Beyond History Versus Theory
Strategic Narrative and Sociological Explanation

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Debates about the appropriate relationship between history and theory are both as old as sociology itself and continuing features of our professional landscape (see, e.g., Durkheim [1895] 1966; Weber [1903-1917] 1949; Tilly 1984; Skocpol 1984; Isaac and Griffith 1989; Kiser and Hechter 1991). This article suggests the concept of strategic narrative as a useful frame for constructing the history-theory relationship in qualitative, historical research. In the first section, I develop the concept of strategic narrative as a way of organizing a continuous and productive interplay of history and theory. In the second section, I use my ongoing investigations into the politics of social science in regulatory law to demonstrate research procedures that operationalize the strategic narrative approach.

CONSTRUCTING THE HISTORY-THEORY RELATIONSHIP AS STRATEGIC NARRATIVE

HISTORY, THEORY, AND STRATEGIC NARRATIVE

Narratives are sequential accounts. They organize material into chronological order to tell stories about what happened (Stone 1979). These stories are conceptual wholes, built through selection and chronological linkage of otherwise discrete parts, each of which then takes on meaning in light of the whole (Griffin 1993). Adopting a narrative form requires the narrator to focus on individual, institutional, or collective actors; the actions they take; and when, where, why, how, and with what consequences they take them. Thus, explicitly or implicitly, narratives not only tell us what happened but they also explain why it happened as it did and not otherwise. Because explanations built on narrative become appropriate and useful to the extent that temporal ordering is crucial, it is no accident that historical sociologists are responsible for importing the construct of narrative from the humanities and transforming it to serve as an analytic tool for social science (see, e.g., Griffin 1993; Abbott 1992; Quadagno and Knapp 1992; Sewell forthcoming; Aminzade 1992).

The popularity of narrative as a term among historical sociologists today signals the latest attempt to promote for sociology an explanatory form that follows Weber in seeking interpretive and causal understanding of historical happenings treated as valid objects of social science inquiry in their own right. Contemporary debates contrasting narrative and nonnarrative approaches (see, e.g., Griffin 1992; Sewell forthcoming) reconstruct long-standing tensions in historical sociology between seeking interpretive understanding of con-
crete, specific events and processes (e.g., Bendix 1977, 1978) and building and evaluating more abstract, general theories (e.g., Moore 1966).

Above all, contemporary scholarship invokes the language of narrative to refashion the way historical sociologists treat time. Sewell (forthcoming) distinguishes three ways historical sociologists incorporate time: teleological, experimental, and eventful. Griffin (1992) further elucidated Sewell’s distinctions, folding experimental temporality into a similar, but broader category that he labels contextual. Among contemporary historical sociologists, the teleological approach, in which history proceeds in a predetermined way toward a predetermined end, is much less popular than the contextual approach. Many of the temporally and spatially bounded causal explanations constructed by historical-comparativists rely heavily on the notion of time as context. Quantitative historical researchers likewise often rely on time as context (Griffin 1992). In case-oriented comparisons, time as context frequently is used to set up quasi-experimental research designs in which variation in historical outcomes is explained, at least in part, by variation in institutional or cultural context. Contextual variations operationalize explanatory constructs, which, depending on the analyst, may be relatively concrete or abstract and which may represent single explanatory factors or complex conjunctions of such factors (see, e.g., Rueschemeyer, Stephens, and Stephens 1992; Skocpol 1979; Lipset 1994). Narrativist emphasis on eventful time highlights especially how actors’ creative use of the rules and resources that constitute structure reproduces or alters that structure.

Whereas some scholars adopt narrative as part of a radical anti-generalizing strategy (Sewell forthcoming), others see narrative as a tool for joining sequentiality, contingency, and generalizability (Quadagno and Knapp 1992). In the former view, historically contingent means “intrinsically unpredictable” (Sewell forthcoming); the unfolding of particular, structurally transformative happenings are to be understood primarily on their own terms; and narrative replaces more traditional methods of historical-sociological research. In the latter view, narrative is an adjunct to, rather than replacement for, more traditional research techniques (Quadagno and Knapp 1992; Abbott 1992). In particular, narrative is married to comparisons, such that the comparativists’ goal of context-specific causal generalization remains intact. With eventful time as an adjunct to time as context, the limited historical generalizations favored by comparativists become more attentive, not only to sequence and path dependency but also to unique events as complex conjunctures of “intersecting causal paths” creating present “potentialities” (Quadagno and Knapp 1992, pp. 499, 503). With eventful time as an adjunct to time as context, historical contingency connotes open-endedness and novelty, as well as causation through a conjunction of factors, statistical interactions, and scope
conditions. Nevertheless, attentiveness to human creativity and novelty does not preclude probabilistic predictions about what is more or less likely to happen, nor, when historical "surprises" occur, does it preclude appreciating their likely further consequences.

In short, when read as a corrective rather than as a replacement for more traditional research strategies in historical sociology, narrative approaches remind sociologists to "work at getting the history right . . . in order to be able to generalize soundly" (Tilly 1984, p. 79; see also a similar exhortation by Quadagno and Knapp 1992, pp. 483-84). They also help us get the history right by broadening the way we conceptualize time both for purposes of explaining specific events and for constructing general theories. In this regard, they encourage us to attend especially to time as path-dependent action sequence as well as to time as context. Finally, they remind those of us who stress theory building that we must go beyond what others have said about historical events. Theory as well as history improves when we "adopt a tenacious interest in explaining and interpreting what really happened" (Griffin 1991, p. 2) by also doing careful, primary historical research.

So far, discussion of narrative has focused on the history part of historical sociology and begged the question of what is theory. Rehabilitating narrative as a valid explanatory form can also be read as rebellion against reducing history to "mere data" and to the extreme "separation of theory and history" that characterizes the construction and testing of deductive general theories (Isaac and Griffin 1989, p. 874). Although narrativists cannot fairly claim that deductivists fail to link theory and history, they do claim that linkages forged are unsatisfying.

For deductivists, theory is a logically interconnected set of abstract, general, and conditional propositions that contain defined concepts and that hold within a defined, abstractly delineated scope (e.g., Markovsky 1994; Kiser and Hechter 1991). Theory and history are defined independently and juxtaposed to one and other. They are linked when theory "subsumes" historical events, that is, when events provide observable instances of abstract concepts and underlying theoretical processes. Derived predictions or hypotheses are tested against historical events; history supplies evidence that may be consistent or inconsistent with theoretical predictions formulated outside of and without reference to it. In short, deductivists often treat history as an unproblematic set of "facts" and presume that theories can explain history's unfolding without explicitly attending to temporality as sequence, contingency, and/or path dependency.

In contrast, the theory-history linkage envisioned by narrativists insists on the mutual theorization of history and historicization of theory (see, e.g., Isaac and Griffin 1989; Griffin 1993; Quadagno and Knapp 1992). As shown clearly by Weber ([1904-5] 1958, [1903-17] 1949) among many others, the notion that historians reproduce a stream of facts without mediation by theory is nonsense. Figuring out who did what, when, where, why, how, and with what consequences is an exercise in which facts are simultaneously conceptually-constructed and theoretically interpreted. It is part of the very process of theory building. Conversely, theories that purport to explain or predict the flow of history will likely be better to the extent that the theorist has seriously engaged "what really happened" and has constructed "what really happened" guided by the full range of conceptualizations of time offered by historical sociology. Again, this includes time as path-dependent action sequence as well as time as context. Strategic narrative provides a frame encouraging the researcher to capitalize on the mutual construction of theory and history by combining, extending, and precisely operationalizing central narrative and comparative research techniques.

In fact, strategic narrative is a sensitizing concept for constructing the theory-history relationship in qualitative, historical research. Because a narrative is a story of what happened and strategic connotes both essential and advantageous, strategic narrative suggests that some stories about who did what, when, where, why, how, and with what consequences will be more necessary and useful for theory building and for the mutual construction of history and theory than will others. In turn, because theory provides us with cognitive tools to shape meaningful relationships among multiple, apparently diverse stories, strategic narrative implies that constructing some narratives rather than others enables qualitative, historical sociologists to contribute most effectively to the cumulation of social science knowledge.

**FOUR CENTRAL ASPECTS OF STRATEGIC NARRATIVE**

If some narratives truly are more strategic than others, how do we know whether or not we are constructing strategic ones? First, doing
strategic narrative means incorporating particular views of history, of theory, and of their interrelationship. Second, doing strategic narrative compels us to construct history as both path-dependent action sequence and as context and to do so in a way that responds to clearly articulated theoretical issues. In turn, this requires that we state our reasons for selecting the history we choose to construct in terms of explicitly formulated theoretical questions, that we consider how these selection criteria affect our historical constructions, and that we interpret our resulting historical constructions in explicitly theoretical terms.

Third, doing strategic narrative involves using primary sources to craft narratives that are likely to feed back into, and modify, theory because they are constructed anomalies or puzzles with reference to a backdrop that is both comparative-historical and theoretical. Close empirical examination of these constructed anomalies sets the stage for systematic design of broader comparative research to be executed in phases. Each phase combines narrative and comparative logic and primary and secondary data to provide self-contained responses to specific theoretical questions; all phases together combine to respond to the full range of articulated theoretical issues that motivate the broader comparative design.

Fourth, doing strategic narrative requires us to construct our historical narratives and comparisons by building and using explicit and replicable concepts, measures, and coding techniques. Operationalization of concepts proceeds in phases. Research that begins with clear concepts is used to develop indicators and coding procedures that feed back to produce more precise concepts, more valid measures, and more reliable coding techniques to be used in subsequent research. Below, I elaborate on each of these four aspects of strategic narrative to show how they combine and extend extant narrative and comparative techniques into an overarching frame for the mutual construction of theory and history in qualitative, historical research.

