# Advances in Comparative-Historical Analysis

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# 1 Comparative-historical analysis in contemporary political science

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Comparative-historical analysis (CHA) has a long and distinguished pedigree in political science. In a discipline in which a succession of different movements has advocated new approaches promising more powerful theory or new methodologies for more rigorously testing theory, or both, CHA has stood the test of time. It remains the approach of choice for many scholars spanning all generations and continues to set agendas – both theoretical and substantive – for many other scholars who use alternative analytical and methodological tools.

In this introductory chapter, we explore the resilience and continuing influence of CHA in contemporary political science. We attribute the enduring impact of CHA to strengths built into its very defining features: its focus on large-scale and often complex outcomes of enduring importance; its emphasis on empirically grounded, deep case-based research; and its attention to process and the temporal dimensions of politics. These features not only distinguish CHA but also endow the approach with comparative advantages not found in other research.

The methodological churning within political science is not new, and yet it seems to have intensified over the past several years. Beginning in the late 1980s, the field underwent important changes as rational choice theory made its way into the mainstream of the discipline. Scholarship using game theory was greeted with considerable fanfare and controversy, celebrated by some for the theoretical elegance of its models, criticized by others for the limited leverage that these models often seemed to offer in explaining real-world outcomes.[1] Even if this line of work did not have the transformative effects that some predicted, clearly it now occupies an important place in the discipline.

[1] For a flavor of debates of the day, see Green and Shapiro (1994) and Friedman (1996).

More recently, an empiricist strand of work has emerged with similar energy and force. Billed by its proponents as a "revolution in causal inference," the experimental method has been sweeping through many departments. Today's experimentalists put great emphasis on research design, often recruiting subjects – in the lab, in the field, or online – to participate in experiments that attempt to isolate the effects of variables of concern. This new trend has shifted the terms of debate away from previous disputes about the relative merits of large-$N$ and small-$N$ research. Instead, both traditional regression analysis and qualitative case-based research are increasingly disparaged by those who see all forms of observational research as fatally hobbled in their ability to nail down causation with any reliability (e.g., Gerber, Green, and Kaplan 2014). Strong proponents of the experimental method solemnly advise graduate students to ignore the revolution in causal inference at their peril.

And, finally, even as we write, "big data" is the new watchword on the political science frontier (e.g., King 2014). Although the term is quite loose, what distinguishes big data from more traditional quantitative research is that it involves huge data sets (often more than a million observations) whose analysis requires specialized computer science techniques (e.g., machine learning). Research agendas organized around big data have been driven in part by technological advances and new social science infrastructures that allow researchers to harvest and manipulate large quantities of information. For scholars who are part of this movement, the issue is what questions these new sources of data and these new techniques might be used to address.

In the midst of this maelstrom, CHA remains a prominent and vibrant research tradition. In fact, in the current context characterized by a feverish concern with data collection and theory testing, CHA stands out by remaining resolutely and unapologetically focused on theory generation and on explaining large and complex outcomes at the macro level that other approaches increasingly shy away from as empirically intractable. Complementing but also competing with these other research approaches, CHA continues to find expression in a steady stream of highly celebrated contemporary works that often set theoretical and substantive agendas that are then taken up by scholars deploying other methods, including proponents of the latest "gold standard."[2]

In what follows, we explore the enduring influence of CHA by highlighting the comparative advantages that stem from its three core defining features.

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[2]   Many of the major works in CHA are discussed in Mahoney and Rueschemeyer (2003). Appendix A presents a partial list of prominent, recent works in this tradition that we know won important disciplinary awards since 2000 (inevitably, we will have overlooked some, and we apologize for omissions).

First, CHA's *macroconfigurational orientation* links it to the classics in political science and shares with them an abiding concern to explain large-scale political and political-economic outcomes. Second, its focus on problem-driven *case-based research* has been a key source of agenda-setting insights that have enjoyed broad applicability and resonance. Third, CHA's commitment to *temporally oriented analysis* has allowed it to make distinctive contributions to our understanding of process and time in politics. We elaborate the advantages of CHA by drawing out what is gained from each of these three orientations. More important, we consider what is lost in research programs that lack these characteristics. Along the way, we also consider complementarities between CHA and other approaches. We explore how aspects of alternative approaches have been or might be incorporated into CHA. We look at the ways in which CHA might help compensate for weaknesses associated with alternative approaches.

## Macroconfigurational research

As a first distinguishing feature, CHA entails *macroconfigurational research.* This feature breaks out into two separate though related components – the "macro" and the "configurational" – and each may be discussed in turn.

### A macroscopic orientation

The macro component entails a concern with large-scale outcomes – state building, democratic transitions, societal patterns of inequality, war and peace, to name a few. Researchers often also focus on large-scale causal factors, including both broad political-economic structures (e.g., colonialism) and complex organizational-institutional arrangements (e.g., social policy regimes). The macroscopic orientation of CHA is also signaled by the analysis of aggregate cases: often nation-states but also including political movements, subnational territories, empires, and, in a few cases, even whole civilizations and world systems. Although macrolevel research is associated with CHA scholarship, it is not unique to that tradition. For example, many statistical researchers also seek to explain macro outcomes and focus on broad structural-institutional causes in their work. This shared concern with macroscopic questions has, in fact, allowed for considerable synergies between CHA and quantitative analysis. Such synergies have sustained highly productive research communities in which competition and collaboration among

scholars employing different methods have advanced our understanding of a wide range of outcomes, from revolutions to welfare regimes to democratization (Amenta 2003; Goldstone 2003; Mahoney 2003; Pierson 2000).

In the past, some scholars contrasted CHA's emphasis on macro outcomes and macroscopic causes with alternative approaches committed to "methodological individualism," that is, the idea that political outcomes must be traced back to the actions and motives of individual agents.[3] However, the distinction vanishes in the practice of CHA. In fact, macro theories often direct our attention to which particular microlevel processes or behaviors are likely to be most important and when. For example, Capoccia's analysis of critical junctures turns precisely on identifying moments of structural contingency when actor choice and agency can carry special weight (Capoccia, Chapter 6, this volume). Likewise, macro theories often suggest specific microlevel events and processes that should (or should not) be present within particular cases if the macro theory is correct. As part of testing their theories, CHA scholars who are interested in identifying big patterns over time or across countries often rely on archival and primary sources, zooming in to inspect specific crucial episodes or patterns at closer range, and in some cases delving into the motives and actions of particular historical actors (e.g., Skocpol 1992; Swenson 2002; Ziblatt 2009, forthcoming).

