

Positive and Negative Feedback in Politics

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The American policy process is characterized by the dual and contrasting characteristics of stability and dramatic change. At times, government policies seem remarkably resistant to change, following standard operating procedures, working within norms of consensus among those involved, attracting little public attention, and deviating little from year to year. At other times, or in other areas of public policy, dramatic changes occur: New problems appear on the political agenda; crises require quick government response; new programs are created and old ones are terminated. The Medicare Program was not created in 1965 in a wave of incrementalism, after all. Welfare reform was not just a marginal adjustment to past policies. The tobacco settlement, costing the tobacco industry hundreds of billions of dollars and putting an end to tobacco advertisements on billboards, does not reflect policymaking by standard operating procedures. Moreover, neither of these developments would have occurred as they did without the operation of multiple venues for political action. In the case of welfare reform, the states took the lead. In the case of tobacco, most of the action resulted from the innovative legal theories promoted by Mississippi's attorney general.

Dramatic policy changes regularly occur in American politics, even if most issues most of the time are characterized by more routine developments. In this book, we explore these dual characteristics of public policy and we argue for the importance of a punctuated equilibrium

approach to their study that allows us to integrate what have often been seen as unrelated phenomena.

The chapters brought together here illustrate a range of themes concerning American politics and public policy across the second half of the twentieth century. They have in common a long-term perspective, typically looking at major issues of public policy or the institutions of government over the entire post-war period. The chapters make use of common datasets tracing attention to public policy issues across that period. While each chapter explores a different area of public policy or a different aspect of our institutional system, they all have two things in common: A long time perspective, and a concern to explain both periods of dramatic change and those of relative stability. These are the signature characteristics of a punctuated equilibrium process, and the joint explanation of both contrasts sharply with the more common treatment of one to the exclusion of the other. Political scientists have traditionally focused either on the periods of rapid change (as in most studies of agenda-setting and program creation) or on those of relative stability (as in most studies of policy subsystems, budgeting, implementation, or public policy more generally). One research tradition focuses on building models based on what we will call positive feedback processes; the other bases its studies on negative feedback models. In this introductory chapter, we lay out these contrasting views and explain the importance of integrating them.

This book is designed with an important theoretical ambition in mind. The study of public policy (and American politics more generally) has too often been divided into groups of scholars different parts of the same process. Many scholars focus their attention on explaining the smooth functioning of policy systems working within powerful and relatively stable institutional constraints. Such studies often show remarkable predictive powers and allow their

authors to use sophisticated techniques of prediction and analysis. Other scholars often ask much broader questions and analyze issues over much longer periods of time or across many different institutional venues. Their work tends to have a more qualitative character, partly because the issues that they study are not clearly contained within the activities of any one institution. Students of institutions have been much more successful in modeling and in showing statistically significant predictions than have students of policy.

We want to show the importance of a combined view. Institutions, we will argue, are almost always endogenous to the policy process. Though they may remain in place for decades or longer, their organization, structure, and rules of participation tend to induce a certain type of outcome. (In other words, institutions generally have purposes, an assertion that readers should find utterly uncontroversial.) The problem for the scholar who would hope to understand the American policy process is that it is deceptively easy to model the smooth functioning of an institution, but doing so ignores some important questions. Where did the institution come from? What political forces conspired to make the institution be designed in one way rather than another? How capable is the institution of exerting its authority over rival institutions? If we want to understand the ways in which government responds to important social problems, then we must look not only at the periods during which institutions produce policies in a smooth and consistent manner, but also at those periods in history when the institutions themselves are reorganized, and at how institutions compete with each other for control over important public policies. In previous work (Baumgartner and Jones 1993), we argued that American public policy is an ever-changing mosaic, with some policies being smoothly handled within policy subsystems and with little public attention, but with other policies being the subject of considerable public debate and institutional struggle. A complete understanding of the process

requires attention to both types of process. The chapters that follow develop these ideas in greater detail.

A second goal of the book is to introduce scholars, students and others to some straightforward techniques of studying policy change. One of the truly great failings of the policy sciences has been the inability to produce longitudinal studies that are reliable. Many times, as we show in Chapter 2, data used for policy analysis is simply not equivalent across time. We have collected a series of reliable policy indicators across time, and believe that the broadest possible availability of this and similar information will help us develop a more comprehensive understanding of how public policies are formulated and changed.