Attending first to theory, history, and their interrelationship, the strategic narrative approach views theory building as an over-time process involving a continual interplay and mutual adjustment between theory and history. Concrete and specific historical events and configurations are conceptualized in terms of abstract concepts and sensitizing frameworks. These concepts and frameworks are used to select, to order, and to interpret chunks of primary and secondary data, rendering them intelligible as both historical narrative(s) and historical comparisons. Conceptually constructed and theoretically interpreted narratives and comparisons provide a basis for developing conditional causal generalizations that respecify the original theoretical questions, generate new theoretical questions, and provide hypotheses that subsequent research is designed to examine. Like current fruitful combinations of neoanalytic induction and Ragin's (1987) qualitative comparative analysis (see Hicks 1994), strategic narrative grounds generalizations about causal relations in inductive inference. However, unlike all such inductive approaches to theory building, strategic narrative systematically and explicitly incorporates deductive reasoning to elucidate causal mechanisms.

By distinguishing between causal relations and causal mechanisms, I do not intend to suggest that formal-deductive theorizing provides the only road to the latter. I do intend to suggest that deductive reasoning is needed to establish causal mechanisms. Whether deduction occurs before or after the sociologist examines history, and no matter how the sociologist conceives of history, logical thinking from premises to conclusions is required to explain how and why some observed or predicted "cause" produces some observed or predicted "effect." This is so whether sociologists are primarily comparativists interested in contextually conditioned relationships between "exogenous" and "endogenous" factors in history or whether they are primarily narrativists interested in the "endogenous" unfolding of singular events. Without knowledge of the underlying "how" and "why" mechanisms producing the relationships we observe, apparent causation may signal no more than concomitant variation or correlation. This may be why the strongest practitioners of many primarily inductive approaches make room for deductive reasoning. For example, Griffin (1993, pp. 1100-4) shows how event structure analysis compels the researcher to reason deductively about how and why an action does or does not produce another action in an apparent causal sequence. Similarly, Ruechemeyer, Stephens, and Stephens's (1992) case-oriented comparative study of capitalist development and democracy implicitly incorporates deduction when the authors rely on assumptions about the nature of capitalism to create a logical chain of reasoning about interests, resources, and mechanisms of influence.
over the state. The authors then use their logical chain to help them understand political paths in specific countries. As if to prefigure a causal relations/causal mechanisms distinction, when Rueschemeyer, Stephens, and Stephens invoke (causal) "mechanisms" (1992, p. 100), they draw directly from deductive (in this case general marxist) theory.

The mutual adjustment of history and theory envisioned by strategic narrative makes its practitioners like photographers who are continually shifting between two lenses while taking a picture. Researchers have a theoretical and a historical lens and aggressively use each to refashion pictures provided by the other. By taking a series of pictures, researchers can combine them to build a cumulative, more panoramic photograph. In addition, constructing strategic narrative extends the two-lens camera metaphor because a researcher's pictures do more than cumulate toward the panorama. They also feed back to clarify prior pictures and to modify the camera lenses that will be used to produce subsequent pictures.

Also, as a frame depicting the mutual construction of history and theory, strategic narrative suggests defining these terms such that the definition of each refers back to the other. In other words, a definition of history appropriate to doing strategic narrative would stress the conceptual construction of history as a set of interrelated, theoretically framed and interpreted narratives and comparisons. Conversely, a definition of theory appropriate to doing strategic narrative would stress the construction of concepts, sensitizing frameworks and conditional propositions that are historical because they systematically incorporate time as path-dependent action sequence and as context. With history and theory so interrelated that even their definitions are intertwined, it becomes clear why building better theory and building better history are two sides of the same coin within the strategic narrative approach. In addition, the strategic narrative approach suggests that both history and theory may be more productively thought of as logically interdependent processes rather than as analytically independent things.

Finally, strategic narrative's mutual articulation of history and theory differs dramatically from traditional frequentist models of hypothesis testing as well as from formal deductive models of theory construction (see Eliason 1995). Both these latter strategies view theory construction and theory testing as analytically distinct, tempo-

rally separated moments in a research program. Neither of these strategies emphasizes how producing the history used to test theories is in itself a theoretical process. In contrast, constructing theory through strategic narrative proceeds in intimate relationship with constructing history. Producing history and producing theory are equally problematic.

If mutual construction of history and theory is the first aspect of strategic narrative, the second aspect is selecting and constructing history in response to a clearly developed theoretical backdrop and with explicit attention to how that backdrop conditions the construction and interpretation of history. Rather than examining particular narratives or comparisons for their presumed intrinsic significance, doing strategic narrative requires us to articulate explicitly the theoretical questions against which we assert that the historical paths and conjunctions we construct are meaningful and important. It also requires that we situate these questions within an overarching abstract and general theoretical framework. In the language of case-oriented research, these two steps together permit us to theorize our historical "cases" abstractly in terms of all the concepts in our theoretical framework, and not just the ones especially highlighted by the particular narratives and comparisons we choose to construct. The same overarching framework we use to conceptualize the cases we examine closely also allows us to explicitly define the theoretical scope of our arguments and to conceptualize abstractly the cases that we do not examine closely, but that fall within this theoretical scope. In this way, we can consider systematically how the "left-out" cases are affecting our theoretical inferences. We then can modify our historical constructions and/or couch our theoretical inferences accordingly. Thus we are able to formulate answers to the theoretical questions we have asked in reasonably abstract and general theoretical terms, while giving due consideration to the probable influences of our selection criteria on our formulations.

Explicitly providing readers with an overarching theoretical framework against which the probable effects of our selection criteria can be assessed also makes it easier for others to critique and extend our interpretations. Finally, by building and applying the theoretical tools needed to consider how case selection affects interpretation and hypothesis building in qualitative, historical research, we become better
able to build bridges to theoretical issues other than those to which our
collection of history directly responds, as well as to cases not
currently within the theoretical scope of our arguments.

The third aspect of strategic narrative builds on the first and second,
by suggesting that the construction of anomalies is an especially
feasible and fruitful way to begin a research program contributing to
the mutual construction of history and of theory. A historical narrative
becomes a constructed anomaly when it presents a puzzle or deviant
case against some general theoretical and comparative-historical
backdrop. In other words, a historical narrative presents a puzzle when
the two following conditions hold: (a) According to extant theory,
events under close examination should not have happened at all or
they should not have happened as they did, and, (b) According to
comparative knowledge, the constructed events represent a rare or
unique empirical instance of a particular kind of happening. Building
anomalies thus requires not only theory but also both narrative and
comparative logic. The “telling” of the anomaly unfolds as narrative;
its existence depends on comparisons.

Once we construct an anomaly against a general theoretical and
comparative-historical backdrop, we can use the anomaly to refocus
and improve specification of the concepts, frameworks, and theoretical
propositions against which the specific events we examined became puzzling. Once we have conceptualized a happening as anomalous,
examining its unfolding closely and systematically should help
us understand better how and why it is anomalous and, therefore, what
modifications to theory would remove the anomaly. However, we
must be careful to avoid presuming that one historical happening can
falsify a general theory. Taking a strategic narrative approach does not
require that sociological theories account for, or subsume, all actions
making up all events. Nor does it require us to make much of every
previously untheorized aspect of singular events.

Consistent with extant case-oriented comparative techniques,
which ordinarily are used to produce deterministic theoretical propositions (see Ragin 1987; Hicks 1994), a strategic narrative approach
does prompt us to consider modifying general theory when a given
mutual articulation of theory and history does not produce a good fit.
However, inconsistent with such determinism, a strategic narrative
approach does not compel us to modify general theoretical propositions whenever the fit between theory and history is in some way
imperfect. Instead, it permits using case-oriented qualitative research
to suggest and examine hypotheses specified in probabilistic terms.
This seems sensible, given that (a) knowledge interchange and cumu-
lation across research programs is a major goal of doing strategic
narrative, and (b) a large part of social science knowledge is produced
by quantitative research programs favoring the specification and test-
ing of probabilistic models.

In sum, doing strategic narrative compels us to refract what we see
in the world through the theories previously considered relevant to it
and also through everything else we know theoretically to consider
whether and how the events we are examining are anomalous and
whether they are likely to provide us with a promising basis for
making contributions to general theory. In short, the more we know
theoretically, the better we can do strategic narrative. If we do not
know very much, we may presume something puzzling that is readily
explicable in terms of already cumulated knowledge. Or, we may end
up constructing narratives that are puzzling, but in ways that produce
rather trivial feedbacks into extant theory.

There is a practical as well as scholarly angle to strategic narrative’s
emphasis on constructing anomalies. Constructing one historical happen-
ing, set of events, or “case” as a puzzle within extant knowledge
allows the researcher to begin a research program that proceeds in
clearly demarcated stages, produces results in the short term as well
as the long term, and combines theoretical contributions with histori-
cal contributions on the basis of closely examined primary historical
materials.

As the second section will operationalize through a detailed exam-
ple, the strategic narrative approach begins with the researcher relying
heavily on primary material as well as on secondary sources to build
a narrative of the anomalous case against the general theoretical and
comparative-historical backdrop he or she has constructed. The result-
ing narrative provides responses to the specific theoretical questions
that motivated it, while suggesting additional, more precise questions
that require constructing additional narratives meeting explicit con-
ceptual criteria within a broader comparative design. Using a “cases
within cases" technique (e.g., Ragin 1992) to execute the comparative
design in stages, the researcher can balance general theoretical leve-
age with narrative and comparative depth at each stage. He or she also
can complete each stage within a reasonable amount of time. In
addition, each stage combines narrative and comparative logic and
primary and secondary source material to provide self-contained
responses to specific theoretical questions, and each stage also builds
explicitly on prior, stages and points ahead explicitly to subsequent
stages. Research stages cumulate so that, over time, the research
program addresses the full range of theoretical issues and hypotheses
implicated in the overarching research design.