Rather than insist on methodological individualism, CHA takes a position that reflects both pragmatic considerations and a particular ontological commitment. The pragmatic position, well articulated by Daniel Little (2012), is that it is often quite possible to "make careful statements about macro-macro and macro-micro causal relations without proceeding according to the logic of Coleman's boat – up and down the struts" (145).[4] While macrolevel arguments cannot be at odds with micro accounts, their validity does not require that they be broken down into individual-level behaviors; in fact, a requirement to disaggregate all processes into individual-level choices and behaviors would render much macro research infeasible or impossible.

The more foundational point, however, is that where structural features play a key causal role there is nothing to be gained – and much to be

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3   Jon Elster (1982), a leading proponent of methodological individualism, defined the term to mean "the doctrine that all social phenomena (their structure and their change) are in principle explicable only in terms of individuals – their properties, goals, and beliefs" (453). For a thoughtful discussion of the origins of the term and the ambiguities in its usage, see Hodgson (2007).

4   Little refers to Coleman's (1990) macro-micro-macro model of explanation. The example he gives is Bhopal, where he suggests that it is not necessary "to disaggregate every claim like 'organizational deficiencies at the Bhopal chemical plant caused the devastating chemical spill' onto specific individual-level activities" (Little 2012: 8–9).

lost – by insisting that every outcome be traced back to the actions and strategies of individual agents. To adopt an exclusively micro-oriented approach would mean ignoring important causal processes that can only be understood at higher levels of analysis (Gaventa 1980; Lukes 1968). Many of the most influential works in comparative politics point to systemic characteristics in which structural variables, large-scale processes, or organizational features play a crucial causal role by shaping the interests of individual agents. One cannot understand the interests and actions of key actors without appreciating the macrostructural environment in which they are situated. In this volume, Paul Pierson makes the point with a trenchant critique of how much work in political science fundamentally misses the impact of power by reducing politics to the apparently fluid interactions of individuals.

### Causal configurations and context

The configurational component of CHA refers to the way in which researchers consider how multiple factors combine to form coherent larger combinations, complexes, and causal packages. One reason this kind of configurational analysis figures so prominently is because the large-scale outcomes investigated in CHA are themselves often aggregated combinations of multiple events and processes. For example, one cannot study revolutions, democratic transitions, and developmental states without analyzing how various events and underlying processes constitute these phenomena.

However, beyond this, configurational analysis also characterizes a specific mode of *explanation* used in CHA. In this field, one frequently explains macro outcomes by examining how variables work together in combinations or "causal packages" (Ragin 1987). This combinatorial approach to causation assumes complexity in the specific sense that interaction effects – including interactions among more than two variables – are presumed to be common, and thus that individual causal factors normally must be analyzed as parts of larger combinations. Even when CHA scholars are interested in studying the effects of a single factor on an outcome, they consider the ways in which the effects of that variable may vary across different settings. In CHA, specifying the effect of $X$ on $Y$ almost always involves taking into account the "context" in which $X$ operates, which means specifying the other variables that interact with $X$ and that shape the nature of its effect (see, especially, Falleti and Lynch 2009).[5]

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[5] On the potentials and challenges of modeling and interpreting interaction effects in quantitative research, see Kam and Franzese (2007).

To invoke a well-known example, consider how O'Donnell (1973) answered the classic question: does economic development cause democracy? His answer was "it depends," and he then set about specifying upon exactly what it depends. In contrast to the conventional wisdom that economic development contributes positively to democracy, O'Donnell found that in South America in the 1960s and 1970s economic development in fact helped to fuel harsh authoritarianism. He argued it did so because economic growth was unfolding in a context marked by mobilized popular sectors and an increasingly prominent role for technocrats within society. Under these specific conditions, economic development was a motor for the creation of repressive military regimes.

CHA researchers adopt a configurational approach to explanation not because they value causal complexity for its own sake or underappreciate parsimony. Instead, for the macro outcomes under study, CHA researchers believe that there is no alternative to analyzing the effects of causes in light of the context in which they occur. Most scholars in this school thus would emphatically agree with Andrew Abbott (1997) when he points out that abstracting a case from its context in the interest of parsimony can lead to deeply misleading results. As he puts it, if such "decontextualization is merely the removal of excess detail, then it's a fine thing, scientifically." But if it eliminates crucial variables and interactions, "it is a scientific disaster" (1171).

## Complementarities and trade-offs

Not all approaches are equally well suited to address the macro phenomena at the center of CHA research. Different approaches are designed to address different kinds of questions, and we should be evaluating the costs and benefits of choosing a given approach for the questions we ask and answer. Arguably, one of the main causalities in the "revolution" in causal inference – increasingly acknowledged as well by otherwise sympathetic observers – is a dramatic narrowing of the type of studies that scholars are likely to undertake (Huber 2013). Many of the questions we want to ask about causes and outcomes at the macro level do not lend themselves to an experimental design. What is the relative impact of coercion and co-optation on the durability of authoritarian regimes? What is the role of organized business in American politics? How do multinational corporations affect development? These questions cannot be answered with an experiment for technical, logistical, ethical, or financial reasons.[6]

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[6]  Lijphart (1971) pointed out long ago that the experimental method "can only rarely be used in political science because of practical and ethical impediments" (684).

The turn to experimental research does not just bias the questions we ask; it often steers the search for answers onto specific paths, toward particular kinds of answers about what factors are seen as causally important.[7] Researchers can almost never manipulate many of the macro factors that we know to be the most important in politics – power, resources, institutions, and ideology – in any meaningful way.[8] Experimental research cannot easily find these factors to be causally consequential, because they simply do not lend themselves to these techniques. By contrast, "information" turns out to be a variable that is especially amenable to treatment, in the lab or in the field.[9] Experiments that vary information (e.g., amount, content, "frame") are relatively easy to design and inexpensive to implement. As a result, a rather large share of experimental work probes the impact of information-based variables, and the findings therefore often report the impact (or not) of treatments that manipulate information in one way or another. Quite apart from the question of whether the resulting experiments are successful on their own terms (for example, avoiding problems of "priming" and other pitfalls), information (or variables that lend themselves to information-based manipulation) may actually be a minor determinant of the outcome of ultimate interest.

