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## The Spiral Model of Policymaking\*

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Public policymaking is a process of continuous decision making by public officials. These officials belong to different agencies and to different levels of the hierarchy within these agencies. Their decisions influence each other in a way that leaves their makers with less than complete control on the final impact of each decision. To compensate for the loss of control or for any other influences that cause deviations from the desired results these officials take remedial actions in their subsequent decision making. That is, they use the feedback on the results of past decisions to decide what decisions should be made in the future. This practice was well described by Charles Lindblom in his classic article "The Science of 'Muddling Through'," (1959) which presented two alternative and mutually exclusive approaches to policymaking. He called one the "root method," which is a decision making process "starting from fundamentals anew each time, building on the past only as experience is embodied in a theory and always prepared to start completely from the ground up."

The other approach is commonly referred to as the incremental approach. Lindblom labeled it in his article the "branch method," which is "a process of continually building out from the current situation step-by-step and by small degree,"<sup>1</sup> that is, "muddling through." The scholarly debate about the relative advantages of each of these approaches over the years<sup>2</sup> suggests the importance of the two. The attempt of Amitai Etzioni to embody some elements of the two approaches into his mixed scanning model of decision making<sup>3</sup> is a good indication of the desire to avoid using one approach while ignoring the other.

This paper discusses some of the disadvantages of the incremental model. It presents the spiral model as an alternative perspective that retains the advantages of a sequential - serial model of policymaking, without the spirit of "muddling through" that characterizes the incremental model.

The paper starts with a brief explanation of the spiral concept. It then goes on to explain briefly why public policies develop in a spiral-like fashion. The paper concludes by suggesting some thought concerning the advantages of using a spiral model of the policymaking process as a conceptual framework.

### What Is a Spiral?

A spiral may be depicted as a curve rising from its base (or descending from its apex) to the tip of a cone. In planar view, such a spiral is seen as a widening (or narrowing) coil. The spiral involves movement developing toward or away from a designated point in a circular motion around a fixed axis of rotation. As a geometrical figure, the spiral,

<sup>1</sup> Charles E. Lindblom, "The Science of 'Muddling Through'," *Public Administration Review*, 19 (2), 1959, 79-88.

<sup>2</sup> See for example, Y. Dror, " 'Muddling Through': Science or Inertia," *Public Administration Review*, 24 (3), 1969, pp. 153-57, and Charles E. Lindblom and Charles L. Schultze, "The Policy Making Process: An Exchange of Views," in *Management and Public Policy: Proceedings of a Conference*, (School of Management, SUNY at Buffalo, 1971).

<sup>3</sup> Amitai Etzioni, *The Active Society*, (N. Y., Free Press, 1968), pp. 282-309.

whether conical or flat, has some interesting attributes. One of these is that its evolution around the axis of rotation is constant. We can then describe the dynamics of the spiral development by mapping the new relation of the spiral to its axis after each cycle. Another property is the monotonous development of the spiral. That is, there exists a maximum and minimum limit to the change that occurs as the spiral develops. Identification of the upper and lower limits on possible change leads in turn to estimating the maximum and minimum pace at which the spiral can evolve. Any development exceeding those limits interferes with the circular momentum. For example, if the gradual development of the spiral is less than a certain minimum value, the circular motion is flattened. On the other hand a development exceeding the upper limit would cause a warp resulting in a distortion of its symmetry on the axis of rotation.

A third property of the spiral worthy of mention here is that although the spiral returns to the same angular position in relation to its axis following each cycle, it does not return to the same point of altitude or amplitude. The difference between the points that stand in the same position in relation to the axis indicates the amount of change made within and between the cycles. Each new point of the spiral represents the continuing change. This enables the spiral to attain, with the completion of each cycle, the same angular relation to the main axis but a different position in other respects.