Cumulating knowledge within a research program framed by stra-
tegic narrative contemplates the making of causal inferences based on
in-depth study of small numbers of cases. However, those who under-
take strategic narrative can easily avoid the central pitfalls of small-N
comparative research cataloged by Lieberson (1991). This is so be-
cause pitfalls stem in large part from rigid adherence to determinism
and to Mill's inductive method of agreement and indirect method of
difference. In contrast, those who undertake strategic narrative should
anticipate that there may be more than one pathway to a particular
historical outcome, with some pathways more frequent or probable
than others. They also should anticipate that production of historical
outcomes will be conditional on complex conjunctions of causes.4
Avoiding possible pitfalls of small-N research likewise is aided by
basing one's theoretical assumptions and questions on the full range
of extant theoretical and empirical knowledge, including that which
has resulted from large-N quantitative studies, by explicitly consid-
ering the impact of case selection on resulting causal inferences and by
systematically incorporating deductive thinking about causal mecha-
nisms. In sum, the third aspect of strategic narrative—grounding a
phased-in cumulative and comparative research design in the con-
struction/analysis of an anomalous case—allows the researcher to
contribute concurrently to history and to theory. It also allows the
researcher to make his or her contributions in a way that is feasible
within time and knowledge constraints, and in a way that avoids
central potential pitfalls of small-N qualitative research.

The fourth and final aspect of strategic narrative focuses squarely
on procedures used to construct narratives and comparisons. It calls
for attending to both eventful and contextual time, as well as for
formulating clear and precise concepts, measures, and coding tech-
niques to construct both aspects of time systematically.

Because eventful time is conceptualized primarily as path-dependent
action sequence, the basic unit of eventful time is an act or action. This
suggests developing techniques that use primary and secondary source
materials to systematically code sets of acts to produce chronologies
of action. The structure and procedures for such coding, which I term
action coding, are elaborated in the following section. The elaboration
includes rules for breaking down and measuring "what really hap-
pened" as action units. It also includes creating a record for each action
unit of what was done, by whom, when, where, why, how, and with
what consequences. Once such a record is constructed, the analyst can
begin to ask questions about sequential connectedness, trajectory, and
path dependence. He or she also can examine issues of pace, duration,
and cycle. Thus, once action coding is complete, the analyst is not
likely to ignore conceptions of time stressed by narrativists. Instead,
his or her theoretical inferences are likely to capitalize both on eventful
time and on the human actors who make it.5

Because doing strategic narrative merges narrativist emphasis on
eventful time with comparativist emphasis on contextual time, proce-
dures for constructing action sequences must be complemented with
procedures for constructing context. Strategic narrative thus also
envisions explicit rules for measuring and coding the institutional and
cultural context(s) that condition human action. The following section
shows how the structure and procedures of extant content coding
techniques can be adapted to systematically conceptualize, measure,
and code contextual time.6

The label content coding evokes continuities between my proce-
dures for conceptualizing and coding context and the techniques many
qualitative researchers use for locating and conceptually categorizing
words and phrases in textual sources (see, e.g., Tesch 1992). However,
the label should not obscure central ways in which my content coding
procedures are similar to the standardized measurement of explana-
tory and outcome factors used in quantitative modeling and in formal
qualitative comparative analysis (QCA). Ragin (1987) distinguished
between case-oriented qualitative research and variable-oriented
quantitative research by contrasting the former's holistic treatment of
cases with the latter's disaggregation of cases into sets of values on analytically separate variables. Both quantitative analyses and qualitative comparisons are similar, however, with respect to their mutual goal of establishing causal relationships among exogenous and endogenous factors. Thus it is not an accident, nor should it be surprising, that there are similarities between my techniques and the measurement and coding of variables required for quantitative analysis.

Nevertheless, the structure I propose for doing content coding in strategic narrative also differs in important ways from coding for either QCA or for quantitative analysis. These differences help content coding retain the flexibility and open-endedness that traditionally have characterized coding for qualitative research, while not sacrificing the clarity, precision, and standardization of measures and coding techniques that traditionally have characterized coding for quantitative research. Where flexibility and open-endedness are needed for strategic narrative to mutually construct history and theory, clarity, precision, and standardization are needed to enhance research objectivity, to ensure replicability, and to enable criticism. Note also that content coding for strategic narrative may conceptualize causal factors as either discrete or continuous. Either way, and although the content coding can help develop measures useful for quantitative analyses, content coding for strategic narrative need not convert words into numerical scores.

Earlier, I noted that comparativists' concept of context includes not just single explanatory factors but also complex conjunctions of such factors. Whether highlighting single factors or conjunctions, comparativists may conceptualize context in concrete and particular terms, or in terms of more abstract and general analytic constructs. For reasons already given, strategic narrative promotes generality and abstraction in conceptualizing and measuring context. Content coding procedures are crafted with this in mind.

I also noted that the feasibility of strategic narrative is predicated on designing and executing a research program in phases that are self-contained but that also systematically cumulate knowledge. This is as true for producing measures as it is for producing ideas. Where clear concepts and a more general theoretical framework in which these are embedded must be produced prior to constructing an anomalous case, it is not feasible or necessary for the researcher to have a final set of concepts, measures, or coding techniques in the early phases of research framed as strategic narrative. Instead, once the researcher has in place a general measurement and coding strategy, he or she can focus successive phases of his or her research program on building and refining specific subsets of measures and the related coding rules that help "fill out" the overarching measurement strategy. This is analogous to the earlier described building, in phases, of more—and more precise—concepts, theoretical questions, and hypotheses to further specify an overarching general theoretical framework.

Thus, as the following section illustrates, building measures through strategic narrative is as cumulative a process as is building theory. Approaching measurement as well as conceptual issues systematically should help protect those who do strategic narrative from the analytic inconsistencies and slippage likely to occur when concepts, measures, or both lack clarity. When concepts or measures are left ambiguous, implicit, or imprecise, readers cannot readily replicate or criticize the researcher's interpretations and inferences. Nor can they easily draw on the research to formulate their own hypotheses. This is equally true whether and when history is conceptualized as context, as path-dependent action sequence, or as a combination of the two. Strategic narrative counters this potential pitfall by emphasizing communication of the procedures used for building measures, as well as the development of the concepts and measures themselves.

The following section now uses my ongoing investigations into the politics of social science in regulatory law to demonstrate the procedures that operationalize all aspects of my strategic narrative approach. It includes operationalizing the mutual construction of history and theory, the selection and construction of narratives in response to clearly articulated general theoretical issues and with attention to how theoretical selection criteria affect subsequent historical analyses, the grounding of a phased-in cumulative and comparative research design in the construction/analysis of an anomalous case, and the over-time development of clear and precise indicators and coding rules to measure concepts reflecting both contextual and eventful time.
OPERATIONALIZING THE STRATEGIC NARRATIVE APPROACH

CONSTRUCTING THE ANOMALY

Current federal law governing labor-management relations says that the National Labor Relations Board (NLRB) may not employ persons to do “economic analysis” (Stryker 1989, quoting 61 Stat. 136). This single historical fact became the central element in my construction of the NLRB case as anomalous against an extant comparative-historical and general theoretical backdrop. At the outset of its existence, in 1935-40, the NLRB had an economic research division. In 1940, however, Congress abolished that division in a rider to a supplemental appropriations bill. Then in 1947, Congress incorporated a more permanent ban on economic analysis into the Taft-Hartley amendments to the original National Labor Relations Act. The 1947 provision remains in force today. The NLRB has not had a social science research unit of any kind since 1940 (Stryker 1989).

I could find no other federal regulatory agency prohibited by federal statute from employing economic analysts. I used primary government documents as well as secondary sources to establish that, at the time the NLRB economic unit was abolished, other federal agencies—including the Federal Trade Commission, Interstate Commerce Commission, Securities and Exchange Commission, Tariff Commission, Railroad Retirement Board, and the Labor and Agriculture Departments—routinely employed economists, many of whom performed tasks similar to those of the early economic experts at the NLRB. Agencies of more recent vintage, including the Environmental Protection Agency and the Equal Employment Opportunity Commission, also routinely employ economists or other social scientists. Against this comparative backdrop, the NLRB situation was anomalous (Stryker 1989).

Because I could show that prior and otherwise divergent class and state-centered perspectives converged to suggest ever increasing government reliance on scientific-technical expertise, I could construct what happened at the NLRB as anomalous against a general theoretical backdrop as well (Stryker 1989). NLRB reliance on economic experts during its first five years was consistent with these important extant sociological traditions. Nevertheless, what happened in 1940 and thereafter was not. This meant that examining the NLRB case closely could show concurrently (a) what happened at the NLRB, and how and why it happened as it did and not otherwise; (b) how general sociological theory could be modified to explain the apparent anomaly.

GENERAL THEORETICAL (RE)FRAMING

Concurrent contribution to history and theory required constructing a chronological narrative of actions that led to congressional abolition of the NLRB economic unit and also conceptualizing this event as occurring under a complex conjunction of conditions. In addition, it required that I conceptualize in abstract and general terms the issue of whether and how a government agency makes use of social science. Doing all this pushed me to reconsider not just how extant approaches treated the government-science relationship, but everything I knew about sociological theory.

I started by reconceptualizing concrete and specific questions and answers about whether and how particular agencies made use of science abstractly, as part of the general issue of what I termed policy form. Policy forms are types of reasoning, expertise, and organizational procedures that governments follow in making and implementing policies. I then noticed that, although almost no sociologist of any persuasion would ignore conflict when trying to explain a policy outcome, otherwise disparate theorists nonetheless downplayed or ignored conflict when they focused on government use of science. Since I conceived of government use of science as a manifestation of policy form, and once I recognized that policy forms affect policy outcomes, it became logical that conflict should be a central aspect both of my explanatory problem and of any solution I might propose. My reframing thus focused on conflict (e.g., Stryker 1989, 1990b, 1994). It did so in two ways: (a) by importing conflict into the outcomes I sought to explain, and (b) by importing conflict into my explanatory framework.

