IS EDUCATIONAL POLICY MAKING RATIONAL — AND WHAT WOULD THAT MEAN, ANYWAY?

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Abstract. In *Moderating the Debate: Rationality and the Promise of American Education*, Michael Feuer raises concerns about the consequences of basing educational policy on the model of rational choice drawn from economics. Policy making would be better and more realistic, he suggests, if it were based on a newer procedural model drawn from cognitive science. In this essay Eric Bredo builds on Feuer’s analysis by offering a more systematic critique of the traditional model of rationality that Feuer criticizes, a more critical evaluation of the procedural model that he favors, and a recommendation that the situational model he does not consider may have some benefits over both. This analysis shows that the traditional model he does not consider may have some benefits over both. This analysis shows that the traditional model presupposes an actor that cannot learn or develop. While the actor in the procedural model can learn, Bredo contends that it cannot develop, that is, it cannot outgrow its initial assumptions and values. Only the situational model allows for learning and development, important in a model to be used in the field of education. Bredo also considers in his analysis the social-relational assumptions built into the traditional, procedural, and situational models and the likely ethical consequences of acting on them.

The models of behavior on which social and educational policy are based are often thought to be selected on the basis of their truth value. We ask whether a model is properly specified and consistent with accepted facts and, if so, treat it as an acceptable account of human behavior. Truth should not be the only consideration in selecting a model for policy analysis, however. As the political scientist James March argued some years ago, an emphasis on truth value alone neglects other criteria, such as a model’s justice value or beauty. Defining justice value as the degree to which actions based on a model “produce better people and better worlds,”1 March argues as follows:

Independent of its truth value, a model has a justice value. Different models suggest different actions, and the attractions of the social and moral consequences of those actions do not depend entirely on the degree to which the models are correct [that is, true]. … Since any two equally correct models may have radically different action implications and radically different moral force, we can easily imagine a circumstance in which we would be willing to forego some truth in order to achieve some justice. [MB, 414]

March is especially critical of the traditional model of rationality borrowed from economics, characterizing it as a “fundamental dogma” in a variety of fields (MB, 417). What is especially problematic about this model is that it assumes that goals are given and exogenous to the choice process being modeled:

Every tool of management decision that is currently a part of management science, operations research, or decision theory assumes the prior existence of a set of consistent goals. Almost the entire structure of micro-economic theory builds on the assumption that there exists a well-defined, stable, and consistent preference ordering. Most theories of individual or

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organizational choice behavior accept the idea that goals exist and that (in some sense) an individual or organization acts on those goals, choosing from among some alternatives on the basis of available information. Discussions of educational policy, for example, with the emphasis on goal-setting, evaluation, and accountability, are directly in this tradition. [MB, 419]

Once goals (tastes, preferences, values, utilities, and the like) are given, the only remaining question is how to attain them. The traditional rational model focuses on how means are (or should be) selected to attain given ends, viewing human behavior as highly instrumental. March suggests that this model is “deficient in some obvious, elementary ways, most conspicuously in the treatment of human goals” [MB, 420]. To make his point, he compares the way we commonly think of adult behavior with the way we tend to think of children’s behavior. Adults are commonly viewed as rational goal-attainers who know exactly what they want while children are seen as playing, discovering new goals as they go. In educating children we rely on this possibility as we encourage them to participate in new activities that expand and refine their values. March is not merely pointing out a limitation of the traditional model of adult behavior, however, for he goes on to suggest that action based on the traditional rational model lacks justice value because it tends to lead to unjust forms of social life. This conclusion leads him to argue for a better balance between adultlike seriousness of purpose and childlike playfulness in organizational behavior and elsewhere.2