From the perspective of the kinds of macrolevel concerns that animate CHA, therefore, one of the more regrettable trends in the discipline is the selection of questions on the basis of methods and data (see also Shapiro 2004, 2014). We all know the story of the drunken man searching for his keys under a lamppost "because this is where the light is best." In the past, this story was invoked as an admonition to pursue the causes of the phenomenon of interest no matter where that search might lead you. Today, however, some scholars suggest that we should seek out questions that lend themselves to "modern" methods and search for answers where the data are most plentiful. They counsel us to leave aside questions – and to bracket possible answers – that, while perhaps important, are empirically intractable. In other words, some scholars are emphatically directing us to look under the lamppost, with the warning that there is no point tapping around in the dark.[10]

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[7] For assessments of the strengths and weaknesses of experiments in political science, see Morton and Williams (2010) and Druckman *et al.* (2011).

[8] With an experiment, one can manipulate treatments in ways that attempt to simulate macrostructural factors. For example, one study seeking to determine whether a leader's status affects his/her ability to elicit cooperation established participants' "status" through their performance in trivia games (Eckel, Fatas, and Wilson 2010). However, one usually cannot actually manipulate macrostructural factors themselves. For a rare exception, see Beath, Christia, and Enikolopov (2013).

[9] We are indebted to Ben Schneider for this point.

[10] We thank Paul Pierson for this point, based on remarks made by a prominent scholar of American politics who cited the lamppost example in just this way.

However, this intense narrowing of questions comes at a huge cost. We have already seen how the study of economic development in some quarters has been reduced to serial exercises in program evaluation (Deaton 2014) and how the study of American politics has become ever more focused on public opinion and electoral behavior (Pierson 2007). These developments have gone hand in hand with a skepticism toward observational research that has caused some scholars to swear off macrolevel outcomes and complex institutional configurations as hopelessly confounded and instead to zero in on narrower questions for which an experiment can be devised or a large-$N$ data set can be assembled. Yet one cannot help but wonder whether searching for answers where the light is brightest in fact captures the most important explanations. For example, the ready availability of public opinion data (combined increasingly with survey experiments) has driven a significant renaissance in behavioral research centering on what individual citizens say they want. And while we learn a great deal as a result about what people are thinking, citizen preferences are not necessarily the main driver of many of the outcomes we wish to explain. Just as the massive growth of high-end inequality in the United States seems hard to trace back to the preferences of voters, so, too, are outcomes such as the dramatic transformation of the Chinese political economy or the dreary durability of authoritarian regimes throughout much of the world hard to link to the micro attitudes and preferences of ordinary citizens.

Turning now to the configurational aspect of CHA, we noted earlier that CHA research assesses theories that assume complex causal interactions and indeed often puts such configurations at the very heart of the analysis. On the one hand, a concern with configurations rooted in specific cases at least partially differentiates CHA from statistical research, which is often more concerned with estimating the average effects of particular variables or perhaps simple interactions across large populations of cases. On the other hand, however, CHA can and does powerfully team up with statistical analyses that are similarly focused on macrolevel outcomes and variables. As Lieberman points out in this volume, much can be gained by combining traditional regression analysis with a close analysis of systematically selected cases. Statistical studies are often helpful in identifying broad patterns about individual variables, while CHA identifies how these variables work together in configurations to generate outcomes in specific cases. Conversely, CHA findings about causal configurations for particular sets of cases can stimulate statistical hypothesis testing aimed at identifying the more general effects of the variables in these configurations.

By contrast, experimental research cannot as easily join forces with CHA in a collaborative program focused on macro (often macrohistorical) outcomes. Lieberman's chapter shows that the two traditions can certainly inform each other, though he also makes clear that CHA and experimental work occupy opposite ends on key dimensions of empirical social science (see the cube in his Figure 9.1). At a basic level the aim of experimental research – to isolate the impact of individual treatment variables while controlling for other factors – clashes with the more configurational approach of most CHA. By design, experimental research tends to produce discrete findings that cannot simply be "added together" in any straightforward way to illuminate more complex causal interactions.[11] So, although it is possible to apply insights from macro CHA work at the micro level – for example, using experiments to test aspects or modules within a configurative CHA explanation – the discrete micro results of individual experiments cannot be "summed together" to explain the macro outcomes on which CHA scholars typically focus.

These difficulties in aggregating the results of individual experiments are partly related to well-known issues of context and external validity. Although experimental research is designed to control for the effects of various factors via random assignment to treatment, its findings are nonetheless situated in the specific setting where the research is carried out. The question of whether and how these findings might be generalized beyond this context is often quite problematic in contemporary political science. In an era when cross-national regression research is often denigrated, it is important to recognize that regression research usually avoids the problem of generalizing its results to inappropriate contexts or of posing a big question and then – once it has been translated and broken down into a viable experiment or "game" – generating results that apply to a different and often smaller question.

Ultimately, experimental research can complement but it cannot substitute for the kind of macro and configurational research carried out in CHA. Virtually by definition, experimental research is likely to miss many of the broad systemic features that we know to be important components of political life, including the connections across different institutional realms. Such work

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[11]  In a stirring tribute to Albert O. Hirschman, Francis Fukuyama (2013) points to the limitations of experimental work even in the area of developmental economics where it is particularly prevalent. He notes that experiments can be useful for narrow program-evaluation purposes, but not for theory development because the results "don't aggregate upwards into an understanding of the broader phenomenon of development. It is hard to imagine that all the work being done under this approach will leave anything behind of a conceptual nature that people will remember fifty years from now" (93).

will also systematically miss complex reflexive processes and dynamics of reciprocal causation in which "causes" and "effects" are mutually constitutive over time and across different institutional arenas. As Gingrich's chapter shows, the brilliance of Esping-Andersen's research on welfare regimes was precisely how it identified complex causal "syndromes," feedback effects, and coherence across different realms and over time. It is hard to imagine how impoverished welfare state research would be if we reduced everything to simple binary relationships or limited ourselves to looking at specific independent variables one at a time.[12]

Within the experimental tradition, there are more complementarities between CHA and natural experiments.[13] Both employ a similar comparative logic based on carefully matched cases. Moreover, studies based on natural experiments – like much of CHA – typically seek to understand the effect of a variable on a macro outcome in a particular case rather than to generalize about an average effect for a broad population. Yet very few natural experiments in political science meet the demanding criteria for a true natural experiment (Dunning 2012; Sekhon and Titiunik 2012). Instead, scholars examine cases that are matched on key dimensions but that often do not fully meet the assumption of "as-if" random assignment to treatment. For these very reasons, work on natural experiments can benefit enormously from the tools of CHA, which are designed precisely to make inferences about cases that cannot be construed as true natural experiments.