In terms of outcomes, I saw that the anomaly I chronicled could also be understood as representing an extreme value on a more abstract and general conflict-based process, which I labeled technocratization of law. I defined this as a process in which scientific-technical reasoning and experts are incorporated into law and come to substitute for
legal reasoning and experts. In the extreme, government administrative action could be based entirely on rule creation, interpretation, and application by lawyers using common law and statutory techniques of legal analysis. Or, it could be based on exclusive use of causal reasoning and empirical generalization by scientific experts. My new conceptual lens permitted me to see other sets of actions and their consequences, which, although not exactly the same as those pertaining to the NLRB, also evidenced contraction, rather than expansion, in government use of social science.

In terms of explanatory framework, defining technocratization as substituting scientific reasoning and experts for their legal counterparts suggests that, when technocratization occurs, it will occur through conflict or at least with the threat or possibility of conflict. It also suggests that whether technocratization occurs will be conditioned by conflict. If this were so, then it made sense to explore diminished as well as enhanced government reliance on science, and it made sense to presume that the conditions under which each occurred would have something to do with conflict. At one and the same time, I was sensitized to explore (a) how the unfolding of specific events at the NLRB was affected by the occurrence and characteristics of conflict among actors inside and outside the agency, and (b) what the results of my historical explorations might suggest about general factors conditioning variation in technocratization (Stryker 1989).

Completing my study of the anomalous case by proposing some general hypotheses about conditions under which contractions in government use of social science would be more or less likely to occur (Stryker 1989), I began some comparative studies designed to theorize and research variation in the degree to which, and ways in which, legal and other government institutions use social science theories, models, methods, data, and results (Stryker 1990a, 1990b). I began small, comparing my narrative of the NLRB with an equally in-depth narrative I constructed for the early Federal Trade Commission (FTC). I selected this comparison because I could construct it to show that agencies similar on a group of contextual factors that might be expected to shape an agency’s use of social science nonetheless differed among themselves in the degree to which they employed in-house social science experts and incorporated this expertise into decision making.*

The explanation I proposed for the NLRB-FTC divergence and any contributions I made to general theory were better, because I constructed my cases systematically in terms of their levels or attributes on a series of more abstract and general contextual factors shaping action, including class-organizing versus disorganizing regulation, the relative prestige and authority of agency legal and social science experts, and institutional legitimacy (Stryker 1990b). By placing my cases in a larger universe of relevant explanatory factors, not all of which were invoked by my NLRB-FTC comparison, I also attended to how my theoretical criteria for case selection conditioned historical explanation. Thus I recognized that explanatory factors that could not account for divergent NLRB-FTC outcomes because they had been held constant in that comparison could still be relevant to building a general theory. Indeed, because deductive thinking about causal mechanisms suggested that such factors (e.g., regulatory effectiveness, content of work done by scientific experts) should be relevant to shaping conflict over government use of social science, I built these factors, as well as the explanatory factors highlighted by my NLRB-FTC comparison, into a more general explanatory framework (Stryker 1992).

My NLRB-FTC comparison also illustrated the importance of closely examining primary as well as secondary sources to construct historical narratives and comparisons. For example, had I rested with others’ construction of action and events, I might have presumed that NLRB-FTC differences in regulatory effectiveness could explain divergent agency outcomes. Instead, my primary historical and legal analyses led me to understand that during the relevant time periods—the early years of each agency’s respective institutional history—the FTC and NLRB logically would have been perceived, and were perceived empirically, as equally effective, aggressive, and economically and ideologically threatening to those bearing the costs of regulation. Absent heavy reliance on primary data to construct narratives of actions and events during the first five years of these agencies’ institutional lives, my theoretical inferences would have been misguided.10

I now conceptualize variation in the degree to which, and ways in which, legal institutions use social science as a problem in what I term the politics of science. By this, I mean that variation in government,
including legal institutions, use of social science can be explained and
predicted as a function of the occurrence, character, causes, and
consequences of conflict over government use of science. With this
general framing, understanding any particular historical situation—
for example, why Congress abolished the NLRB economic unit, but
the FTC economic unit remains to this day—requires developing and
applying a politics-of-science perspective. Explaining variation in
government use of social science more generally also requires devel-
oping and applying such a perspective. Doing so can contribute to
understanding issues important to both scholars and policymakers,
because deductive reasoning and historical evidence alike suggest that
whether and how governments rely on science affects their effective-
ness, autonomy, and legitimacy, as well as the interests and resources
of governed parties (Stryker 1990b, 1994).

CUMULATIVE RESEARCH AGENDA

My politics-of-science research program has two concurrent goals:
(a) developing what I term an actor-interest-resource-conflict fram-
work to understand divergent outcomes in the historical cases I
construct narratively and comparatively for specific theoretical rea-
sons; and (b) using my historical constructions to feed back into my
framework, developing further its concepts, indicators, and research
hypotheses to shape my selection and construction of additional
historical cases. My explanatory framework presumes that the politics
of social science are part of a larger political dynamic in which regu-
latory agencies must manage various internal and external con-
stituencies. These constituencies include individual, institutional,
and group and other collective actors in three broad categories: (a)
societal (alternately referred to as social/economic) actors, (b) politi-
cal-institutional (alternately referred to as government) actors, and (c)
expertise (alternately referred to as professional) actors. Iterating
between inductive and deductive logic, and between the general
theoretical and historically particular, suggests that understanding the
nature and causes of political conflicts over government use of sci-
ence, as well as the consequences of such conflicts for subsequent
government use of science, requires examining the formation, inter-
ests, resources, and political mobilization of these three sets of actors
as these emerge in, and are conditioned by, rules of the game in
concrete and specific institutional and cultural settings. Agency-
authorizing statutes, agency law enforcement tasks, the processes
surrounding agencies' initial formation, and the quality and accessi-
bility of applicable science are included in the framework because
research on specific historical events suggests they are important and
because deductive theoretical work suggests they are central to estab-
lishing the institutional and cultural rules and resources that help
specify actors' interests and enable them to act. Cultural schema, too,
enter the framework, as rules and resources that guide, enable, and
hinder action (Stryker 1992, 1994).

Empirically, I examine causes and consequences of societal interest
group, government, and expertise conflicts over government use of
social science, and the mobilization, interests, and resources of all
three broad sets of actors (e.g., Stryker 1989, 1990a, 1990b). Indeed,
for historical cases I have closely examined, I have shown that whether
and how social science is used has been both the object and outcome
of such societal, government, and expertise conflicts. Within this
general frame, however, my current phase of research is designed
especially to foster development of hypotheses focused on (a) class
and class conflict (as opposed to other types of societal conflicts) and
(b) the institutional and cultural resources for conflict provided by
markets and competitive market values. The following are some
present central hypotheses:

1. Class conflict versus other societal conflicts: In the absence of a
historically strong and socialist labor movement (as in the United
States), regulatory use of social science is more vulnerable to restric-
tions and less likely to expand when it benefits labor in a regulatory
context that promotes class mobilization and conflict than when
regulatory use of social science occurs in a context that promotes other
kinds of societal conflict.

2. Markets and market values: In the absence of a historically strong and
socialist labor movement (as in the United States), regulatory use of
social science is more vulnerable to restrictions and less likely to
expand when it undermines competitive markets and market values
than when it reinforces competitive markets and market values.

3. Joint class and markets: In the absence of a historically strong and
socialist labor movement (as in the United States), permanent restric-
tions on regulatory use of social science are most likely to occur when
regulatory use of social science both undermines competitive markets and market values and benefits labor in a context that promotes class mobilization and conflict rather than occurring in a context that promotes other types of societal conflict or when regulatory use of social science reinforces or extends competitive markets and market values.

Complete elaboration of how my past historical narratives and comparisons contributed to formulating these hypotheses and their scope conditions, which are to be further specified by my current research, is available in Stryker (1992). Here, to illustrate cumulation, I focus on the first proposition only. On the basis of the NLRB case, I argued that a necessary factor leading the NLRB to lose its economic research unit was that the NLRB effectively used social science to benefit a subordinate social class (labor) to the detriment of a dominant social class (capital) in a class-organizing regulatory context. Class-organizing regulatory context is defined as an institutional situation that tends to organize, to mobilize, and to promote conflicts between classes rather than between other types of societal actors. I argued that, in a class-organizing regulatory context in which the agency effectively used social science to benefit a subordinate class, convergence of class conflict over the NLRB with internal agency conflicts between lawyers and economists led to the NLRB economic unit's elimination. Comparing the NLRB case with continuity of an economic unit at the FTC, I showed how regulatory enforcement conditioned the identity, interests, and mobilization of conflicting societal parties. I stressed the causal relevance of regulation that organized capitalists collectively rather than one that disorganized or fragmented their interests by firm, industry, or small versus large business. However, on the basis of the NLRB-FTC comparison alone, I could not rule out the possibility that class mobilization and conflict over government use of social science was just one type of a more general dominant/subordinate group conflict over state use of social science. A better specified question emerging from, and motivated by, my prior research thus became: Are political dynamics and outcomes of ethnic, racial, or gender group conflicts over government use of social science the same as, or different from, those occasioned by class conflict? Answering the question required comparing a regulatory program that tends to promote political mobilization based on class with one that tends to promote mobilization based on some other type of dominant/subordinate social group, for example, race or gender.

Hypothesis 1, then, both resulted from my past work and transformed the class versus race or gender question into a hypothesis organizing current research. Current analyses do not "test" hypothesis 1, at least not in the sense of standard hypothesis testing. Instead, my analyses provide empirical information to further examine and specify my hypotheses, as well as to promote intersections of inductive and deductive reasoning that help develop causal mechanisms. My current research also is organized around hypotheses pertaining to competitive markets and market values, as well as to the joint effect of class and market factors.

Figure 1 depicts my current research design. It compares U.S. regulatory programs that make salient and promote political mobilization based on class identity with programs promoting non-class-based mobilizations; programs that reinforce competitive market institutions and values with programs undermining those institutions and values; programs that jointly promote class-based mobilizations and undermine markets with programs involving the other three logical possibilities for combining class and market factors. Because, over time, the programs—which constitute cases—also diverge in the degree to which they rely on social science, the design permits examining how class and market factors help condition action to account for this divergence. The design is cumulative in two ways. First, it encompasses and builds on my prior research. Second, I intend to execute it in stages, such that specific comparisons in the design provide answers to specific research questions (e.g., the causal import of class vs. race- or gender-dominant/subordinate group conflicts), while also linking together around the full range of issues that motivated the design.

