitimation in management, in public policy, and in our research lives? In my mind, the main benefits of this are to promote a broader understanding of the context and of the stakeholders affected by our research, including their different frames of reference and values. As researchers, we are good at anticipating objections and favorable responses from our peers from a methodological point of view. However, in many areas of management and policy, certainly including climate change and sustainability, it is crucial to adopt a broader frame for legitimation that anticipates and encourages our confrontation with the real stakeholders of our research. In this regard, Howard Kunreuther's research is exemplary.

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¹² Just as one of many examples, the Kunreuther and Linnerooth et al. (1983) volume on siting of hazardous facilities acknowledges 100 individuals and 45 organizations for information and critique of the book.

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