Each of the chapters of this book reports some original research tracing the functioning of an institution of government or a particular policy issue over time. The methods used here may be applied more broadly to other policy arenas, especially since most of the data reported are publicly available through our web site and on the attached CD (we explain this more fully in Chapter 2). We want to encourage the systematic and longitudinal study of public policy, and we have made available many of the resources necessary to do that for any number of issues.

In this chapter, we introduce the most important themes that are picked up in the subsequent chapters. We begin with a discussion of negative feedback processes. These are the mechanisms that induce stability and incrementalism in public policy, and they are fundamental to most models of bureaucratic behavior, the functioning of policy subsystems, concepts of interest-group pluralism, models of democratic gridlock, and to other prominent views of the policy process. Though rarely described in the terms that we use here, all these models have in common an adherence to a negative feedback model of the political process, one where shocks to the system are dampened, where pressures from one side lead to counter-pressures from another

side, and in general where self-corrective mechanisms keep the system on an even keel. We then turn our attention of positive feedback models of politics—models in which ideas of momentum, band-wagon effects, thresholds, and cascades play a more important role. In these processes, dramatic and unpredictable changes to public policy are more common, as in the literatures on issue-definition, agenda-setting, and policy entrepreneurship. Rather than self-correction, these models are characterized by self-reinforcing processes in which change in one case makes change in the next case more likely. Like a market in which consumers prefer to own a stock that is going up in value, initial increases can become self-perpetuating, at least for a time. Many political phenomenon share characteristics of positive feedback mechanisms, as for example when political leaders sense that the public is increasingly concerned with an issue such as gun control. The more the leaders talk about the issue, the more the public may be concerned with it, and the cycle can last for quite some time. In sum, the political system shows important characteristics of both negative and positive feedback processes, though the two do not operate at the same time for the same issue.

Our goal is to point out that a complete view of the political system must include both positive and negative feedback processes. Most importantly, we will argue, the processes that make one of them possible also make the other one inevitable. Therefore any theory that focuses on one must also make room for the other. Fundamental to the differences between positive and negative feedback systems in public policy are the roles and structures of institutions. We review the important role of institutional design in promoting negative feedback processes, but also in making inevitable certain periods of institutional redesign, and therefore positive feedback processes as well. We conclude the chapter with a quick discussion of the merits of longitudinal

analyses of individual policies as well as system-level views. Subsequent chapters, then, take up these points in detail.

Negative Feedback

A negative feedback system includes a homeostatic process or a self-correcting mechanism. Just as a thermostat adjusts to falling temperatures by putting out more heat, homeostatic devices work to maintain stability. Whatever the direction of the outside force, the homeostatic device operates in the opposite way when the outside force becomes too strong; the result is to maintain steady outputs in the face of changing external pressures. The key element of any negative feedback system is simply that the system react to counter-balance, rather than reinforce, any changes coming in from the environment. Negative feedback systems are extremely common in political science and in public policy. Many public policies, such as counter-inflationary actions of the Federal Reserve, are explicitly designed to be homeostatic: Where inflationary pressures are seen to rise, the Fed tightens credit policies, working to counter-balance the incipient inflation and to keep the economy on an even track. Unemployment compensation, anti-poverty programs, price supports for farmers, and many other entitlement programs are explicitly homeostatic in that they are designed to activate automatically in response to changes in the condition they are supposed to regulate (see Boynton 1989).

Many models of congressional and bureaucratic behavior include explicit homeostatic processes. Members interested in reelection provide benefits to constituency groups that mobilize to support them, pulling back from further support when rival groups make clear their own power. The result is that the political system never leads to ever-increasing power to any single group, but rather to distributions of support that remain within certain bounds. Peltzman's (1976) model of regulatory capture models a government decision-maker choosing to allocate resources

to one of two groups: Consumers or business. Members of these competing constituencies then support or oppose the political decision-maker depending on the actions he has taken. Where the decisions veer too far in one direction, the opposite group mobilizes to show its own power, supporting a challenging candidate, for example. With political support distributed between the two competing constituency groups, the decision-maker is constrained to operate only within a certain band of action. The result is an equilibrium outcome that illustrates the negative feedback processes common to many theories of politics and policy.