Cells 2 and 3 in Figure 1 encompass my prior research on pre- (and to a more limited extent post-) World War II FTC and court enforcement of federal antitrust law, as well as NLRB enforcement of the original and amended National Labor Relations Act. Major antitrust statutes include the Sherman Act of 1890 and the Clayton and Federal Trade Commission Acts of 1914. All have been amended many times. The National Labor Relations Act of 1935 (also known as the Wagner Act) was amended in 1947 by the Labor Management Relations Act
(also known as Taft-Hartley). Cell 1 adds court and Equal Employment Opportunity Commission (EEOC) enforcement of Title 7 of the Civil Rights Act of 1964, which prohibits discrimination in employment on the basis of race, gender, and other ascriptive criteria and was most recently amended by the Civil Rights Act of 1991. Cell 4 adds the Environmental Protection Agency's (EPA) enforcement of the Clean Air Amendments of 1970. These were designed to control air pollution and were amended most recently by the Clean Air Act Amendments of 1990.

The four cells of the design emerge from a two-dimensional typology I developed to conceptualize regulatory context across class and market explanatory factors. Dimensions capture whether or not a given program regulates an employment relationship and whether the program, at its outset, generally promoted (reinforced) or undermined (undercut) competitive markets and market values. Promoting markets includes, but is not restricted to, using market criteria for government decision making. Undermining markets includes, but is not restricted to, using nonmarket criteria for government decision making. Market impact characterizations are "broad-brush" and do not preclude further design-relevant within-cell (either over time, across different parts of relevant regulatory laws, or both) variation along this dimension.

As a function of its "relationship-regulated" and "market impact" dimensions, the design contrasts regulatory programs conducive to social class solidarity and to between-class conflict (labor-management relations cell, within which the previously conceptualized class-organizing NLRB enforcement occurred) with programs conducive to conflict between such other dominant and subordinate groups as those based on race and gender (equal employment opportunity cell); programs conducive to within capitalist class conflict between firms, industries, and small and large business (antitrust cell); and programs conducive to conflict between consumers and producers, for example, consumers and producers of pollution (environment cell). Because equal employment opportunity enforcement, air pollution control enforcement, and antitrust enforcement make politically salient social identities other than class, all create collective solidarities that cut across or fragment classes and so are in some way class disorganizing. Comparing how regulatory use of social science varies across contexts characterized by class, as opposed to various nonclass, mobilization and conflict, provides information relevant to hypotheses 1 and 3, above. It also further elucidates my analytic construct of class organizing versus disorganizing regulatory contexts.

The design also provides information relevant to hypothesis 2. To assess whether actors promoting expansion or contraction of government use of social science receive institutional and cultural resources from being "in sync" with competitive markets and market values, the design contrasts programs that undermine competitive markets and market values with programs that promote competitive markets and market values. Marshaling social science to promote unionization and collective bargaining, the pre-World War II NLRB used that science to facilitate setting terms of employment through a political bargaining, rather than a competitive market, process. Conversely, the FTC, with a mandate to promote competitive markets, ordinarily uses social
science to advance this statutory goal. With the important exception of affirmative action (assuming this is defined as providing special consideration to women and minorities based on ascriptive factors), equal employment opportunity enforcement ordinarily uses social science to promote markets and market values by forcing employers to treat employees on the basis of competitive merit, not on the basis of ascriptive criteria. Finally, like the original National Labor Relations Act, the initial clean air legislation enforced by the EPA constrains and partially replaces markets, in this case by politically mandating that firms produce protection levels beyond those resulting from calculations of what and how to produce profitably for market exchange. However, unlike the NLRB, when the EPA makes use of social science—for example, such tools as economic and policy analyses, cost-benefit techniques, and market incentive schemes—in administering air pollution control, it does so ordinarily to promote the reemergence of market institutions and values.

The design uses within-cell exceptions to its broad-brush generalizations to supplement comparisons across the four programs with within-program comparisons. Thus the design exploits cases within cases. For example, comparing affirmative action with market-promoting equal employment opportunity enforcement can help elucidate the causal role of markets and market values. The joint role of class and market factors can be examined by comparing affirmative action with NLRB enforcement of the Wagner Act. In both cases social science is used to undermine market values; however, one context promotes class-based mobilization, whereas the other promotes mobilization on the basis of non-class-based dominant and subordinate groups.

So that I can continue combining theoretical work with in-depth reliance on primary sources and so that I can take narrative as well as comparative logic seriously, I target both within-cell and across-cell analyses to constructing and comparing narratives of what I term key events. As with my broader cases—regulatory programs or aspects of regulatory programs—the events I select to examine closely are "key" relative to the theorized aspects of context/conjuncture in my explanatory framework. They are not "key" because they are intrinsically interesting, culturally significant, or pathbreaking or path determining in a chronological sense. (Of course, if my hypotheses are worth taking seriously, and the historical outcomes arrange themselves as I would predict, the events I examine should be pathbreaking, path determining, or both in important ways.) In any case, key events are my smallest analytic units. They are the focus of my narrative and comparative analyses. Each specific set of narratives and comparisons of key events will sharpen my earlier narratives and comparisons and contribute to further theory building.

In sum, because my narratives are constructed around systematic between- and within-cell variation on central class and market explanatory factors, if my conceptual framework is sensible and my central hypotheses are worth taking seriously, my narratives about unfolding regulatory processes, including regulatory use of social science, should differ in predictable ways. My ongoing research suggests this is so. Further examining variation in the occurrence, character, causes and effects of societal, government and expertise conflicts over social science across all four regulatory programs facilitates development of more extensive and better specified hypotheses for later further examination by myself and others. To accomplish this, I must do more than show that historical differences in regulatory use of social science covary with class and market factors. I also must consider other possible explanatory factors and either rule them out or show how they work in conjunction with class and market factors to produce specific variation in the ways in which social science reasoning and experts are used in regulatory programs I examine. Thus the information I gather and the analyses I do reflect the whole range of explanatory and outcome factors encompassed by my "actor-interest-resource-conflict" framework. The appendix provides a list of these factors and also gives information on categories of actors I have conceptualized. A full picture of regulatory use of social science in the four policy arenas, including complete narratives of key events, will emerge from future research. However, the explicit theoretical framing of that research coupled with my historical knowledge that variation in processual unfolding and in outcomes exists across the four programs ensures that emergent information will be useful.

As with the NLRB-FTC comparison I discussed earlier, my cumulative research program requires that I select cases according to
explicit theoretical criteria. It therefore produces “selection effects” on my historical constructions. Clear and explicit conceptualization of cases in terms of my complete analytic framework does not remove these effects. Nevertheless, and again as with the NLRB-FTC example I previously discussed, it does inhibit me from making inappropriate general theoretical inferences based on the history I construct. It also enables me to discuss how my selected cases relate, in terms of my developing theory, to cases I have not (yet) studied.

Deductive thinking about causal mechanisms also helps in this regard. For example, logical reasoning from a set of basic and empirically justifiable premises to conclusions combined with historical observation to suggest when conflicts among expertise actors within regulatory agencies would be most likely to occur and exactly how they would be likely to shape external actors’ response to these agencies (Stryker 1994). Thus I currently construct my historical narratives, watching for a dynamic interplay of actors and conflicts internal and external to the regulatory agencies I examine. In general, combining inductive inferences about possible causal relations with deductive thinking about possible causal mechanisms reminds me that my cumulative design emphasizes only part of my complete analytic framework. Deductive reasoning about causal mechanisms reinforces my practice of constructing narratives and comparisons sensitized to all my contextual factors and not just the ones that provide the basis and scope for the cumulative design. I also confess to switching easily between the language of necessary and sufficient causation appropriate to discussing particular historical sequences and the probabilistic language I regard as more appropriate for general hypothesis formation.

Finally, constructing a typology to reflect my cumulative research design also helped me to visualize clearly my design’s internal logic and to remind me how the design related to the wider universe of explanatory factors in my complete theoretical framework. Dimensions and cells of my typology target useful comparisons and show how these comparisons are useful. Yet they also highlight limits of each comparison. My typology’s “freeze frame” of time and place does not prevent me from exploring path-dependent action sequence, because I have developed systematic ways to construct narrative as well as comparative logic.

**TIME AS ACTION SEQUENCE AND AS CONTEXT**

Here, I show procedures for the over-time development of measures appropriate for conceiving of time as both path-dependent action sequence and institutional and cultural context/conjuncture. First, I illustrate action coding and second, I illustrate content coding. The general structure of both my action and content coding, as well as the techniques I use to develop and apply both coding types should be applicable across all theoretical issues and frameworks. These structures and techniques can be used for any type of documentary, observational, or in-depth interview data source, and in conjunction with both formal and informal analytic techniques for narrative and comparative analyses. As for the codes themselves, my content codes operationalize my concepts of aspects of institutional and cultural context relevant to my theoretical framing. My action codes should apply to any theory building that takes narrative seriously.