### *The Spiral Development of the Policy*

If one assumes that a policy develops incrementally, one must assume a continuity of some sort. The continuity between any two decisions does not mean necessarily that the trend of the development is linear. Policy decisions may have a circular interrelation among themselves. This relation is revealed when the interrelations of nonconsecutive decisions within the same policymaking process are examined. For example, a circular relationship exists when a presidential decision that starts a congressional action generates a public reaction and a Supreme Court decision, which results in a new presidential decision. Roosevelt's modification of his National Recovery Act (NRA) proposal after it was struck down by the Supreme Court and President Carter's agreement with the court ruling to restrict the use of federal money for elective abortions are cases in point. The incremental and circular development of policymaking resembles Louis Guttman's "circumplex."<sup>4</sup> Accordingly, the policymaker returns to the initial point of the policy after a certain number of stages in the policy development. As he comes back to this point, the policymaker evaluates the initial assumptions, problem definition, the alternatives considered and the relative merit of the choice that was made. This he does in view of the added insight and knowledge gained since he first started to deal with the policy. The analysis can be useful only if the initial decision is not binding and subsequent decisions can differ from it. The novelty of a new decision is defined, therefore, only by comparing it to previous ones. The fact that decisions are built on each other moves the policymaking process spirally from one cycle to another.

Depending on the perspective from which the development of the policymaking process is viewed, the spiral evolution of the policy will have a flat or conical shape. The *flat* spiral is a bird's eye view of the development of the policy around its central axis of rotation. It accounts for the evolution of the policy as one that contracts in towards a central issue or as one that expands to make more elements of the policy environment become elements of the policy itself. For example, when a policy concerning the

<sup>4</sup> Louis Guttman, "A New Approach to Factor Analysis: The Radex," in P. Lazarsfeld (ed.), *Mathematical Thinking and the Social Science*, (N. Y. Free Press, 1954), pp. 258-348.



welfare of children emerges from a policy that deals with family, the flat image of the spiral would reveal a contracting trend from the wider issue to the more specific one. If on the other hand the policy that deals with the welfare of the child develops from a limited policy on medical care to a more comprehensive policy that considers nutrition questions, physical fitness, etc., then the flat image of the spiral would show a policy that expands out from its center (i.e., from its axis of rotation).

The relevant *conical* image of the spiral would show a three-dimensional view of the policymaking process. The conical image of the spiral symbolizes how the policy develops from cycle to cycle as it contracts or expands. The conical image may relate the policymaking process to the time dimension, the policymaking hierarchy or the different "policy arenas." The conical image signifies the crucial stages in the policy development by revealing and relating the changes in the horizontal dimension of the spiral to changes in its vertical dimension. How can these attributes of the spiral help bring together the incremental, i.e., the "branch method" and the fundamental, i.e., the "root method"? The answer to this question will be simpler if we consider briefly some of the main advantages and disadvantages of each of these mutually exclusive methods.

The branch method, as defined earlier, represents a conservative approach to decision making. It entertains the assumption that decision makers prefer to draw on their own past experience rather than experiment with new and unprecedented solutions to their problems. As a result of this tendency the development of the policymaking process is sequential and incremental. That is, it consists of small decisions that follow each other. Each decision differs from its predecessor incrementally in an attempt to remedy shortcomings or to further improve the policy if it is found to proceed in the right direction. Thus, the change from one decision to another results from the feedback the policymaker gets about the results of his previous decision. Making decisions on the basis of feedback means the policymaking process develops as a process of trial and error. In this process, each decision follows in a remedial fashion what the policymaker assumes to be the results of a previous decision. The acknowledgement of the need for learning is one of the important attributes of the incremental approach. This learning is presumed to result from the feedback the policymaker gets. However, the branch method makes learning dependent on the possibility that feedback is available and, further, that the policymaker is able to relate cause and result. In particular the incremental approach assumes that feedback is available even before the undesired results of a wrong decision reach a critical level, calling for immediate action and a choice among limited options.