Bender and Moe (1985, 1986) present a more realistic model than Peltzman; their model includes agency leaders hoping to receive budget increases, legislators hoping for reelection, and competing interest-group coalitions hoping for certain government policies. Here, too, the key elements are essentially homeostatic: The competing interest groups provide or withdraw support from elected officials depending on the policies being produced. The elected officials then adjust their views on future policy changes in order to maintain adequate public support to be reelected. They provide support or cutbacks to agency leaders who are producing these outcomes, basing each year's budget on the performance and outcomes generated by previous experience. The result is a closed and mutually adjusting system that ensures that policies reflect the competing interests and the relative strengths of those concerned. Bender and Moe refer to this "pluralist equilibrium" as a "very stable balance-of-power system" (1985, 769).

Some form of negative feedback, or diminishing returns to scale, is required in any equilibrium model and is therefore a part of any neo-institutional analysis. Without counter-mobilization, political interests would gather ever-increasing powers until they overwhelmed the entire political system. We can see diminishing returns in any number of institutionalist models. Models of distributional politics in Congress focus on how committees may become stacked with

“high demanders” working through their institutional positions to pull congressional policies to support their own constituents at the expense of the chamber preference (Fiorina 1974; Shepsle and Weingast 1987). Increasing costs accrue as the committee pulls the policy further and further from the chamber preference: A negative feedback mechanism that ensures that an equilibrium outcome will be possible. The equilibrium outcome may be different from the chamber preference, but it will be an equilibrium. Similarly in Krehbiel’s (1991) informational model, specialists invest in expertise because they gain policy control. The floor grants them this control as long as their policies do not go too far from the chamber preference. The two models may predict different equilibrium outcomes, but each includes a mechanism of diminishing returns making it impossible for the committee to veer further and further from the chamber. Models of bureaucratic oversight (McCubbins and Schwartz 1984) posit an increasing likelihood that Congress will act to reign in an agency as that agency’s behavior veers further from congressional preferences. Virtually all models of institutional behavior involve a strong element of diminishing returns, since this is necessary for an equilibrium analysis. (And, we might add, because it conforms to how things work in most cases.)

A focus on equilibrium analysis and an institutional, rational-choice perspective is not a necessary requirement for a negative feedback process. The literature on bounded rationality, incrementalism, and administrative behavior more generally is also characterized by negative feedback systems. Standard operating procedures, rules of thumb, and decision-making by incrementalism have in common a focus on the relative stability of expected policy outcomes. In the absence of dramatic revisions to the procedures themselves, decisions should be made according to a process that induces stable outcomes (see Lindblom 1960; Wildavsky 1964; Simon 1997). Not only are the institutional approaches to congressional behavior, congressional

oversight of the bureaucracy, and administrative behavior more generally dominated by models of negative feedback, but the vast literature on policy subsystems is as well.

From Griffith's (1939) discussion of "policy whirlpools" through Cater's (1964) study of policy subsystems and Lowi's (1969) description of "interest-group liberalism," scholars through the decades have noted the tendency for communities of like-minded interests to dominate policy-making in their areas. Those with technical expertise often have a vested interest in increased spending in a given area, and those without the expertise often have other priorities. The result, which has been noted and documented by scholars in every decade of the 20th century, is the predominance of "iron triangles," "policy subsystems," "systems of limited participation," or "policy monopolies" in many areas of American public policy. These models of subsystem power all have in common a view that increased power stems from autonomy from the broader political system. These models also note inherent limits to this power, however. Diminishing returns are evident since a policy subsystem is not expected to grow to overtake the entire political system. Where demands grow to be too great, political leaders reign the system back in, or rival subsystems attack. The result is an equilibrium outcome that may differ from the general good, but an equilibrium nonetheless.