March’s analysis remains relevant because we are in the middle of another effort to rationalize and standardize education. Whatever their differences, high-stakes testing and accountability systems and market-based “choice” schemes share the belief that actors will respond to changes in outcomes in a “rational” way. International comparisons of achievement are used in similar fashion to analyze what nations need to do to boost achievement score outcomes relative to other nations.3 As March suggested, when this instrumental way of thinking comes to be viewed as the only way to think, or the only rational way to think, it functions as the equivalent of a religious dogma, a “cult of efficiency.”4

3. For a refreshing contrast, consider William James’s statement of a century ago: “I believe that international comparisons are a great waste of time — at any rate, internal judgments and passings of sentence are. Every nation has ideals and difficulties and sentiments which are an impenetrable secret to one not of the blood. Let them alone, let each one work out its own salvation on its own lines.” See Elizabeth Hardwick, The Selected Letters of William James (New York: Farrar, Straus and Cudahy, 1961), 180.

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What gets lost along the way is the ability to question whether the goals being pursued are good, how they might be balanced or harmonized with other goals, and how metagoals — such as the ability to generate, select, and evaluate goals wisely — can be improved.

**Moderating the Debate**

These considerations provide a context for considering Michael Feuer’s *Moderating the Debate*, since Feuer is concerned with the consequences of the traditional rational model on educational policy making. The debate that Feuer seeks to moderate seems to be one between dogmatic proponents of the rationalistic mindset just described and their sometimes equally dogmatic opponents. Arguments between modernists and postmodernists, believers in fixed standards and believers that all standards are politically arbitrary, would seem to approximate the positions he seeks to moderate.

Feuer argues that we need a middle way between these alternatives, an approach grounded in empirical science. This position seems consistent with his role as director of the Social and Behavioral Science and Education Division of the National Academies. The problem with unalloyed belief in the traditional rational model, in Feuer’s view, is that it leads to pendulum swings between exaggerated promise and later disappointment. The notion that vouchers will cure all ills is an example, as is belief that systems of accountability will do the same. A mechanistic conception of “what works” results in similar swings between rigor and relevance in research. In both spheres the perfect has become the enemy of the good, the “rational” the enemy of the reasonable.

The cure for these problems, Feuer argues, is to adopt the modern theory of choice developed in cognitive science. This “procedural” model (Herbert Simon’s term, not Feuer’s) views goals as aspiration-level constraints rather than as global optima. Thinking of goals as minimally acceptable levels rather than perfect optima helps make objectives more realistic since one can go home happy having “satisficed,” or done well enough. It also makes it easier to resolve goal conflict than the effort to achieve an optimal outcome. Different family members may specify that a new car must satisfy differing constraints, for example, one insisting that it cost less than $20,000, another that it seats at least four, and a third that it get at least 22 miles per gallon. Finding a car that satisfies all these constraints is probably easier than finding one that is optimal for each, if that is in fact a sensible concept. Paying more attention to cognitive processes also gives a more realistic understanding of how policies are likely to influence behavior, since it acknowledges that people in different positions or coming from different backgrounds are likely to respond differently to the “same” policy. Viewing the procedural model as more scientific, Feuer even suggests that the policy wonks proudest of their tough-minded rationalism are actually behind the times, scientifically, since they base their thinking on an obsolete model of behavior.

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While sympathetic with Feuer’s argument since I have the same reservations about overzealous, unmodulated use of the traditional rational model, I nevertheless believe that he has not carried the analysis far enough. I elaborate in what follows by first expanding on Feuer’s criticism of the traditional rational model. Borrowing from Max Weber’s analysis of different models of action, I suggest some further limitations of the traditional model. Following that, I consider the procedural model that Feuer favors, suggesting some limitations that he does not consider. This leads me to introduce a third way of thinking of rational or reasonable choice, the situational model, which allows for reflexive processes not included in the other two models. Since Feuer’s work is itself an example of this kind of thinking, I argue that he should include it in his analysis to be consistent.

The Substantive Model

The traditional model of choice drawn from classical and neoclassical economics suggests that people act to maximize the value of the consequences of their actions. This is sometimes termed a model of “substantive” rationality because it assumes that people’s choices actually do maximize this value.