Lindblom uses the term "muddling through" to present the incremental model, and indeed this term describes realistically the development of the policymaking process. Yet, the normative basis of the model — the ability to use it to improve or influence a desirable mode of policymaking — is debatable.<sup>5</sup> In particular, I want to emphasize the possibility that *trial and error and sequential remedial action may carry the policymaker sideways and away from the issue* with which he was trying to deal initially. The incremental approach does not consider the necessity to evaluate the progress and the relevance of decisions made in relation to the initial goal or problem. Therefore, the incremental approach may, for example, influence resource allocation to deal with the consequences of the last decision, but with no assurance that this would eventually facilitate the solution of the initial problem.

The unhappiness about the patchwork practices of government in such critical areas as education, health and crime control amounts to an indirect criticism of the

<sup>5</sup> Some of the possible criticisms of the incremental model appeared in the papers that constituted the symposium in *Public Administration Review*, 24 (3), 1964, pp. 153-165.

incremental model. Such criticism led to reluctance to allow policymakers and administrators to go on dealing with problems by remedial action. It also resulted in demand for evaluation. A survey taken by the Urban Institute showed a relationship between failure of public policy and inability of public agencies to spell out their program objectives.<sup>6</sup> Constant awareness of long run objective or a central problem is not necessary when "muddling through" is the normative guideline for public policymaking. Yet, when there is a demand to prove that real progress does result from the use of resources, policymakers face the new reality of public concern. Facing this new reality, policymakers have to deal simultaneously with two requirements: 1) The need to deal with substantive problems and 2) The need to demonstrate that they *do*, in fact, deal with them, as shown by policy evaluation.

Policy evaluation involves the application of scientific methods to learn what happens as a result of program activities. According to Joseph Whaley this includes "the definition of program objectives, the development of measures of progress toward these objectives and the projection of what reasonably could be expected if the program were continued or expanded."<sup>7</sup>

As such, policy evaluation in general, and the current trend toward zero based budgeting and sunset legislation<sup>8</sup> in particular, require the policymaker to reconsider from time to time how his current activity relates to the core issue with which he seeks to deal. Hence, the policymaker should constantly be ready to start anew from fundamentals. Thus, the essence of the "root method," according to the Lindblom definition cited earlier, is reincarnated in the demand to demonstrate the effectiveness and *raison d'être* of policy at every turn of the cycle.

The spiral perspective posited in this paper is one means to resolve the apparent incompatibility of incremental decision making and the demand to relate the impact of a policy to the objectives it is expected to achieve. The spiral perspective incorporates therefore both the root and the branch method of policymaking. It enables the decision maker to visualize his progress sequentially to avoid the possibility that deviations from the main issue would go unnoticed for a long time. Using evaluation research the policymaker can then find out for himself in what direction a prospective decision may take him both in relation to past decisions and in regard to the central issue. Being aware of how the impact of one decision leads to another decision and how the impact of each is related to the main issue may provide the policymaker with important insight into the dynamics of the policymaking process. That is, he may see more clearly what influences the impact of his decision and what result may be expected?

Finally, the spiral perspective of the policymaking process and its spiral mapping may help the policymaker re-examine the initial definition of the central issue around which the policy is supposed to develop. This re-examination may start whenever the spiral is seen to warp or flatten. These anomalies indicate that the need to deal with the consequence of a past decision (including its bounding effect) is stronger than the need to deal with the central issue. Finding that this is the case may help the policymaker become more aware of what he is doing, thus, to make conscious decisions to deviate from past practices or to redefine goals, and to explain the rationale of these changes in terms of the question at issue and the policy to deal with it.

<sup>6</sup> Joseph S. Whaley (et. al.), *Federal Evaluation Policy*, (Washington, D. C., The Urban Institute, 1970), p. 15.

<sup>7</sup> *Ibid.*

<sup>8</sup> These two trends are expressed basically in the following legislation: a) Government Economy and Spending Reform Act of 1976 (S-2925) and b) Sunset Act of 1977 (S-2 ).