Probably the most important negative feedback theory of American politics in general has been David Truman's "disturbance theory," the foundation of pluralism. In this view, "disturbances" to the established order—be they economic shocks, natural disasters, wars, or the actions of rival interest groups—that have the large negative effects on a given social group will naturally and inevitably lead to the reaction and the mobilization of that constituency. The suffering group will organize, mobilize, and demand redress—it will "put things right." In this pluralist perspective, the self-correcting genius of American democracy was in effect a negative

feedback system: Any strong push in one direction could be expected to be countered by an equal and opposite push, never allowing the political system to veer too far from an underlying equilibrium. Of course the general view of the entire political system as a huge self-correcting mechanism came under strong and justified attack (for a review, see Baumgartner and Leech 1998). However, there are many areas of public policy where negative feedback systems operate over long periods of time.

In our previous work (Baumgartner and Jones 1993), we noted the importance of policy monopolies in creating stable policy outcomes, often for extremely long periods of time. We described the dual roles of institutions and ideas in buttressing these policy monopolies. Institutional structures limit who can participate in the policy debate, and powerful supporting ideas often limit the ways in which the given issue is discussed. Where the institutional venues of decision-making are stable, and where a positive policy image supports a given policy, powerful negative feedback processes can operate, creating a strongly homeostatic system that generates stable policy outcomes for decades. One important element of the stable operation of policy monopolies is the policy image, or the supporting set of ideas structuring how policy-makers think about and discuss the policy. Where poverty policy is considered from a perspective of helping children avoid the scourge of growing up without the best chances of success, more generous policies are supported than where the policy is considered from a perspective of cutting back on government hand-outs. As long as the policy image remains stable, it is difficult to justify a radical rethinking of the resulting policy. Policy images, therefore, play an important role in promoting negative feedback processes.

Institutional structures, or venues, constitute the second element of our previous explanation of the strength of policy monopolies. Where institutional rules are clear and

restrictive, structuring who has legitimate standing to participate and who can be labeled an “outsider,” then a group of authorities can implement a relatively stable set of policies for as long as they retain their authority. Since the leaders of government agencies typically have a vision of what policies they seek to promote, the relative autonomy of a given institution to implement the policies it favors is an important element in understanding almost any area of public policy.

Where institutional structures are clear, then those promoting radical revisions from the status quo can often be dismissed as uninformed, irresponsible, or dangerous. As a result, powerful government institutions operating with autonomy and according to standard operating procedures that limit participation only to those granted authority can be a further source of the politics of negative feedback. Powerful institutions acting with set relations to the broader political system tend to produce relatively stable outcomes.

Negative feedback systems are fundamental to understanding a great variety of areas of public policy, and they are central to most theories of politics. They help explain equilibrium behavior of many kinds, and they are central to understanding the roles of voters in elections, interest groups, bureaucrats, and Members of Congress. No theory of politics would be complete without an understanding of negative feedback processes. The same can be said of positive feedback processes.

Positive Feedback

A positive feedback mechanism includes a self-reinforcing process that accentuates rather than counterbalances a trend. If we observe such a process operating through time, we find considerable clustering of events, along with large and generally unexpected changes. The world is more changeable and erratic than we would like to believe.

Mathematician Benoit Mandelbrot (1983: 248-49) refers to the Noah and Joseph effects to indicate the tendency of many time series to cluster beyond what would be expected if only random effects were operating. He calls them by these names to refer to the Biblical periods of floods and droughts. Occasionally, and far more frequently than would be expected according to standard models of random processes, extraordinarily large changes occur, or a series of unexpected events continues for longer than randomness would lead one to expect. Building not from theory so much as from observations of a variety of social and economic phenomena, Mandelbrot notes that many processes lead to greater than generally expected fluctuations. He distinguishes between *mild* randomness (where essentially random, Gaussian processes are in effect) and *wild* randomness (where behavior is more erratic than would be expected by chance). In the case of wild randomness, large punctuations occur, punctuations that occur too frequently within the operating parameters of “mild,” Gaussian, randomness. In sum, many social and economic processes exhibit what he calls wild randomness—we will see many examples of these in the pages that follow. The federal budget, for example, shows characteristics of exaggerated incrementalism combined with a great number of extremely dramatic changes, many times more than would be expected with a random model of change.

By their nature positive feedback systems are explosive rather than stabilizing. They operate in the social sphere as well as in the physical realm. Bender and Moe (1985) note that in a negative feedback process, “success is self-limiting” because the gains of one side lead to the mobilization of the opposing side. No such luck where positive feedback systems are operating: “In such a world, the positive feedback of the Matthew effect—‘To him who hath shall be given’—creates an unstable system of cumulative advantages” (1985, 771). (When scholars contemplate an unbalanced and hard-to-explain world, they seem compelled to turn to biblical

metaphors.) In any case, we note that many authors have paid attention to the different logics of positive and negative feedback systems.