To act in this way, at least three conditions must be met. A person must (1) know all consequences of all possible courses of action; (2) have well-defined, stable, and consistent preferences; (3) choose and enact the course of action whose consequences have maximum value. One might consider these the cognitive, evaluative, and conative assumptions of traditional choice theory.

Economists recognize that these are not realistic assumptions and have developed a number of arguments to save the model from contradictory evidence. A first is that while the model may not be true of particular individuals, it is true on average, deviations from the norm being random. This saves the theory at the cost of making it inapplicable to specific individuals (including individual firms). Alternatively, the model is said to be a normative model of how people should behave, not a descriptive model of how they actually behave. This argument leaves unclear how actual behavior can be best predicted or explained. A third argument is that the model is a useful fiction, like a perfect vacuum in physics. This seems more realistic but raises questions about the applicability of the model to an imperfect world. In practice it seems that substantive rationality is often simply presupposed, the theory being presumed right regardless of the facts. At least that is the way economists tended to think before the recent rise of behavioral economics.

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6. “Utility” or “expected utility” can be substituted for “value” without any significant change in the present analysis.
The chief advantage of the substantive model is clearly its simplicity (as suggested in the last argument). Assuming that a person’s behavior is a function of environmental contingencies alone allows changes in behavior to be predicted easily from changes in the environment. If a desired good becomes cheaper relative to other goods, people will choose more of it; if more expensive, less. It also gives simple suggestions for controlling behavior. If you want someone to do more of a particular behavior, increase the rewards or decrease the costs. In short, it makes prediction and control appear easy.

This simplicity is bought at the price of overlooking a variety of other explanations for behavior whose systematic omission makes it likely that conduct will become unethical. These omissions can be highlighted by considering Max Weber’s comparison of four different models of human behavior. Weber distinguished between rational behavior and two forms of nonrational behavior, habitual and emotional. He then divided rational behavior into two subtypes, means-rational [instrumental] and ends-rational [moral]. Since the first type of rational behavior (means-rational) is essentially the same as the substantive or traditional model, Weber’s analysis highlights three forms of behavior that the substantive model ignores: habitual, emotional, and ethical [ends-rational]. Let me consider them in reverse order.

Weber’s conception of “value-rational” or “ends-rational” behavior was a way of noting that instrumental behavior differs from normatively regulated behavior. As March sometimes puts it, a consequential logic is different from a categorical logic. A child who refrains from stealing a cookie because it is the right thing to do behaves in a norm-regulated manner, while one who refrains from taking it out of fear of being punished behaves in an instrumental manner. Weber was adopting a Kantian view of ethical behavior in this analysis, distinguishing ethically regulated from nonethically regulated behavior on the basis of its motive. In ethically regulated conduct one does the right thing for its own sake, not because of its consequences. This distinction is important, despite difficulties in Kant’s analysis, because acting in a normatively regulated manner is necessary when acting in the public interest, something that makes little sense in the traditional instrumental model except as a means to some private end. A believer in the traditional rational model could respond by arguing that people comply with norms only when it is what they prefer to do, reframing moral concern as selfishness. But this ignores struggles between what people believe is right and what they want, insisting that such struggles cannot be real because they must “really” have consistent preferences. Unfortunately, this is just another way of saying that the model is right despite contradictory evidence.

Weber’s concept of emotional (“affectual”) behavior is also overlooked in the substantive model. Acting emotionally may sound undesirable, but uncalculated sympathy, care, or love is of obvious importance. It is the spontaneous expression of

affection that we value over the calculated one because it shows real identification with our interests. Presupposing that people act only in a rationally calculated, self-interested manner clearly overlooks emotionally driven behavior in which people will give up everything, even their own lives, to save — or destroy — another. A defender of the traditional model can insist that such behavior is really rational, but this requires shifting to a different level of analysis to preserve the assumption of rationality, such as suggesting that empathy with near kin is rational from a genetic point of view because it helps preserve one’s genes in the future. This does not make it rational for the individual in question, however. If we stay with the individual, it is clear that a model that systematically overlooks emotionally driven behavior is missing something important. As William James put it, in understanding another’s behavior, “to miss the joy is to miss all.”