## Case-based research

A second defining feature of CHA is *case-based research*. This feature highlights the fact that CHA typically focuses on explaining observed outcomes, often in particular times and places, and it does so by developing explanations that identify the causal mechanisms that enable and generate these outcomes. This orientation again can be unpacked into two separate components: (1) a focus on real-world puzzles, and (2) the use of mechanism-based explanation.

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[12]   Similarly, the Varieties of Capitalism framework (Hall and Soskice 2001), which has inspired such a large and fruitful body of research, is specifically organized around the complex systemic features of political economies (e.g., Iversen and Soskice 2001, 2006).

[13]   As Lieberman (Chapter 9, this volume) points out, the same holds true for quasi-experimental designs such as matching techniques and regression discontinuity analysis.

### Real-world puzzles

CHA research is *problem driven* in the sense that it is animated by real-world questions, which is why CHA scholars gravitate toward empirical puzzles anchored in particular times and places (Pierson and Skocpol 2002; Shapiro 2004). They may ask why cases that are similar on many key dimensions exhibit quite different outcomes on a dependent variable of interest. This is the approach taken by Maya Tudor (2013) in her analysis of divergent political trajectories in India and Pakistan. Alternatively, CHA scholars may ask why seemingly disparate cases all have the same outcome. This is the main strategy followed by Steven Levitsky and Lucan Way (2010, and Chapter 4, this volume) in their analysis of competitive authoritarianism. Real-world puzzles may also be formulated when particular cases do not conform to expectations from existing theory or large-*N* research. For example, Atul Kohli and collaborators (2001) explore why India is a longstanding democracy despite being poor, ethnically diverse, and regionally divided.

Most CHA research is thus defined by certain scope conditions that delineate the range of cases to which the theory applies. Identifying these scope conditions is part of the process of specifying the context (i.e., the specific configuration of variables) within which the researcher believes his or her argument will be valid. Thus, rather than ask whether wars on average cause state building across all times and places, CHA researchers more typically ask whether wars contributed to state building for a specific set of cases situated in a specific context (e.g., Centeno 2003).

However, regardless of whether scope conditions are defined in narrow or broad terms, high-quality CHA research places great emphasis on *getting its cases right* – that is, developing a deep enough understanding of the case (often on the basis of different types of primary evidence) to adjudicate among competing hypotheses. In contrast to what Lieberman (Chapter 9, this volume) refers to as "mini-cases" invoked for illustrative or heuristic purposes, a good answer in CHA research must be able to withstand scrutiny when one brings more details of the case or cases at hand to bear. Explanations of particular empirical puzzles should not fall apart when these cases are examined again or by other scholars (including specialists) at close range. This requirement demands that CHA researchers become experts on those aspects of their cases relevant to the question under study.

In CHA, getting the cases right is not just essential for valid explanation; a deep understanding of actual – not stylized – cases is also what brings novel explanations to the fore. Working at close range allows scholars to

identify new explanatory propositions that will not show up in mini-cases or in research organized around the coding of cases on predetermined independent variables of interest. As an example, consider the impact of Peter Swenson's (1991) research into the origins of democratic corporatism in the advanced industrial world. In the 1970s and 1980s, a large literature documented a strong correlation between the strength of the organized labor movement and the development of tripartite national bargaining associated with wage equality and other outcomes. Leading labor scholars inferred that these outcomes were a matter of labor strength over capital. On the basis of close analysis of two of the most critical cases in these debates, Denmark and Sweden, Swenson upended the conventional wisdom by revealing that specific segments of business were prime movers in the push for centralization. This work sparked a highly fruitful new round of further research – both qualitative and quantitative – that generated key insights into the role employers played in the origins of institutional arrangements that traditionally had been chalked up simply to labor strength. Whether scholars agreed or disagreed with his findings, Swenson's careful case-based research inspired a much broader research program that has taught us a great deal about employer preferences and the politics behind the genesis and reproduction of key political-economic institutions in the developed democracies (e.g., Broockman 2012; Iversen, Pontusson, and Soskice 2000; Mares 2003; Martin and Swank 2004).

Beyond its role in generating novel causal claims, CHA also produces conceptual innovations of broad applicability. Recent research on different modes of institutional change – such as Schickler's (2001) work on layering, Hacker's (2005) study of drift, and Thelen's (2004) analysis of conversion – provides an illustration. The discovery and elaboration of these concepts occurred in the context of detailed analyses of particular empirical puzzles. In the case of drift, for example, Hacker's close analysis of social policy in the United States challenged the conventional wisdom that popular social programs resist retrenchment. In particular, he showed that, in the face of consequential shifts in the social or market context, failing to update a policy can fundamentally alter its impact. In such instances, "doing nothing really means doing something, because stable policy rules produce shifting political outcomes" (Hacker and Pierson 2010, 2). Like conversion and layering, the concept of drift – though rooted and originally observed in a specific case – has in the meantime been adopted and applied much more widely. Work on drift has not just informed a new round of social policy research but also has been applied to explain outcomes ranging from corporate governance reform

in Europe (Cioffi 2010) to the reconfiguration of business-state relations in Japan (Vogel 2006).[14]

In short, in addressing real-world puzzles, CHA research often generates new insights and thus creates new theory. These insights can then stimulate broader research agendas as they are taken up by scholars of diverse methodological orientations. Other CHA researchers may seek to assess an initial argument using new historical material or new cases. Statistical researchers may seek to test the generality of the argument – or aspects of the argument – using large-$N$ data sets. Rational choice scholars may seek to specify the micro foundations of the new theory using their analytic and methodological toolkit. And scholars of all methodological orientations working on a wide range of empirical questions may gain new insights into their own cases through the application of the portable concepts and mechanisms that have emerged from CHA studies. The key point to underscore is the power and utility of local explanation in generating new theories that can set the research agenda for a broad range of scholars.