Economist Brian Arthur has described elements of positive feedback in the economy. Initial success in gaining market share can make additional gains come more easily, rather than reaching a diminishing return as in a negative feedback model. Computer operating systems and widely used software packages are familiar examples of markets where the increasing returns to scale seem to operate. Part of the value of a given operating system or word processing software is not so much that it is superior to another one on technical grounds, but rather that many others use it so that files can easily be shared with colleagues and co-workers. In any situation where a consumer's choice is determined by the number of other consumers making the same choice, then positive returns to scale may operate. Whichever producer establishes an initial lead in the market may well go on to dominate the market completely, if consumers are purchasing partly on the basis of this logic. Studies of the spread of many products, such as the QWERTY keyboard, video standards (VHS or Betamax), computer operating systems, and other technologies have shown this, as have studies of fashion trends, fads, and cultural norms (see Schelling 1978; David 1985; Banerjee 1992; Arthur 1994; Axelrod 1997).

Positive returns and "lock-ins" in the economy have been challenged on both empirical and theoretical grounds (Liebowitz and Margolis 1999). On the other hand, most students of economic booms and busts point to self-sustaining bursts of optimism or pessimism (Kindleberger 1996). The more interesting question is whether a broader rolling equilibrium that is destabilized but not destroyed by occasional severe positive feedback episodes is sustained in modern capitalist economies and liberal democracies.

Studies of industrial location have noted a similar self-reinforcing trend: As a given city becomes known for the production of a particular item, the reputation can be self-perpetuating even if its initial choice was purely random. Suppliers locate nearby; a skilled and experienced workforce develops that cannot be easily replicated; economies of scale are created as the local industry grows; and these trends all reinforce each other (see Krugman 1997). A great variety of industrial standards, including railway gauges, electrical plugs, and other familiar items exhibit this characteristic: More important than making the “correct” choice on technical grounds, one simply wants to make the same choice as everyone else, so that goods can be shared most easily. Many markets exhibit positive returns to scale; one key element that they have in common is that the decisions of one depend on the decisions of those around them.

In politics, two processes are generally responsible for positive feedback; both have to do with how individuals make decisions. The first operates when people observe the behavior of others and act accordingly. Cue-taking or mimicking models help us understand this type of behavior. The second operates because people, in the words of Herbert Simon, are “serial information processors.” They attend to only limited parts of the world at any given time. They use a limited number of attributes to understand the world. If they become aware of the relevance of un-attended attributes, then their decisions can change dramatically. When people shift attention from one element of a decision to another, they may rapidly and unpredictably change their minds. Models of incremental decision-making typically rely on an assumption of unidimensionality, but where underlying decisions involve a great number of unrelated dimensions, decisions can shift dramatically when the decision-maker shifts from one dimension of evaluation to another.

Mimicking

The political advice that it is best to “go with a winner” is an apt description of how positive feedback can affect political life. Candidates for office attempting to raise money find that their perceived chances of success limit or stimulate their ability to find other supporters. Where potential donors feel the candidate has little chance of success, they may prefer to support a rival. Without money, it is hard to promote one’s message, leading to a downward cycle. Conversely, where people feel that the candidate has the potential to be a legitimate contender, money may flow more easily, thus making it easier to hire the best staff, purchase media ads, travel, and develop further popular support. So the cycle can be either positive or negative, but in either case it is self-reinforcing rather than self-limiting.

Larry Bartels has developed a model of primary voting where voters are concerned with two things: Their own views of the candidate, and their estimate of the candidate’s chances of winning. Where the chances of winning are extremely low, they will not support the candidate even if they agree with her views (e.g., they do not want to “waste their vote”). Where the voters see that there is a greater chance of success, on the other hand, they become more willing to provide support. The result is a simple explanation for the concept of “momentum” in presidential primaries, and an assessment of the importance of early primary victories. Early victories lead to more press coverage, greater name recognition, easier fund-raising, less attention to competitors, and other advantages. Perhaps most importantly, they increase the chances that likely voters will consider the candidate to be “viable.” This, in turn, increases voters’ willingness to vote for the candidate (see Bartels 1988, 27). Of course, winning a presidential race is not purely a question of early primary victories; the candidate must retain support over the long haul. But Bartels shows how positive feedback effects are central to the electoral process.