The substantive model also overlooks habitual or conventional behavior, Weber’s analysis suggests, by presupposing that people consciously choose value-maximizing actions rather than acting out of habit or tradition. The suggestion that people always act in a consciously rational fashion conflicts with everything we know about conscious attention, namely, that we lack the capacity to be conscious of more than a small fraction of what we are doing. A possible reply is that habits are also rational most of the time, or gradually become rational through reinforcement. While there is much to be said for the implicit intelligence of habit, assuming that habits are rational, on average or eventually, overlooks the occasions when they are not. In addition, there is no reason to think that habits formed on the basis of limited local experience, achieve global optima. It seems more plausible that “rational” analysis is itself embedded in habits formed by a limited sample of experience.

A further limitation not included in Weber’s analysis is that individuals behaving as the substantive model suggests cannot learn or develop. If you already know all courses of action and all consequences, and if your preferences are consistent and unchanging, as presupposed in the traditional model, what is there to learn? Development is also impossible if we take it to mean an improvement in goals or values, or a change that improves the rate of learning. If you cannot learn to begin with, “development” conceived in this way has no meaning. Perhaps the clearest example of the inability to develop is the belief that people behave in a purely instrumental manner that cannot be changed, since it is a fixed law of nature. As a result, the traditional rational actor can never develop another law of behavior.

These limitations have important consequences for policies based on the traditional model. Ignoring normatively regulated behavior suggests that norms ensuring the public good are likely to be treated as a strategic advantage or disadvantage, rather than a moral obligation. Neglect of emotion is likely to lead to policies that lack sympathy for others. Lack of respect for habit or tradition is likely to lead to the belief that all considerations have already been taken into account when a policy maker is in fact embedded in habits or traditions that remain unexamined. If one adds to these concerns the recognition that a policy maker who behaves as this model suggests would be incapable of learning or developing, it becomes clear that the consequence of acting on the basis of this model, uncorrected by other concerns, is likely to be unethical conduct. But why should one expect otherwise of the Gospel of Greed?

This is not to argue that the substantive model is without value, only that its value is more limited than its proponents believe. One might consider the substantive model the equivalent of an accounting system. Accounting systems can be helpful in keeping track of expenses and what one received in return, but this no reason for accountants to be in sole command of social life, especially when they tend to be blind to whether the “costs” and “benefits” of which they take account are worth valuing in the first place.

THE PROCEDURAL MODEL

The model that Feuer appears to favor is the information-processing model developed in cognitive psychology and cognitive science since the late 1950s. In analyzing this model Feuer draws largely on the work of Herbert Simon and his colleagues. I do likewise.15

At the heart of the procedural model is the notion that when we think, we are doing a little computer simulation in our heads. If we solve a symbolic problem in our heads, we can treat the sequence of moves used to get to the solution to the symbolic problem as a plan of action in the external world. This model also has a number of elements. One must first have a symbolic representation of the problem situation. This includes a representation of the initial state, the goal state, and rules for manipulating the symbolic representation in order to change it from state to state. The goal of problem solving is to find a sequence of moves that reduces the difference between the initial and goal states until this difference is eliminated.16 To solve a chess problem, for example, one needs to represent

the initial state of the board, the desired end state of checkmate, and the rules by which the representation can be changed, indicating the movement of different pieces.