## Empirical mechanisms

The quest to explain real-world puzzles in CHA yields explanations in which much attention centers on specifying the *mechanisms* through which causes and causal configurations exert effects within particular cases. In CHA, scholars distinguish incidental correlations from causal associations in part on the basis of whether mechanisms can be identified to explain the associations. When mechanisms cannot be found, researchers may eliminate potential explanations as spurious. Thus, in CHA, it is not sufficient to demonstrate that hypothesized causes covary with outcomes across cases. Rather, the researcher must provide the reasons why this is so by opening up the black box and identifying the steps that connect observed causes to observed outcomes.

In line with case-based research, CHA scholars study mechanisms by observing them at the level of individual cases: mechanisms are identified empirically rather than simply posited as plausible. The researcher may or may not anticipate in advance specific mechanisms and actively look for their presence; in fact some of the theoretical innovations mentioned earlier were uncovered in the process of explaining cases that did not conform to existing theory. The real requirement is that CHA researchers successfully identify linking processes concretely and in sufficient detail to

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[14]  In addition, prominent game theorists have been prompted to formalize Hacker's concept of drift. See Callander and Krehbiel (2013).

persuade others – including case experts – that the initial set of hypothesized causal factors actually contributed to the outcome. This kind of empirically grounded mechanism-based explanation requires delving into the details and thus demands a deep understanding of the cases under analysis.

As an example of this kind of explanation, consider Rueschemeyer, Stephens, and Stephens's (1992) *Capitalist Development and Democracy.* These authors follow a long line of research in noting an association between capitalist development and democracy. However, on the basis of close analysis of individual countries, they find that the effects of development on democracy are contingent on intervening mechanisms. For instance, development contributed to democracy in many cases of historical Europe because it strengthened pro-democratic working classes and weakened anti-democratic landed elites. Yet, in contemporary Latin America, the working class was not always democratically oriented, with the consequence that development often did not yield democracy. Through their empirical analysis of cases, therefore, Rueschemeyer, Stephens, and Stephens not only provide evidence about the mechanisms through which development contributed to democracy in certain historical settings but also arrive at new hypotheses about the specific circumstances under which development contributes to democracy.

A concern with empirical mechanisms within cases is closely associated with the use of process tracing in CHA. Scholars in this field develop and test alternative explanations in part by tracing the processes that link initial events to subsequent outcomes at the level of individual cases (Bennett 2008; Hall 2006; Mahoney 2012). To determine whether factors that covary are actually causally related, CHA scholars carry out process tracing tests, in which specific within-case observations – typically concerning empirical mechanisms – may count heavily for or against causal hypotheses. To identify these within-case observations, a deep knowledge of the history of the case is often essential. Scholars with case expertise have enormous advantages in locating those observations that prove most useful in explaining why an association between two variables is or is not causal in nature.

The discovery via process tracing of within-case observations concerning mechanisms can allow CHA researchers to reach strong conclusions about the validity of hypotheses for particular cases. At the same time, the process tracing of mechanisms within individual cases contributes to the theory-building capacity of CHA. For example, Slater, Smith, and Nair (2014) reject the finding of Acemoglu and Robinson (2006) that economic inequality contributes to military coups (see also Haggard and Kaufman 2012). They do so because, contrary to what Acemoglu and Robinson propose, their process

tracing of cases shows that militaries do not act for or with economic elites. Instead, they find that the mechanism at work in their cases is related to weak state institutions: economic inequality and downturns produce coups when they weaken an already fragile state and provoke unhappy military officers. In short, the use of process tracing to assess explanations often goes hand in hand with an empirical analysis of causal mechanisms at the level of individual cases. The analysis of these mechanisms can serve both to test theories about those cases and to build new theories, including theories that often "travel" or generalize well beyond the cases studied.

## Complementarities and trade-offs

It is useful to contrast CHA's approach to empirical cases to that of other modes of analysis. In much formal modeling research, empirical cases are invoked to illustrate or demonstrate the plausibility of a deductively derived theory. For example, in Acemoglu and Robinson's (2006) work on democracy, empirical cases serve an illustrative function. They are presented in highly stylized form, as vignettes whose purpose is to provide examples of broader ("general" and therefore often quite abstract) propositions – in this case revolving around the interactions of "elites" and "citizens." Virtually by design, empirical sketches that are meant to illustrate a theory cannot put that theory at risk, nor can they generate additional insights that might be used to refine or improve the theory. Because they do no real "work" in the analysis, stylized cases invoked as illustrations typically do not go deep enough to illuminate the causal mechanisms behind the theory in ways that then yield precise, testable hypotheses for others to pursue.

Contrast this to Swenson's case-based analysis, which offered concrete propositions – for example, the hypothesis that conflicts of interest between employers in sheltered and exposed sectors of the economy, not class conflict, drove the development of corporatism – that clearly invited or provoked others to explore further. The point we are making here might appear counterintuitive. It might seem logical to assume that the more "general" the theory, the more research it would inspire and the more fruitful the resulting research program. But we are suggesting something like the opposite: excellent case-based research in the CHA tradition stimulates further research and applications because it offers especially clear and empirically grounded causal claims. This concreteness (and not the "breadth" of the claims) is what invites other researchers to take up, test, refine, extend, and ultimately confirm or reject the original findings.