Positive feedback processes have been seen to operate in the growth of social movements. Here again, the critical variable seems to be the degree to which a single person's decision to participate is conditioned on their estimate of the likely behaviors of those around them. Where one sees all one's neighbors ready to participate in a protest or social action, one becomes much more willing to participate oneself. Two people with the same attitudes, but living in different neighborhoods, might behave quite differently. Matthew Crenson (1987) has shown the impact of context in why some urban neighborhoods have so many norms of cooperation, and high property values, whereas others decline into a complete lack of coordinated action; a similar pattern of virtuous and vicious cycles is apparent in Putnam's study of civic life in Italy (1993). Phil Converse and Roy Pierce (1986) found that participation in strikes, riots, and demonstrations during the May 1968 events in France depended largely on how close the events were to one's residence, among other things. People cannot riot or demonstrate alone, no matter how strongly they may feel compelled. Social movements of many kinds are characterized by sensitivity to context, and therefore by positive feedback.

Dennis Chong (1991) shows the role of leadership and expected success in the civil rights movement: Where many saw their neighbors participating, they overcame their fears; where few saw their neighbors participating, they were less likely to participate themselves. The participation of neighbors and the expectation of success appear to be important predictors of participation in a great variety of social and protest movements (see Converse and Pierce 1986 concerning the May 1968 riots and demonstrations in France, and Lohmann 1994 concerning the demonstrations leading to the fall of the German Democratic Republic in 1991). All these models have in common a positive feedback process at their core, and they help explain the

explosive nature of many social and protest movements: Either they fail utterly or they can be the subject of explosive growth once they reach a certain threshold (see Granovetter 1978).

Attribute-Based Information-processing

Positive feedback processes do not invariably involve the mimicking actions of many individuals. Positive feedback also affects individual-level decision-making. William Riker (1984, 1986) noted that strategically minded politicians could often have dramatic effects on public debates or parliamentary voting by shifting the elements of debate from a losing issue to a winning one. Jones (1994) has developed an individual decision-making model involving attributes (John Zaller calls these “considerations”) that underlie a set of political alternatives (such as issues before a legislature or candidates before an electorate). A decision-maker can attend to only a very limited number of such attributes or considerations. If, during a debate, one’s attention is shifted from one attribute to another, as Jones shows formally, a decision may be reversed.

Such reversals are a critical component of the instability that characterizes occasional positive feedback in politics. So long as one’s understanding of a political issue is dominated by one attribute, there is likely to be little change (negative feedback dominates). But when new attributes come to be salient, then more substantial change is possible (positive feedback may emerge). The attention model of political debate shows the importance of the ability to focus attention on one dimension of the issue rather than on another. Where one side portrays an issue as relating to states’ rights, a rival might propose that the issue really concerns racial equality. The more people participating in the debate who support one of these views over the other, the more difficult it becomes to maintain the contrary view. Political debates therefore can exhibit

the signature characteristics of positive feedback, since the behavior of an individual can be seen to be closely tied to the behaviors of those around them.

Positive Feedback in Policy Processes

In previous work, we have shown how changing public images of a given policy question can interact with changing institutional venues of activity to produce surprisingly rapid changes in public policy. Where a given policy monopoly begins to lose its supporting policy image, rival institutions of government which may not have been involved in the issue previously may assert their authority to become involved. The more hostile agencies that become involved, the greater the change in image; the greater the degradation of the image, the more new political leaders and agencies will want to become involved, and the cycle continues. This positive feedback mechanism explained some of the rapid shifts we observed with public policies towards nuclear power, pesticides, smoking, and other areas (see Baumgartner and Jones 1993).