Conceiving of human problem solving in this way led to the notion that it is limited in the same way that computer simulations are limited. Limitations on short-term memory mean that symbolic representations must be simple relative to real-world problems. Limitations in computational speed mean that comprehensive knowledge is impossible. The consequences of specific actions must be computed, or searched for, requiring the expenditure of time or other resources, rather than known ahead of time. Computational tests of outcomes mean that goals function as quasi-independent constraints, like human aspiration levels, rather than global optima. Because human rationality is “bounded” by simplified problem representations, limited knowledge, and imperfectly ordered preferences, it can be considered only “intendedly” rational, not substantively rational.

One can get a sense of this model by considering some of its applications. One use has been in describing interactions between governmental departments in which each department is treated as analogous to a module in a computer program that performs a certain task and hands its solutions to other modules (or departments) that use it to solve their own subproblems. In this view, an organization is a like a giant computer program whose behavior is the result of interactions between different departments, each with its own subgoals and routine ways of solving problems. Research on individual choice and judgment suggests that individual problem solving is heavily affected by attentional habits, social norms, and other factors suggestive of bounded rationality.

If we compare this model of behavior to Weber’s four models, it is clear that it places more emphasis on habit than the substantive model. Habit is represented by computational rules or procedures as well as by memorized solutions derived from prior search. In effect, the whole “program” simulating problem solving in some domain is a habit. Normatively regulated conduct can be included to some degree in this model by adding different actors’ goals to the criteria for an acceptable collective decision. The acceptability of a collective decision might be dependent on each member of a coalition getting at least their bottom-line requirements, for example. This is not really a robust understanding of what

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it means to act in the public interest, however, since that would require that
each individual act in a way that is attentive to the collective side effects of their
separate actions.\textsuperscript{23} The procedural model also has little to say about emotion,
viewing it as equivalent to an interrupt on a multitasking computer that shifts
attention to a new task when it becomes urgent.\textsuperscript{24} Treating emotion in this
way ignores issues of attachment and identification important in social relations.
A parent who behaved as the model suggests would seemingly attend to a child
only when it screams.

Despite these limitations, learning is possible in the procedural model since
a solution found through search may be memorized for future use. Preferences
may also change as repeated success leads to higher aspirations while failure
leads to lower aspirations.\textsuperscript{25} These changes take place within a framework that
remains fixed at some level, however. One can program a computer to play chess,
for example, but the rules of the game must be given to begin with. One can
admittedly always start with more abstract premises, making the system more
general, but the same problem then occurs at a higher level. Since primitives cannot
be changed within such a system without threat of computational incoherence,
development is not possible.\textsuperscript{26} This is implicit in the computational analogy,
which requires that the problem be well specified to begin with. It is also implicit
in psychological research presupposing a well-defined task that is inapplicable
to situations where tasks are redefined socially as interaction proceeds.\textsuperscript{27} As
Newell and Simon acknowledged, “the whole process of moving from one
representation to another, and of discovering and evaluating representations, is
largely unexplored territory in the domain of problem-solving research.”\textsuperscript{28} This
suggests that reflexive thinking, recognized as important in the social sciences and
traditionally central to philosophy, is omitted.\textsuperscript{29} People may behave as though their
thinking is bounded by dogmatic or unchanging habit, but it seems undesirable to
presuppose that they do so, especially in a model for educational policy making.

\textsuperscript{24} Herbert A. Simon, “Motivational and Emotional Controls of Cognition,” in \textit{Models of Thought},
\textsuperscript{25} Cyert and March, \textit{A Behavioral Theory of the Firm}.
\textsuperscript{26} Eric Bredo, “Reconstructing Educational Psychology: Situated Cognition and Deweyan Pragmatism,”
Limits of Artificial Intelligence} (1979; repr. New York: Harper and Row, 1972); and Terry Winograd and
Fernando Flores, \textit{Understanding Computers and Cognition: A New Foundation for Design} (Reading,
Massachusetts: Addison-Wesley, 1986).
\textsuperscript{27} Michael Cole, \textit{Cultural Psychology: A Once and Future Discipline} (Cambridge, Massachusetts:
Harvard University Press, 1996); and Denis Newman, Peg Griffin, and Michael Cole, \textit{The Construction
\textsuperscript{28} Newell and Simon, \textit{Human Problem Solving}, 108.
\textsuperscript{29} Donald A. Schönen, \textit{The Reflective Practitioner: How Professionals Think in Action} (New York: Basic
Books, 1983); Pierre Bourdieu and Loic J.D. Wacquant, \textit{An Invitation to Reflexive Sociology} (Chicago:
University of Chicago Press, 1992); and Alvin Ward Gouldner, \textit{The Coming Crisis in Western Sociology}
The Situational Model