The advantages of this orientation for explanation should not to be taken for granted. A significant share of experimental research, for example, adopts a very different approach, reducing the goal of explanation to the identification of average treatment effects. As other observers have also pointed out, although experimental research can be good at measuring the presence or size of a treatment effect, it often fails to open the "black box" and show why the treatment has this effect. However, in an article whose title sums it up, "Enough Already About 'Black Box' Experiments," Donald Green and collaborators reject these criticisms of studies that do not specify the causal mechanisms that link a particular treatment to a particular effect (Green, Ha, and Bullock 2010). For them and others, establishing whether $X$ exerts some influence on $Y$ is the point of the exercise; the question of *why X* affects $Y$ is a second-order concern, to be tackled in due course, but not as a first-order priority.[15]

The model that experimentalists often have in mind is the type of science employed in medical research, where one arguably often does not need to know why $X$ affects $Y$. For example, if a medicine helps to remove certain symptoms across enough clinical trials, then it may well be a secondary concern why it has this effect. However, in the political world, where we cannot manipulate treatments in the vast majority of cases, it is quite a serious matter if we do not know why a particular cause produces a particular effect.[16] A failure to specify the mechanisms through which $X$ affects $Y$ means that we cannot anticipate how the relationship might be altered by other conditions (i.e., by "context"). Without an understanding of the reasons why $X$ affects $Y$, we are also then often mystified when, in a different context, $X$ fails to influence $Y$ or perhaps even produces some unanticipated $Z$ instead (see also Woolcock 2013). We therefore agree with Stokes (2014), who argues, "A causal effect that cannot be explained, cannot be identified, in any meaningful sense of that term" (51).[17]

[15]  On the challenges of studying mediator variables with experiments (and the sometimes herculean assumptions this can entail), see Imai *et al.* (2011).

[16]  This is the crux of Deaton's (2010) critique of the use of randomized controlled trial experiments in the study of development (see also Deaton 2014). He argues that, although randomized controlled treatment can help determine whether a particular project has been useful, it cannot say *why.* He thus advocates shifting the focus of research to investigate the (generalizable) mechanisms that explain why and in what contexts projects can be expected to promote development (2010, 6).

[17]  Stokes (2014) suggests that in experimental research there are always unobserved interaction effects; average treatment effects mask what is possibly highly relevant variation across subpopulations. From a skeptical standpoint, therefore, "unobservable interactions always threaten the meaningfulness of causal inference based on experimental data" (47).

A striking feature of contemporary political science is the fervor over theory testing. The question of where new insights come from – where the seeds of new theories are cultivated – is often lost in the midst of this fervor. While political scientists are increasingly well equipped to test existing theories with ever more rigorous methods, they are often left adrift when their research turns up anomalies or unexpected null results. At this point, the search for explanations often becomes ad hoc, as researchers cast about to devise some story that is consistent with the data.

The trend toward big data is, if anything, likely to exacerbate the problem of theory generation in contemporary political science. Rational choice analysis was criticized for asking "theory-driven" questions and for posing problems that, as Shapiro (2004) has put it, are often "idiosyncratic artifacts of the researcher's theoretical priors" and whose answers therefore are unconvincing "to everyone except those who are wedded to [these] priors" (22–3). Experimental research has been criticized for asking "methods-driven" questions that generate unremarkable findings (Huber 2013). Although the big data movement may avoid the worst-case scenario of massive fishing expeditions, it is hard to imagine how it will avoid "data-driven" research programs. Having invested heavily in acquiring the skills needed to manipulate big data sets, scholars are understandably likely to gravitate toward questions on which they can bring these hard-won technical skills to bear.

CHA does not define itself primarily in terms of a single metatheory, a specific method, or a particular type of data. Scholars in this camp are typically quite pragmatic, even opportunistic, in these respects. Instead, CHA takes its questions from the empirical puzzles presented by the world around it, and scholars are often especially drawn to cases that do not fit dominant theoretical accounts. This orientation, we think, accounts for the central role that CHA has long played in generating new theoretical insights around which broader research communities form. Stephan Haggard's chapter provides an example. He documents the emergence of a large and fruitful research program on the "developmental state," as scholars grappled with cases that cast doubt on the longstanding orthodoxy that the state was "bad" for development. Drawing on a deep understanding of the operation of specific political economies such as Japan and South Korea, they generated fresh theoretical insights, introduced new concepts, and proposed new theories that then stimulated a vast research agenda spanning generations and methods. Developments such as this demonstrate that sometimes one can fully appreciate the value of CHA only by looking at the research it inspires – including, of course, by scholars who deploy different methods altogether.

# Temporally oriented research

The third and final feature of CHA is *temporally oriented research.* CHA researchers assume that the study of temporal processes is essential for the valid understanding and explanation of real-world political outcomes. The reasons for this are several, and they go beyond the obvious point that establishing causality necessarily involves confirming that the hypothesized cause precedes its effect. CHA methods for temporal analysis reflect an ontology in which (1) temporal location shapes the effects of individual variables, and (2) the temporal structure of causes and outcomes matters for explanation and analysis. Let us again examine each of these points in turn.

### Temporal location

In CHA, the effect of a variable may depend on its temporal location (e.g., Pierson 2004). The same variable can have different effects depending on *when* it occurs relative to other processes and events. Thus, CHA researchers pay close attention to the sequence in which variables appear and their timing relative to one another. In fact, placing an explanation "in context" often means situating variables in a particular temporal setting. In this sense, explanations in CHA are configurational not only because they consider combinations of causes operating at a given time but also because they consider combinations of causes located at different points in time (see Falleti and Mahoney, Chapter 8, this volume).

This insight about situating causes in time is central to a significant literature on path dependence in politics. Different scholars sometimes embrace somewhat different definitions, but a core claim that runs through virtually all of this work is the idea that early events in a path-dependent sequence exert a stronger causal impact on outcomes than later ones do.[18] With an increasing returns process, options that are available early on, but not chosen, recede as actors organize their strategies around the path "taken" in ways that render a return to the status quo ante more difficult over time (Pierson 2000). Power dynamics can follow a similar logic: early winners may gain resources and other advantages that make it difficult for losers to make a comeback (Mahoney 2000; Pierson, Chapter 5, this volume). These kinds of

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[18] For a discussion of the different meanings assigned to path dependence as part of a taxonomy of forms of institutional change, see Rixen and Viola (2014).

path-dependent sequences can lock in outcomes over the long run, including suboptimal outcomes that do not serve important human interests or goals. Given the possibility of path dependence, much work in CHA focuses on identifying historical turning points or critical junctures when initial decisions or events occur to launch these sequences. These historical periods hold the selection processes and causes that explain how the long-run pattern was started in the first place.