The same logic that applied to markets, elections, social movements, and policy change also applies to individual strategies of policy making, lobbying, and decision-making within a legislature. We can establish an extremely simple model of a policy maker's willingness to spend effort on one issue rather than another. Consider the choices available to a policy maker operating under a condition of scarcity of attention. The person might be an elected official, a lobbyist, an appointed official, or a staff member giving advice to such a person; the key element is that they must choose the issues on which to spend their time, organizational resources, and energy (see Salisbury and Shepsle 1981; Browne 1995; Hall 1996). One thing they might prefer is to work on issues that have a chance of success rather than on those issues that are sure to go nowhere.

If the probability of any action on the issue is zero, then there is little reason to focus attention on the issue, since there is no expected benefit. What would cause the probability of success to rise? One important element is the expected behaviors of other relevant actors. This is why focusing events can be so important, and why policy making in Washington and elsewhere often exhibits a herd-like phenomenon characteristic of positive feedback processes. A given issue may be stalled for years, but suddenly attracts the attention of many policy makers. This can happen not because any preferences change, but only because expectations change concerning the probability of government action. With many actors simultaneously paying attention to the expected willingness of others to pay attention to the issue and to expend resources in bringing about change, they may all change in rapid response to each other, or to a commonly perceived event. So a prominent technical study, or a stochastic event such as a high-school shooting bringing attention to the issue of gun-control, can be important not so much because it changes anyone's mind about how serious the issue is (though this may well happen), but because it may change policy makers' calculations about the willingness of allies to become involved in the struggle. The expectation of success itself can create momentum. Of course the mobilization of one side can lead to the counter-mobilization of the other side, as in the negative feedback processes discussed in the previous section. In the case of gun control in the wake of the Littleton, Colorado high school shootings, as in many other cases with such prominent focusing events, the more remarkable phenomenon is how the event mobilizes one side tremendously while it demobilizes the other. Certainly, these mobilizations do not last forever (positive feedback processes must come to an end at some point), but the important question is how much policy change may be enacted during or as a direct result of the period of heightened attention to the issue generated during this short burst of increased attention. Often, important

policies are adapted remarkably quickly, even after the same issue had gone nowhere in previous years.

The willingness of a political actor to invest resources in a given lobbying struggle are likely to be related to two things: The probability of success (and therefore the expected behaviors of other actors involved), and the expected benefits. Expected benefits may change only slowly or not at all, but the expected behaviors of other relevant actors can often change dramatically and in rapid response to commonly perceived crises, focusing events, the release of studies, Presidential pronouncements, or other premeditated or stochastic events. Therefore positive feedback processes, or policy bandwagons, can occur very quickly and without any change in the expected policy benefits to the various actors involved. More likely than a change in policy benefits is a change in the expected actions of others.

Many processes relevant to policy change show elements of positive feedback, just as negative feedback is central to understanding policy change as well. Most important from our perspective, large-scale decisions about institutional design are often made during periods of heightened attention to an issue; these often have substantial long-term consequences. Central to our view of the links between positive feedback processes, which are relatively rare and by definition short-lived, and negative feedback, which are more common and more long-lasting, is the role of institutional design.

Institutional Design

When Aaron Wildavsky (1964) looked at federal budgetary processes and noted the importance of incrementalism, he was careful to limit his analysis of yearly budgets to units that could directly be compared. Therefore he eliminated from consideration those cases where new programs and agencies were created, radically modified, or terminated, looking instead only at

the years of “steady-state” functioning of existing institutions. When Richard Fenno did his landmark study of the congressional budgetary process, he also deleted all cases that threatened “organizational integrity” (1966). As studies of “steady-state” budgeting, one could hardly do better than these two projects, and together they demonstrated the importance of inertial forces, a finding has been one of the most influential in the literature not just on budgeting, but on public policy overall. Of course, one might question what happens when all the observations are used.

Several scholars, including Wildavsky, have looked at more inclusive datasets and they have consistently found a combination of the same levels of incrementalism with a significant amount of non-incremental, radical change (see Davis, Dempster, and Wildavsky 1966; Jones, Baumgartner, and True 1998). In sum, the federal budgetary process is characterized by considerable incrementalism and stability, to be sure, but also by a remarkable degree of radical change. Key to the differences in these two outcomes are questions of institutional design.