This brings me to the situational approach developed by the American pragmatists.30 Sociohistorical approaches deriving from the work of Lev Vygotsky are similar, as are contemporary situational approaches to cognition, learning, and education.31 These approaches are relevant because they promise to overcome some of the limitations of the other two models.

The two most significant changes introduced in the situational model or approach are (1) thinking is embedded in a cycle of action, emerging from conflicted habit and tested, in part, by its ability to resolve the conflict and enable action to proceed to completion; and (2) thinking is a social process, a form of social interaction or dialogue learned from the responses of others to one’s actions. The approach is “situational” because it considers thinking as arising in specific situations that are unique when considered as a whole, although past habits and generalizations are resources for dealing with them.

In this approach, most activity is viewed as habitual. It proceeds with little awareness of detail, like driving home having no idea how one steered or used the brakes. It is only when novel situations result in conflicting responses to an object that action is inhibited and conscious thought stimulated. One reaches out for a ripe peach but midway through the act notices that it is badly bruised on the back. This interrupts the act, making one conscious of what one is doing and its conflicting consequences. Thinking is an attempt to remove this “irritation” of doubt by finding a way of defining the problem and its solution that allows action to proceed. As C.S. Peirce put it,

Doubt is an uneasy and dissatisfied state from which we struggle to free ourselves and pass into the state of belief; while the latter is a calm and satisfactory state which we do not wish

30. See, for example, Dewey, The Public and Its Problems; John Dewey, How We Think (Boston: D.C. Heath, 1910); and John Dewey and Arthur Bentley, Knowing and the Known (Boston: Beacon Press, 1949). See also Schön, The Reflective Practitioner.

to avoid…. Thus, both doubt and belief have positive effects upon us, though very different ones. Belief does not make us act at once, but puts us in such a condition that we shall behave in a certain way, when the occasion arises. Doubt has not the least effect of this sort, but stimulates us to action until it is destroyed.32

One might, for example, resolve the doubt by looking for a better peach or deciding to cut the present one in half.

If thinking is embedded within a cycle of activity whose disruption it seeks to correct, then neither the problem nor the solution is given. All one initially experiences is something unexpected and troubling that one did not expect. This results in an emotional state, or the beginning of one, due to frustrated or inhibited action. Given a difficulty whose nature is unclear, one needs to investigate, seeking to work out the nature of the problem. How badly spoiled is the peach? Is it really spoiled or does it just have a blemish? If an interpretation seems to make sense of the situation, bringing all the facts into a single account, then one can begin to seek a solution. Perhaps I decide to cut the peach in half. After doing so, I may find that it is almost entirely spoiled so my plan has failed. Then it’s back to problem solving. When one does find a path that works, there is a sense of emotional release and learning of means-ends relations.

The situational model also treats thinking as a social process. This is probably clearest in the work of George Herbert Mead who viewed thinking as an internalized “conversation of gestures” one has with oneself.33 In Mead’s account one learns to think reflectively by participating in cooperative activity with others. Such participation teaches one to respond to one’s own gestures (such as utterances) as another would who implicitly anticipates their meaning. Individual thinking involves an internalized or autonomous version of the social-interactional process, learning to respond to one’s own actions in terms of their likely meaning to others, responding to their imagined responses to one’s response, and so on, until a sequence is found that appears to resolve the situation. This is then tried in action, testing the ideas by seeing if a cooperative line of action can be worked out, changing the situation in the process.