Figure 2 illustrates action and content coding. As shown, action coding reproduces a text in its original, or close to its original language and syntax, and couples it with a set of shorthand codes that summarize, for each action unit, the researcher’s concrete and specific answers to questions about who acted, what was the action, when did the action occur, where did the action occur, why did the action occur, how did the action occur, and what were the consequences of the action. In the example, the action codes are all those categories listed under “II. ACTION,” with the exception of “Documents” and “Summarizing Content Codes.”13 Action coding also includes all verbatim text stored under “III. TEXT.” If the researcher chooses to summarize the text rather than use a scanner to reproduce verbatim text, he or she can substitute the label “III. SUMMARY” and follow it with a typed-in summary.14 To minimize bias and error when summarizing, the researcher should employ language and syntax from the original text. As shown in the example, I assign a complete bibliographic label, including relevant page numbers, to each of my coded source materials. I also assign each an abbreviated “Identifying Code,” which links coded data to a master reference file listing all data sources and categorizing them according to type, for example, primary or secondary, government or nongovernment, public or nonpublic, document.
In action coding, the response to the “who” question appears under “Key Actors.” Actors’ names as given in the text are used to index all persons, organizations, and groups mentioned. I include organization and position for persons, and political party for persons in government, if the text provides them. Information responding to the “what” question appears under “Action Taken.” Information responding to the “when” question appears under “Date of Action.” Here, I record chronological date/dates and, if given, time/s of day for the action. Information responding to the “where” question appears under “Place of Action.” Information responding to the “why” question appears under “Object of Action.” This is coded only if, and as, stated in the text. No speculation about hidden or unacknowledged motives is allowed. Information responding to the “how” question appears under “Resources for Action.” Here, using the concrete, specific terms of the text, I include all information given on material and symbolic means of producing the action. Means include both nonhuman tools and human actors. Information responding to the “with what consequences” question appears under “Consequences of Action.” This, too, is coded only if and as the text provides explicit information about actual or potential immediate or long-term consequences. During coding, no theoretical speculation about consequences is allowed.

Figure 2 shows action coding for one action unit in a longer chronology. In this instance, the action unit is coterminous with the document. However, many documents contain more than one action unit. When this is so, information under “II. ACTION” and “III. TEXT” (or “III. SUMMARY”) is repeated for each action unit in a document. (The document itself constitutes one record; bibliographic and policy arena information are coded once per record.) In general, to decide what should constitute an action unit, the researcher must use the structure and time frame of his or her source materials, as well as his or her knowledge of rules of the game of the processes he or she is coding.15

No matter how action units are defined, they are tied to past and future action through information in the “Object of Action” and “Consequences of Action” categories. This information can be combined with summary or verbatim textual detail to further parse and aggregate actions for construction and analyses of actions, action sequences, and events. Lengthy chronologies of historical process are
my research program, with only a few exceptions, content coding stops with assigning "variable names" and does not require assigning "variable values." Instead, values are left in terms of the text (or text summary), so that textual material becomes part of the content coding as well as of the action coding. This strategy allows my current construction of the history to help specify the range of value codes that, once developed, can be applied in later phases of the research program and in others' research.

In developing codes and coding procedures, I emphasize beginning with clear conceptual definitions of abstract ideas and then operationalizing these definitions in terms of concrete attributes that can be easily recognized and objectified, so that the researcher can use standardized rules to determine if and when given codes apply. Indeed, if qualitative research is to contribute to building reliable measures, over-time development of ways of moving from concept to indicators via a set of standardized coding rules is crucial. Constructing such standardized rules helps build validity as well as reliability, because it entails continuous assessment of the match between concepts and indicators, thus furthering improvement in both.

At this point in my research program, my content-coding procedures combine rules whose application rests predominantly on human interpretation with rules that are precise enough that they can be computer executed. Although the latter produces more reliable measures, only considerable experience with the former can indicate which series of computer-executed commands will produce measures that are valid as well as reliable. One way in which I currently combine interpretive discretion with standardized tools is by using a two-step process for assigning many of my topic codes. The first step in applying a given code requires that text be searched for particular words and phrases or for such words and phrases in particular contexts. Computer searches purposively are designed to be overinclusive rather than underinclusive so that no possibly relevant information is lost. The second step then requires human interpretation to review located passages and make the final decision about whether the topic code applies. Figure 3 provides an example of this, by showing rules for applying the code "Opportunity-Results," which also appears under "Summarizing Content Codes" in Figure 2. Current rules for
“Opportunity-Results” is a subtopic (subcode) of “Markets and Market Values.” It is especially important in the equal employment opportunity policy arena, but it can come into play in other policy arenas as well.

Conceptual Definition: The conceptual definition of “Opportunity-Results” relies on the prior definition of “Markets and Market Values.” The latter is used to signal material showing how a state policy, or one of the four current local state agencies relate to market institutions, values, or ideology. “Markets and Market Values” is defined as the commodification-decommodification dimension of policy and agency processes and outcomes. More specifically, the conceptual dimension signaled by “Market and Market Values” refers to whether, how, and the degree to which policy or agency outcomes or decision-making processes reinforce (reproduce) or undermine (undercut) market institutions, value principles, or both. It also refers to whether, and the degree to which, the decision-making procedures that are part of an agency or policy mimic the logic of the market, trying to replicate market processes or the outcomes that such processes would achieve, or conversely, whether they go against the logic of the market. In terms of outcomes, it refers to whether, and the degree to which, agency decisions or other policy decisions in the policy arena would shrink or extend the scope of market institutions or value principles. It involves considering, for example, whether, as a result of agency or policy decisions, a greater or lesser number of persons become subject to markets and market values, whether they become subject to markets and market values during longer or shorter periods of their lives, and whether more or fewer areas of life become subject to markets and market values. Decision-making processes and outcomes referred to in this conceptual definition can be actual or proposed; past, present, or future; followed or to be followed; debated or considered; or to be debated or considered.

“Opportunity-Results” then refers to that aspect of the commodification-decommodification dimension that reflects whether, how, and the degree to which policy or agency outcomes or decision-making processes reinforce (reproduce) or undermine (undercut) the principle or practice of equal employment opportunity, and whether, how, and the degree to which these policy or agency outcomes or decision-making processes substitute the principle or practice of equal employment outcomes based on race, gender, or some other asccriptive criteria for equal employment opportunity.

Operationalization: To see if the code “Opportunity-Results” applies:
1. Search text for the following words and phrases:
   - ability, achievement, age, ascertainment, affirmative action, antidiscrimination, adverse impact, competitive-individualism, corrective action, color, deliberate efforts, discriminated, (d) nondiscrimination, disparate impact, disparate treatment, diversity, unequal employment, employment opportunity, (inequality of opportunity, (unequal opportunity, (inequality of result(s), (unequal results, (inequality of rewards, (unequal rewards, (inequality of resources, (inequality of outcome(s), (unequal outcomes, (unequal treatment, education, gender, goals, group competition, group membership, historic(al) discrimination, individualism, individual rights, individual competition, merit, outcome(s), particularism, particularist, process(es), procedure(s), productivity, pattern(s), practice(s), positive action, preference, preferential, present effects, quota(s), qualified, qualification(s), race, racial, range(s), representation, representation, reverse discrimination, remedial measure(s), sex, skill, systematic discrimination, target(s), training, universalism, universalistic.

2. Check each located passage and interpret the passage in light of the context in which it appears to see whether or not it falls under the conceptual definition of “Opportunity-Results.” If so, code “Opportunity-Results.” The list of terms in step 1 is designed to be overinclusive, but it will be especially so if the document to be coded does not fall in the equal employment opportunity policy arena.

Figure 3: Content Coding “Opportunity-Results”

Coding “Opportunity-Results” also illustrate the aforementioned strategy of using codes to signal topic, while leaving the “values” taken on by the topic in terms of the text itself.

At the outset of designing appropriate word and phrase searches, the thesaurus in any good word processing package can be helpful. However, iterative testing and retesting still is required. As the analyst becomes increasingly familiar with the various source materials to be coded, the specialized terminology in those materials, and the research arenas to which the materials pertain, he or she can adjust coding rules to account for any prior over- and underinclusiveness. Once standardized coding procedures are in place, biases created by prior knowledge of the analytic framework will be minimized. Moreover, standardized coding rules can be applied by those who do not have such prior knowledge, and such rules enable cross-checking among multiple coders.

Even before a complete set of standardized rules for content coding is in place, using standardizing procedures to develop these rules will systematize the iterative recoding and reinterpretation characteristic of qualitative research, so that open-endedness and flexibility do not become ambiguity and bias. My overall coding structure combines three types of standardized relationships among topic categories: hierarchy, parallelism, and intersection.

A hierarchical structure is one in which some codes signal broad topics, and other codes signal narrower subtopics within these broad topics. Figure 3, above, provides an example, because it shows that “Opportunity-Results” is a subcode of the broader code “Markets and Market Values.” Hierarchical structures of codes, subcodes, and sub-subcodes, and so on can represent an a priori conceptual scheme exhaustively, while also incorporating learning during the course of research. As long as the researcher’s list of broad topic codes is complete prior to the research, he or she can add new subcodes during research as he or she conceives of more specific and precise subtopics, and he or she can do this without altering the overall structure of his or her coded data. Moreover, the researcher can use hierarchy to routinize his or her response to a particular type of uncertainty affecting coding. In this regard, my general rule is to code the narrowest applicable content code, that is, to code subcodes rather than codes, or sub-subcodes rather than subcodes, whenever possible. However,
if the coder is unsure about whether a given subtopic applies but is certain that the broader topic applies, the broader code is used. In short, hierarchical structures permit elaborating a coding scheme systematically to accommodate iterative re-coding and re-analysis responsive to the better specified theoretical questions and answers that qualitative, historical research characteristically provides over time.

In addition to using subcodes to specify some narrower topics encompassed by broader topics, a researcher also can use subcodes to specify topic "values." In the latter case, the relationship among subcodes must be one of parallelism. I call "parallel" those codes that signal mutual exclusiveness, such that if one of a set of parallel codes applies to a given piece of information, another of the set cannot. For example, I have developed mutually exclusive categories to signal various types of what I refer to as "external actors" and "internal actors." Both these two broad codes, each of which is a mutually exclusive subcode of "type of actor," can be broken down further into more precise and specific subtypes. Within each level of the "type of actor" hierarchy, exhaustiveness and mutual exclusiveness of codes is maintained because I consider the codes to be "values" taken on by my type of actor variable "type of external actor." Between levels, hierarchy rather than parallelism obtains.

Again, not all subcode structure consists of mutually exclusive and exhaustive categories within hierarchical levels. Instead, like the "opportunity-results" subcode for "markets and market values," many subcodes merely specify narrower subtopics within topic categories and need not be part of a larger parallel set. Only when the researcher has learned a great deal from prior research can he or she use subcode structure to designate sets of mutually exclusive and exhaustive "variable values." When this point is reached, quantitative analysts can reap benefits from measures developed in qualitative research.