Institutions are typically created, terminated, or their procedures radically modified during periods of heightened attention to their purposes. Those involved in making these restructuring decisions typically have certain goals in mind. Therefore, institutions are typically designed to structure participation in certain ways, encourage the use of some forms of information rather than others, and to discourage other forms of participation and other forms of information. In particular, institutions often promote certain issue-definitions by requiring that the leaders pay attention to some types of information before others. The Environmental Protection Agency looks at issues differently than the Small Business Administration; the Anti-Trust Division of the Justice Department has different staff expertise, different reporting requirements, and different priorities than does the Department of Commerce. If institutions are often created and reorganized during periods of heightened attention to a given problem, they do

not disappear when public concern dies away; rather, they may be the most important legacies of agenda access. After an issue is no longer part of the public agenda, the institutions, procedures, and biases that these encourage, designed to achieve one set of goals rather than another, remain in place.

Most important social problems that government institutions may be designed to alleviate are extremely complex, but the institutions designed to attack these problems often are given the particular mandate to focus on one element of the problem more than on another. Of course, the institution may change its focus as it becomes clear that the problem has other causes that must be addressed. More typically, however, we design institutions with only a partial mandate to focus on one dimension of an inherently multidimensional problem. Welfare programs are designed to alleviate the problems of poverty, but of course their main focus is typically to distribute aid to poor people: It would be outside of their mandate to envision a radically different approach to the problem. So, if underlying social problems are largely multi-dimensional, but if institutions are designed to focus on one or a small range of these dimensions but to ignore others, then it is inevitable that periodically there will be demands for their re-organization, or at least their re-calibration. Rival institutions are often created that approach the same problem from a different perspective, and in time these jurisdictional overlaps multiply. The result of this is that institutions often promote a certain simplified view of a more complex social issue. More importantly for our purposes here, the smooth functioning of a given set of institutions can often be expected to be interrupted by periodic recognition that it is not solving the entire underlying problem. Periods of negative feedback may alternate with periods of positive feedback during which attention focuses on some new element of the problem, and new institutions are formed.

If the underlying social issue that they are designed to deal with is especially complex (e.g., poverty, parity in international trade flows, parity in income between agricultural workers and city-dwellers), it is unlikely if not impossible that the procedures decided upon will push towards a global solution of the broader problem. One anti-poverty program may be quite effective at addressing certain parts of the problem (e.g., guaranteeing the poorest families some minimum level of subsistence), but when attention shifts to greater concern with another element of the problem (e.g., the creation of dependencies), the program may not appear as successful. Calls for reform may occur, or new programs may be created in the wake of increased attention to a previously unattended dimension of the same problem.

So a multi-dimensional social issue may be subject to the same types of cycling and instability problems that formal theorists have discussed in relation to social choices in general. Even if a set of institutions successfully works towards achieving a certain goal, at some point in the future it could be destabilized as attention shifts to another dimension of the issue. This is more likely, of course, where the problems are complex and/or incompletely understood; less likely where the institution implements a straightforward technology managing a well-understood task (e.g., delivering the mail). But even in the relatively simple cases, disruptions occur.

Many theories of public policy focus their attention, as Wildavsky did, on the periods of smooth functioning of a given set of institutional structures. Not surprisingly, these are the theories that focus on negative feedback mechanisms, as discussed in a previous section. Other theories ask where the institutional structures come from. Invariably, they note the policy goals that institutional designers are attempting to create (or frustrate) as they structure future participation. A complete understanding of public policy must show respect for the impact of

institutions as they structure behavior, but at the same time it must note that these institutional structures themselves are subject to occasional change. To do this it is generally necessary to look at public policy processes over a long period of time. More importantly, it is paramount that the analyst avoid choosing as the scope of attention only the behaviors of a single institution.

Rather than look at a single institution, it is more fruitful to choose an issue and note how various institutions become involved in its resolution. In the chapters that follow, various authors look at a range of public policies and a range of institutions. By tracing public policy over the entire post-war period, most of the chapters that follow note periods that show a smoothly functioning negative-feedback system carefully working to perpetuate a given policy goal as well as other periods when the institutional structures surrounding the issue are themselves thrown into doubt and dramatic restructurings occur. As we continue to look at a range of public policy issues and at diverse elements of the policy process, we find a consistent pattern of positive and negative feedback processes alternating irregularly in most areas of public policy. The result is a view of government comprised of a complex mosaic of ever-altering structures of limited participation and attention.