Approached in this manner, ideas are tested in two closely related ways. They are tested experimentally by acting toward natural objects and seeing if they respond in a way that allows action to develop. They are also tested socially by seeing if the symbolic definition of the problem and its solution result in coordinated social interaction. The test for an idea is whether it allows action to develop and foster social coordination in a world that is thought to be changing, in part, as a result of this very action.

Needless to say, in this view there is no place to stand outside of interaction with things and people to find out how they really are, independent of such
interaction. One may, for example, set up predictable, mutually confirming relationships with others based on assumptions about their behavior [such as the notion that they are selfishly rational, which they may return in kind] when other ways of behaving might bring out different kinds of response. Even with natural objects, what one observes depends on what one does with them, like light being either particle or wave depending on the experimental apparatus detecting it. Thus thinking functions in an environment that is partly — though by no means unilaterally — of its own making.

The way to improve thinking, in this model, is to learn to use the various tools and social processes that have been developed historically to improve inquiry. Accounting systems are certainly among these, as are computer simulations. At least as important as such techniques, however, are social innovations, such as the practices of scientific communities that check results against one another, restrict conflict of interest, and make debate public and reasoned, allowing the community to be convinced or not. In this view rationality is not a state one arrives at. We get smarter together over time, in particular areas, as our instruments and forms of social organization are refined and the experiences we have expand.

This model clearly differs from the externally determined conception of behavior in the substantive model. Behavior may be highly predictable from environmental events when it is highly habituated, as the substantive model assumes. This is equivalent to the assumption in economics that things are near equilibrium. When established habits are disrupted by novel events, however, behavior is likely to be driven by emotional impulse or by the results of new thinking. Since the substantive model does not deal with emotion and does not include an adequate model of thinking, it is difficult for it to handle such conditions. The situational model also differs from the internally determined conception of behavior in the procedural model. It differs in making the basic habits of thought less fixed or rigid. The computational model of classical cognitive science and artificial intelligence can do a good job of simulating thinking processes when the task is stable and well-defined, but when the task is changing due to other factors, such as a rapidly changing social division of labor, or is ambiguous, uncertain, or conflictual, the computational model tends to break down. The very fact that it does not take emotion into account well suggests that this would be the case.

One can generalize this criticism by saying that the trouble with the substantive and the procedural models is that they are systematically blind to their own consequences. The substantive model tends to be adopted as dogma, at least in our society, while the procedural model is a model of a dogmatic thinker. Unlike the other models, the situational model allows for reflective thought. It allows for growth beyond the boundaries of one’s initial ideas, which are treated neither as laws of nature nor as fixed rules of thought. Rather, they are tested by their natural and social consequences, and by surviving critical review from those with differing biases. What “rationality” means in this case is (roughly) situationally sensitive, carefully reasoned and persuasive, experimentally
tested inquiry that continues to get better. What ultimately distinguishes the situational approach from the others, then, is faith in an open-ended process of self-improvement that can never be fully represented within a given model.

**Conclusions**

In this response to Michael Feuer’s *Moderating the Debate*, I have tried to extend Feuer’s critique of the traditional model of choice drawn from economics by drawing on Weber’s comparison of different models of action. The analysis suggested that an emphasis on the substantive model alone, uncorrected by other concerns, is likely to result in behavior that is blind to ethical commitment, emotionally insensitive, and incapable of correction by learning. I also suggested that the actor presupposed in the model is incapable of developing, in part because the basic law of behavior presupposed in the model — value maximization — is treated as unquestionable. Such considerations led me to treat the substantive model as an accounting tool — no less, but also no more.