Finally, "intersection" is the way in which I express the relationship between two codes that are analytically distinct but not mutually exclusive. Where parallel codes offer alternatives for capturing the same aspect of a conjuncture described by a piece of textual information, intersecting codes capture analytically different aspects of the conjuncture presented by the text. In the list of summarizing content codes applied in Figure 2, "opportunity-results" intersects with "policy content" because the text that I coded described how past judicial and proposed legislative policies ("policy content") promoted different concepts of equal employment opportunity ("opportunity-results"). Not all discussion of state policy will provide information relevant to "opportunity-results," nor will all information signaling "opportunity-results" relate to state policies. However, the two analytically distinct aspects of context come together in the conjuncture described by text I coded for Figure 2. In general, when I content code, I code all relevant intersecting codes.

In sum, the coding structure and procedures I have outlined provide qualitative, historical researchers with tools to combine and operationalize time as institutional and culture context/conjuncture and time as path-dependent action sequence. They also allow for systematic, over-time development of measures, so that strategic narrative's mutual construction of history and theory contributes better indicators as well as better concepts.

CONCLUSION

I have suggested strategic narrative as a frame for constructing the history-theory relationship in qualitative, historical research. Doing strategic narrative involves concurrent construction and mutual adjustment of history and of theory. It requires that we build history to respond to explicitly formulated theoretical questions, that we consider how our theoretical selection criteria affect our historical constructions, and that we interpret our historical constructions in explicitly theoretical terms. It also requires that we build theory in a way that incorporates eventful as well as contextual time. Thus research framed by strategic narrative constructs history as both path-dependent action sequence and as institutional and cultural conjuncture shaping action. Indeed, strategic narrative provides an overarching frame for combining, extending, and precisely operationalizing central extant narrative and comparative techniques.

Doing strategic narrative begins with using primary sources to construct an anomaly against a general theoretical and comparative-historical backdrop. Examining the anomaly sets the stage for designing broader comparative research to be executed in phases. Each phase
combines examination of primary and secondary sources with narrative and comparative logic to provide self-contained responses to specific theoretical questions. All phases together combine to respond to the full range of articulated theoretical issues that motivated the broader comparative design. Because a researcher doing strategic narrative proceeds in stages and uses a cases-within-cases design technique, he or she can devote attention equally to constructing narratives and comparisons based on detailed examination of primary sources and to abstract and general theorizing.

Just as strategic narrative implies over-time theory building, it also implies over-time building of indicators. Doing strategic narrative requires us to construct narratives and comparisons by building explicit and replicable concepts, measures, and coding techniques. Research that begins with clear concepts is used to develop indicators and coding procedures that feed back to produce more precise concepts, more valid measures, and more reliable coding techniques to be used in subsequent research.

Finally, I have shown how research framed by strategic narrative contributes to cumulating sociological knowledge. Within a strategic narrative research program, increasingly precise historical and theoretical knowledge accumulates over the phased-in execution of the cumulative research design. The same processes that occur over time within the research program also help build bridges across research programs. This is especially so because, once developed, improved general concepts and their indicators can be used to create and examine hypotheses far removed from those that motivated the initial research. Thus doing strategic narrative promotes cumulation across qualitative research organized around diverse substantive questions and also across qualitative and quantitative research.

**APPENDIX**

**Major Explanatory and Outcome Factors**

- Content of regulatory agency work;
- Content of government work outside agency but inside policy arena;
- Regulatory agency procedures;
- Government procedures outside agency but inside policy arena;
- Regulatory agency effectiveness;
- Effectiveness of government institutional actors, other than agency, in policy arena;
- Regulatory agency enforcement aggressiveness;
- Enforcement aggressiveness of government institutional actors, other than agency, in policy arena;
- Regulatory agency social science work;
- Social science work of government institutional actors, other than agency, in policy arena;
- Regulatory agency natural science work;
- Natural science work of government institutional actors, other than agency, in policy arena;
- Nature (e.g., theory vs. empirical, disciplinary content) of policy-relevant social science;
- Nature (e.g., theory vs. empirical, disciplinary content) of policy-relevant natural science;
- Institutional and legal framework for use of social science experts and reasoning (includes informal and formal organization and procedures of all government institutional actors, including, but not restricted to, regulatory agencies);
- Institutional and legal framework for use of natural science experts and reasoning (includes informal and formal organization and procedures of all government institutional actors, including, but not restricted to, regulatory agencies);
- Degree to which, and ways in which, regulatory agency administrators base agency decisions on social science reasoning and experts;
- Degree to which, and ways in which, government administrators outside agency, but inside policy arena, base government decisions on social science reasoning and experts;
- Degree to which, and ways in which, regulatory agency administrators base agency decisions on natural science reasoning and experts;
- Degree to which, and ways in which, government administrators outside agency, but inside policy arena, base government decisions on natural science reasoning and experts;
- Accessibility of policy-relevant social science;
- Accessibility of policy-relevant natural science;
- Quality of policy-relevant social science;
- Quality of policy-relevant natural science;
- Impact of agency social science work on regulated parties' interests (including economic well-being, prestige, authority, autonomy, legitimacy, self-esteem);
APPENDIX: Continued

Impact of social science work of government institutional actors, other than agency, on regulated parties' interests (including economic well-being, prestige, authority, autonomy, legitimacy, self-esteem);
Impact of agency natural science work on regulated parties' interests (including economic well-being, prestige, authority, autonomy, legitimacy, self-esteem);
Impact of natural science work of government institutional actors, other than agency, on regulated parties' interests (including economic well-being, prestige, authority, autonomy, legitimacy, self-esteem);
Impact of agency social science work on agency capacity;
Impact of social science work of government institutional actors, other than agency, on these government actors' capacity;
Impact of agency social science work on agency capacity;
Impact of social science work of government institutional actors, other than agency, on these government actors' capacity;
Impact of agency social science work on agency autonomy;
Impact of social science work of government institutional actors, other than agency, on these government actors' autonomy;
Impact of natural science work of government institutional actors, other than agency, on these government actors' autonomy;
Impact of agency social science work on agency legitimacy;
Impact of social science work of government institutional actors, other than agency, on these government actors' legitimacy;
Impact of agency social science work on agency legitimacy;
Impact of natural science work of government institutional actors, other than agency, on these government actors' legitimacy;
Policy arena:
Relationship(s) regulated by agency;
Relationship(s) regulated by government institutional actor(s), other than agency, in policy arena;
Regulatory agency enforcement class organizing, disorganizing, or neutral?
Regulatory agency enforcement race organizing, disorganizing, or neutral?
Regulatory agency enforcement gender organizing, disorganizing, or neutral?
Government, other than agency, action class organizing, disorganizing, or neutral?
Government, other than agency, action race organizing, disorganizing, or neutral?
Government, other than agency, action gender organizing, disorganizing, or neutral?
Market and market value impact of agency action;
Market and market value impact of government institutional actor, other than agency, action;
Market and market value impact of agency use of social science;
Market and market value impact of government institutional actor, other than agency, use of social science;

APPENDIX: Continued

External conflict over regulatory agency social science (includes type(s) of external actors involved; what resources they mobilize; frequency, intensity, duration, generality; what conflict(s) is/are about; conflict overlap; which actors are supporting and which resisting agency use of social science, etc.);
External conflict over government institutional actor, other than agency, use of social science (includes type(s) of external actors involved; what resources they mobilize; frequency, intensity, duration, generality; what conflict(s) is/are about; conflict overlap; which actors are supporting and which resisting government use of social science, etc.);
Internal agency conflict (includes type(s) of internal actors involved; what resources they mobilize; frequency, intensity, duration, generality; what conflict(s) is/are about—for example, expertise, partisan politics or other, multiple internal conflicts—conflict overlap; who is supporting and who is resisting expansion of agency use of social science, etc.);
External conflict over regulatory agency (includes type(s) of external actors involved; what resources they mobilize; frequency, intensity, duration, generality; what conflict(s) is/are about; conflict overlap; which actors support or resist agency enforcement, etc.);
External conflict over government actor(s), other than agency, in policy arena (includes type(s) of external actors involved; what resources they mobilize; frequency, intensity, duration, generality; what conflict(s) is/are about; conflict overlap; which actors support, and which resist, government institutional actor enforcement);
Internal conflict within government institutional regulatory enforcement actors other than agency (includes type(s) of internal actors involved; what resources they mobilize; frequency, intensity, duration, generality; what conflict(s) is/are about; conflict overlap; which actors support, and which resist, extensions and restrictions of government regulatory use of social science);
Degree of consensus/dissensus in external expert communities about policy-relevant social science;
Degree of consensus/dissensus in external expert communities about policy-relevant natural science;
Professional training and socialization of individual social science actors;
Professional training and socialization of individual natural science actors;
Professional training and socialization of individual legal actors;
Professional memberships and activities of individual social science actors;
Professional memberships and activities of individual natural science actors;
Professional memberships and activities of individual legal actors;
Within-Agency prestige and authority of agency social science and social science experts (includes, e.g., formal and informal authority, relative numbers, pay, titles of agency social science vs. legal vs. natural science experts);

(continued)
Within-Government institutional actor prestige and authority of government social science and social science experts (includes, e.g., formal and informal authority, relative numbers, pay, titles of government institutional actor social science vs. legal vs. natural science experts);

Within-Agency prestige and authority of agency natural science and natural science experts (includes, e.g., formal and informal authority, relative numbers, pay, titles, of agency social science vs. legal vs. natural science experts);

Within-Government institutional actor prestige and authority of government natural science and natural science experts (includes, e.g., formal and informal authority, relative numbers, pay, titles, of government institutional actor social science vs. legal vs. natural science experts);

Prestige and authority of agency lawyers (includes, e.g., formal and informal authority, relative numbers, pay, titles, of agency legal vs. scientific experts);

Within-Government institutional actor prestige and authority of government lawyers (includes, e.g., formal and informal authority, relative numbers, pay, titles, of government institutional actor legal vs. scientific experts);

Individual actor background factors (includes demographic factors, occupational and education experience, reasons for educational and career choice, values, including political preferences and ideologies, as well as specific views on regulatory policy and administration, etc.).