Other CHA arguments analyze the unfolding of multiple processes in relation to one another. These arguments call attention to the effects of timing and ordering for outcomes of interest (Grzymala-Busse 2011). Consider, for example, Tulia Falleti's (2010) study of decentralization reforms in Latin America. Administrative decentralization reforms can either empower governors and mayors or weaken them depending on their position within an overall sequence of decentralization reforms. Likewise, consider Skowronek's (1982) landmark study of the "patchwork" American state. Skowronek shows that because the United States already had strong democratic politics prior to industrialization and the formation of bureaucracy, political parties were able to exert considerable control over the form of the emergent modern state. The US state developed not as an efficient and rational bureaucracy but instead as a complex amalgam of competing controls that partisans introduced piecemeal over time.

Another variant of sequencing arguments concerns the analysis of conjunctures in which two or more causes come together in time. The precise timing of that intersection may matter a great deal for the effect of the conjuncture. For example, the historical "collision" of the launch of Lyndon B. Johnson's War on Poverty with the urban riots of the mid-1960s powerfully shaped the political fate of social policy in the United States. The redirection of newly introduced social programs to address the problems of African Americans in the country's impoverished urban centers "strengthened the remedial focus of labor market policy and . . . encouraged the creation of separate, racially focused programs" – developments that left such policies politically vulnerable in the long run (Weir 1992, 165–6).

CHA researchers are sensitive to the effects of temporal location because they view their cases historically and situate them in the context of sequences of unfolding events. This orientation is in fact essential for valid explanation in this field. It is thus not incidental that CHA scholars are responsible for developing many of our most powerful analytic tools for the study of temporal location: critical junctures (Capoccia and Keleman 2007; Collier and Collier 1991; Slater and Simmons 2010; Soifer 2012); path dependence

(Alexander 2001; Boas 2007; Mahoney 2000; Pierson 2000); and timing, sequence, and conjuncture (Abbott 2001; Aminzade 1992; Büthe 2002; Grzymala-Busse 2011; Pierson 2004; Rueschemeyer and Stephens 1997). These tools provide concepts for framing and structuring explanations in CHA, and they also provide a basis for comparing CHA works. One can, for example, distinguish CHA studies from one another based on whether they adopt a critical juncture approach or analyze path-dependent processes. Works with quite diverse substantive content can speak to one another because they use the same temporal constructs or adopt the same analytic-temporal framework in formulating their explanations.

## Temporal structure

CHA also recognizes explicitly that variables and processes themselves have a temporal structure. A given causal factor or a given process of change may vary in its duration or pace, and these variations may be highly consequential.[19] Thus, one must not only ask whether some process or event occurred at a given intensity but also inquire about the temporal dimensions of its occurrence. How fast or slow does a given process unfold? How long does a given event endure? What is the pace of a causal process? These questions are addressed both because temporal structure can shape the form and nature of causal effects and because the temporal structure of events and processes can be important outcomes worthy of explanation in their own right.

The CHA concern with temporal structure means that works in this tradition take notice of gradual, slow-moving, and hard-to-see causal processes. Pierson's chapter (this volume) provides multiple examples of the operation of power dynamics through which, over time, some options, issues, or viewpoints come to be "organized out of politics" altogether. These "hidden" dimensions of power can be seen only by examining processes as they unfold over time; they remain invisible in studies that adopt a short-run time horizon. The broader temporal range of much of CHA also allows analysts to recover the impact of distal causal processes that alternative approaches are similarly ill suited to capture. For example, in Yashar's (2005) work, the causal process driving indigenous protest in Latin America unfolds over a period of decades. Yashar shows that corporatist structures that were originally created

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[19] This insight – central to Pierson's (2004) path-breaking work on temporality – has in the meantime been taken up by quantitative researchers who criticize what Pierson called "snapshot" causal inference methods as inappropriate for the analysis of dynamic political processes (e.g., Blackwell 2013).

to turn Indians into national citizens in fact had the opposite effect: they depoliticized ethnic cleavages by sheltering indigenous communities. As a result, when neoliberal reforms slowly eroded those protections, identities were repoliticized, culminating in a wave of indigenous organization and protest. Thus, what might seem like suddenly emerging revolts are in fact better conceived as products of a slow-moving causal process dating to the end of the corporatist period.

Other work in the CHA tradition shows that when a given event or process endures over a long time, it is more likely to trigger a tipping point or set into motion a process of diffusion or accumulation (Grzymala-Busse 2011, 1279). A substantive example is Huber and Stephens's (2001) study of the effect of long-term social democratic control of government for welfare state outcomes. Although a single election result does not shape institutional patterns, electoral success over the long run produces a "ratcheting" effect in which welfare policies that were initially controversial become entrenched and form the point of departure for subsequent debates. To take another example that emphasizes pace: Mark Beissinger (2009) uses event data and case studies to explore the dynamics through which some but not all communist regimes collapsed in the wake of the fall of the Berlin Wall. He draws attention to "streams of activity in which action in one context profoundly affected action in other contexts," producing a tide of changes that unfolded at different paces in different countries (1).

Just as "causes" have temporal dimensions that can affect ultimate outcomes, "effects," too, have temporal structures that are consequential for political analysis. One of the major lessons of the literature on feedback effects is that phenomena of interest to political scientists may emerge only slowly over time (Pierson 2004). For example, the political impact of policies such as the introduction of supplemental (private) retirement accounts manifests only gradually as enrollments increase and growing numbers of citizens become invested – financially and politically – in the fate of these programs (Hacker 2005; Jacobs 2012).

In this volume, Hacker, Pierson, and Thelen examine the key properties of two forms of gradual change that fly under the radar in most political science analyses. They characterize drift and conversion as strategies through which actors can quietly promote significant changes in political outcomes and whose effects emerge only slowly beneath the veneer of apparent institutional stability. Drift occurs when policies or institutions are deliberately held in place even as shifts in the broader political or economic context alter their effects – for example, as demographic or technological changes render

existing regulatory regimes ineffective. Virtually by definition, the political consequences of these processes come into view only when one adopts a long-term time horizon. Similarly, the conversion of existing institutions and policies to promote goals that are often radically different from the ones for which they were created often proceeds only very gradually, for example, through the accumulation of new legal interpretations of existing rules or the application of old rules to new problems.