I also sought to extend Feuer’s handling of the procedural model drawn from cognitive science by pointing out some of its limitations that Feuer overlooked. These center on the notion that the procedural model is a *model* of a dogmatic thinker. The computational metaphor and the notion of bounded rationality imply that the procedural thinker works within a framework of thought and value that cannot be observed or corrected from within that framework. If people really behaved in this way they would be incapable of self-reflection, would not develop, and would be unable to engage in complex activities, such as irony or playfulness. They would also be likely to be emotionally and socially insensitive. While the procedural model may offer a good description of bureaucratic behavior, and may be a helpful tool for working out the qualitative implications of ideas through simulation, it is well to keep its limitations in mind. Human thinking may be analogous to computation in some ways, but we would do well not to confuse the model with what is being modeled.

These considerations brought me to the situational approach. This third model presupposes that thinking is embedded within ongoing cycles of habitual activity that it partially reorganizes. It also conceives of reflective thought as learned in social interaction and as a form of social interaction itself. I argued that this approach helps conceive of an actor as growing or developing, rather than as stuck within fixed habits of action (the substantive model) or fixed habits of thought (the procedural model). Growth occurs by interacting with physical objects and other people whose responses give old objects new meanings and give rise to new kinds of objects (such as those created in social life). Unlike the other models, this one takes habit, emotion, and thought into account. It acknowledges that most behavior is habitual or conventional. Conflicted habit then results in an initial


emotional response that can lead either directly to impulsive action or indirectly to a more thoughtful response. Positive emotions such as joy or relief occur when the initial tensions are released after successful resolution of the situation, giving us a basis for learning new tastes and values.

This discussion can be related to March’s ethical concerns, with which I began, as well as to Feuer’s, by noting that use of these models appears to be consistent with three different patterns of social relationship between policy makers and those governed by policies. The fact that the traditional model treats human behavior as governed by fixed, universal laws, as though human beings followed a natural law of value-maximization, allows policy makers to function as technocrats removed from the situations they describe. People are literally objects in this view, value-maximizing machines. Policy researchers are then just technicians telling policy makers which levers to pull to get the ship of state to turn in a desired direction.

The procedural model suggests a closer relation between policy researchers and the governed since it implies that one must understand the habits of thought, or mind-sets, of those being governed. This presupposes that people think in a coherent and stable manner. This assumption may work quite well in an organization with a stable division of labor but not so well when the division of labor changes rapidly. As a result, action based on this model seems likely to accept given social boundaries and distinctions. In effect, the policy maker becomes another member of an established division of labor, whose somewhat different purposes and ways of thinking are unlikely to be disruptive of that pattern.

Ethical or social-justice difficulties arise with both of these models — when uncorrected — because they make one blind to established biases. The first makes one blind to established habits of action, the second to established ways of thinking. Both forms of blindness are likely to lead to considerations being ignored that are not part of the framework. Since such considerations eventually involve the goals and values of other people (or one’s own developing goals and values), irresolvable ethical conflict is certain to result over the long term.

The situational model gives no guarantee against unresolved or irresolvable goal conflict, but it creates no artificial barriers against resolution. Current habits or institutionalized practices are recognized as liable to create difficulties when they come into conflict with one another. Different ways of thinking are also viewed as making it difficult to resolve a situation. Neither of these is taken to be beyond correction, although not in any infallible or optimal manner.

If part of a “problem” may derive from the way it is conceived in the first place, then problem conceptions, as well as problem solutions, need to be up for critical consideration. Public discussion and reasoning where parties with different aims

and perspectives can attempt to persuade others by open presentation of evidence
and arguments are central to the situational model. As solutions are developed,
they need to be tested in practice, with attention to their side effects and interaction
effects on different groups, and not merely their intended main effects. What this
suggests, in short, is that what is really needed to “moderate the debate” is more
democracy, more openness and fair play, not more cognitive science.

I AM GRATEFUL to Ray McDermott and Peg Miller for helpful comments and suggestions.