NOTES

1. In contrast to Griffin (1993), Sewell (forthcoming) defines as events only "that relatively rare subclass of happenings that significantly transform structures."

2. Also unlike neoanalytic induction, qualitative comparative analysis (QCA), or their combination, strategic narrative emphasizes the narrative component of qualitative, historical research.

3. Kiser and Hechter (1991) also distinguished between causal mechanisms and recognized that induction can help establish the former. However, Kiser and Hechter's argument that establishing causal mechanisms requires a general deductive theory is narrower than my statement that establishing them requires deduction.

4. For deterministic theoretical propositions, these statements would be equivalent to presuming multiple, conjunctural causation (Ragin 1987). For probabilistic propositions, conjunctural causation is especially relevant. The qualitative scholar's conjunctural causation is equivalent to the quantitative scholar's interaction effects.

5. Systematically producing a chronology of action units allows, but does not compel, the analyst to conduct computer-assisted investigations of action sequences. Griffin (1993) showed how doing event structure analysis (ESA) with the computer program ETHNO primed the historical researcher to ask questions about sequential connectedness in ways appropriate to assessing whether a given—or similar—action is a necessary precursor to some subsequent action. Where ETHNO incorporates explicit rules for making inferences about causal relations among actions in a reconstructed chronology, ETHNO does not tell the researcher how to construct the starting chronology for subsequent computer-assisted causal interpretation. Whether or not a qualitative researcher makes use of such a formal analytic tool as ESA, the procedures for action coding shown in the section "Operationalizing the Strategic Narrative Approach" ensure that the chronologies he or she constructs will be rigorous, replicable, and readily criticizable.

6. Even without avowedly comparative goals, research that fails to conceptualize time in terms of institutional and cultural context cannot communicate adequately exactly how, why, or what about a conjecture in which some action takes place can help explain the occurrence or nonoccurrence of that action. When the goal of constructing and comparing similarities and differences among "historical cases" is present, as it is in strategic narrative, the need to conceptualize time as context becomes even greater. It is contextual time that signals the contingent conditioning of action by the variable settings in which that action takes place. More abstractly conceptualized, these settings or contexts for action provide institutional and cultural rules and resources that constrain, enable, and orient action, making some actions possible while precluding others. Among "objectively possible" actions, institutional and cultural rules and resources provide positive incentives for some actors to take some action and negative incentives for these or other actors to take other (or these) actions (see, e.g., Stryker 1994).
7. This view of causal relations contrasts with narrativists' view of causality as (predominantly) endogenous unfolding.

8. Because concurrent construction and interpretation of history is a fundamental premise of all extant narrative and comparative techniques, including strategic narrative, and because such concurrent construction/interpretation is essential if qualitative research is to capitalize on history's richness to improve specification of indicators and hypotheses, it must be underscored that this concurrent construction/interpretation itself is not a problem. It is just different from the way that quantitative researchers generally treat the relationship between ideas and evidence. When theory construction and theory testing are distinct processes, as they are in quantitative research designs, researchers first construct hypotheses either by deriving them formally from a set of basic assumptions or by "deriving" them in a much looser way from past literature. Only when hypothesis formulation is complete do researchers conduct the statistical test. If the test suggests the hypotheses are lacking, hypotheses can be modified, but only after any disconfirming results are reported. In addition, in the frequentist, as opposed to the Bayesian tradition, there is no cumulative assessment of hypotheses based on the totality of prior knowledge accumulated with current data. Instead, each data analysis constitutes a separate test (see, e.g., Ellis 1995). In contrast, mutual construction of theory and history does not test hypotheses in this fashion but rather envisions joint production of better ideas and better evidence. Thus the researcher may begin a study with a tentative set of concepts, indicators, and hypotheses and end the study with a more precise and better specified set. Along the way, he or she has mutually adjusted starting ideas and starting facts until there is a good fit. As long as the researcher designs and applies explicit procedural rules for this mutual adjustment process, it will be replicable and open to criticism.

9. The NLRB and FTC both began life with economic divisions. Quickly, both agencies' economists found themselves attacked by Congress. Both agencies let go some controversial economic personnel. However, whereas the NLRB economic unit and its function were attacked successfully by congressional action, the FTC was more effectively taken over by the FTC economic division and function. Thus, over time, NLRB and FTC policy forms diverged. FTC enforcement continued to rely on economic, as well as legal, expertise. NLRB enforcement came to rely strictly on legal expertise.

10. In some situations, others' primary historical work may be sufficient for the sociologist to make appropriate theoretical inferences. However, the general point is that the sociologist cannot know whether others' historical work is correct and sufficient without consulting primary sources.

11. Obviously, interest and/or resource-oriented frameworks of various types are common in political sociology (see, e.g., Hicks and Misra 1993).

12. The EEOC and EPA fall between extremes of the "triumph" of economic expertise at the FTC (Eisner 1991, p. 228) and the removal of economic expertise from the NLRB. The EPA employs economists in its Office of Policy Planning and Evaluation (Melnick 1983; Congressional Quarterly 1990). Economic analysis is important, if not always triumphant, in regulating the environment (Rosenthal 1991, pp. 128-41; Freeman 1990). The EEOC employs social scientists and statisticians (Equal Employment Opportunity Commission 1984; Congressional Quarterly 1990). In equal employment opportunity law, social science ordinarily is subordinated to legal issues and expertise, but it has provided central evidence to show some kinds of employment discrimination (Player 1988).

13. The "Documents" category indexes all documentary source material referred to in an associated text, with as much or little bibliographic information as is available. "Documents" codes link to, and help build, a master reference file. The category "Summarizing Content Codes" is discussed in the next section. Scanning in verbatim text ordinarily will maximize validity and reliability, because when the researcher undertakes content coding he or she will be able to rely on computer execution of coding instructions based on identifying words, phrases, and/or other attributes of an original text. However, a combination of criteria, including length, number, and quality of documents to be processed, copyright issues, level of detail needed to meet analytic goals, and the researcher's projected analytic techniques, can be used to determine relative costs and benefits of relying on verbatim text versus summary notes. Phase of the research program also is relevant here, because computer-assisted coding requires well-developed and precise coding rules.

14. I use both my documents' structure and time frame and my knowledge of rules shaping political processes to standardize my decisions about what constitutes an action unit. For example, for any new legislation on which it reports, Congressional Quarterly Almanac prints a "Box Score" of "key actions" in the legislative process. Each of these key actions becomes an action unit when I construct a chronology of the legislation.

15. If there is a large amount of text associated with a given action unit, relevant content codes also can be attached to specific subsections within that text to expedite later comparative analyses. I also consider information recorded under "I. POLICY AREA" to be part of my content coding, because "Policy Arena" signals the regulatory arena, and program within that arena, to which action-coded text applies.

16. Figure 3 shows that the conceptual definition and measurement of "Markets and Market Values"—the broader code for which "Opportunity-Results" is a subcode—includes negative as well as reinforcement of market principles. In general, the researcher must take care that his or her concepts and measures reflect negative, as well as positive, instances when explanatory and outcome factors are discrete, and all locations along the relevant continuum when those factors are continuous.

17. The reader is warned that, although coding rules for "Opportunity-Results" have been revised in light of tests showing underinclusion in prior rules (Pedradus 1995), additional revisions may emerge from testing current rules on new types of documents.

18. In set theoretic terms, the code-subcode relationship is defined as follows. If A and B are two codes, B is a subcode of A if and only if all the information coded under B also would be coded under A, but not all the information coded under A would be coded under B. Branching diagrams can be used to represent hierarchy in a coding scheme. Branching diagrams can be updated periodically to reflect any added subcode structure. My content coding relies on five basic building blocks to generate subcode structure for many of its codes. These are differentiation between a "Policy" and an "Agency" as the focus of information being coded, differentiation among "Types of External Actors" involved with the policy or agency, differentiation among "Types of Internal Actors" involved with the policy or agency, differentiation among various "Types of Relationships Between the Policy or Agency and External Actors or Among External Actors With Respect to the Policy or Agency," and differentiation among various "Types of Relationships Between the Policy or Agency and Internal Actors or Among Internal Actors With Respect to the Policy or Agency." More information is available on request.

19. Although two parallel codes cannot both apply to the same information item—for example, institution or individual X cannot be both an "internal" and "external" actor—passages of text indexed by summarizing content codes contain multiple items of information. Thus two or more parallel codes can apply to a given passage. This would be so, for example, if a passage referred to action by multiple actors, some of whom were "Internal Actors" and some of whom were "External Actors."
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Sociologists routinely employ regression analysis and a variety of related statistical models to draw causal inferences from survey data. Typically, the parameters of the models are interpreted as effects that indicate the change in a dependent variable that would occur if one or more independent variables were set to values other than the values actually taken. The purpose of this article is to formally demonstrate, in a fashion accessible to the social researcher who is not a methodologist, why the interpretations above do not generally hold, even when the model is correctly specified and a causal theory is given. Some implications for the way in which social research is and should be conducted are discussed. In particular, the usual strategies for testing competing causal explanations are misdirected. Further, the emphasis on causation in contemporary sociology is often misdirected.

An Introduction to Causal Inference

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1. INTRODUCTION

Sociologists routinely use regression analysis and related procedures, for example, generalized linear models (McCullagh and Nelder 1989), structural equation models for discrete data (Goodman 1973), and structural equation models for metric dependent variables, with observed and latent variables (Jöreskog 1977), to argue that one or more independent variables cause (do not cause) various dependent variables.

Typically, using data obtained from a survey, a researcher estimates a parametric statistical model to study how one or more response variables depend on various sets of independent (often called “explanatory”) variables; the parameters that describe the manner in which

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