By focusing on the temporal structure of causal processes and effects, CHA scholars have initiated a broad conversation about typical patterns of institutional change. Some writings on path dependence have called attention to a mode of discontinuous change in which a brief episode of rapid transformation is followed by a long period of stability. CHA is well adapted to the study of such developments because of its concern with the analysis of critical junctures and of long-run causal patterns. At the same time, however, other CHA scholarship has emphasized various slow-moving processes that do not evoke this kind of punctuated equilibrium conception of change (e.g., Pierson 2004). These works show how gradual change is a quite common mode of institutional evolution in the political world (Thelen 1999, 2003, 2004), and as a result scholars now often also consider the ways in which long-run processes may be marked by incremental change within the constraints of path dependence.

Recent attention to processes of gradual institutional change has stimulated an important new theoretical and empirical literature (Mahoney and Thelen 2010a; Streeck and Thelen 2005). This literature has evolved from the identification of typical modes of gradual change (e.g., layering, drift, and conversion) to the development of hypotheses about the causes of particular types of change. The new work offers configurational explanations in which both structural contexts and particular kinds of actors combine to produce particular modes of gradual transformation (Hacker, Pierson, and Thelen, Chapter 7, this volume; Mahoney and Thelen 2010b). It is no coincidence that CHA is at the forefront of this exploration of gradual change: even to be able to "see" how incremental changes can cumulate into significant transformations requires one to adopt the long time horizon characteristic of CHA. Approaches that focus only on short-term effects are blind to such gradually unfolding modes of institutional change.

## Complementarities and trade-offs

CHA has not been alone in focusing attention on issues of temporality. Beginning in the 1990s, political science as a whole witnessed what might

be thought of as a "temporal revolution," a movement in which CHA itself was a central initiator. The temporal revolution in political science reflected a broad chorus reacting to the deficits of viewing politics in cross-sectional, one-off, snapshot ways (see, e.g., Hall 2003; Pierson 2004). The consequence of this movement was unmistakable: it moved temporal analysis into the mainstream of political science, as scholars from a range of methodological approaches brought "time" more centrally into the analysis of politics.[20]

The innovations that grew out of this increased focus on temporality varied across alternative approaches, but they often complemented one another in converging on the idea that time and history are important for the study of politics. In CHA, as we have seen, scholars amplified their focus on long-standing themes and introduced new tools for the study of timing, sequencing, and temporal structure. Statistical researchers contributed to the revolution by developing new longitudinal techniques, making methods such as time-series cross-sectional analysis the norm and advancing new tools rooted in Bayesian statistics (e.g., Beck 2008; Blackwell 2013). Along with these changes, statistical researchers increasingly asked questions about the effects of "historical" causes, such as colonialism, early state formation, and past democratic experience. To carry out tests, these researchers drew on new data sets that often coded cases far into the past. For their part, game theorists formulated new iterative and evolutionary approaches to rigorously consider sequences of strategic choices in which ordering and timing matter (e.g., Smith and Price 1973; Weibull 1997). Some game theorists also became interested in asking historically oriented questions and in using historical sources in their work. Among the results of these developments, the "analytic narrative" approach (Bates *et al.* 2000) and the historical analyses of economists such as Greif (2006) have some parallels with CHA-type work.

Current disciplinary trends, however, threaten to undo the achievements of the temporal revolution. Many of the long-term causal processes that we know to be central to much of politics are not amenable to methods that focus mainly on short-run processes. Unfortunately, most experimental work pulls us back to the analysis of causal processes and outcomes that unfold entirely over short periods of time. In such studies, time stands still because it is possible to isolate the effect of a treatment only where the intervention is

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[20]  Sociologists participated in and contributed to these developments. By contrast, the trend did not extend as deeply into economics, though there are exceptions. Some of the most arresting findings to emerge from Thomas Piketty's (2014) celebrated *Capital in the Twenty-First Century* flow from his having simply situated the current period in a longer time frame. The book thus demonstrates that very different patterns come into view if you pan out from the micro focus that is characteristic of most mainstream economics to track macro processes as they unfold over time.

proximate enough to the effect to rule out other possible intervening variables. The result is again a narrowing of our field of vision, as scholars zero in on the immediate impact of a particular intervention and as large-scale institutional, demographic, and economic trends drop out of view.[21]

Equally important, one-off treatments often generate findings that systematically overlook causal processes that unfold over time and that affect the very outcomes these experiments are designed to explore. This problem is especially easy to spot in experiments that seek to establish the impact of "participation" or "democracy" in contexts that do not feature homegrown participatory or democratic institutions (e.g., Grossman and Baldassarri 2012; Gugerty and Kremer 2008; Khwaga 2009). Many such experiments introduce (through treatment) democratic or participatory practices to test their impact on local political dynamics. The effects sometimes reach statistical significance, but often they are substantively very small and almost always of questionable durability. Even the most serious treatment interventions frequently produce similarly modest and mixed results. Consider, for example, a recent study of democratic participation and gender relations in traditionally religiously conservative settings, conducted in the context of development initiatives in Afghanistan. The treatment was to mandate female participation in village councils to see whether this form of involvement could lead to greater empowerment of women. While these initiatives produced modest improvements in self-reported attitudes toward female participation, they did not produce any change "in more entrenched female roles . . . or in attitudes toward the general role of women in society" (Beath, Christia, and Enikolopov 2013, 540).

Such studies are of value for program evaluation purposes, in this case, for example, underscoring the resilience of local institutions in the face of third-party interventions. However, from a more process-sensitive perspective, the observed outcomes are predictable. When institutions are introduced (treatment style) into a new context, they are unlikely to produce an impact precisely because what also matters is the process through which these institutions themselves emerge. The endogenous political processes through which democratic institutions arrive (historically speaking, often involving prolonged conflict and struggle), as much as the institutions themselves, are what produce the ultimate effects – through the way these processes

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[21] Although they do not typically concern themselves with possible long-term causes, experimentalists do worry about the duration of their results – for good reason, because it turns out that the effects of many treatments fade away relatively quickly (e.g., Druckman and Leeper 2012). When it comes to much experimental work, therefore, it seems that a few weeks or months constitute the new *longue durée*.

transform citizen expectations and reconfigure social and political dynamics (see, e.g., Baiocchi, Heller, and Silva 2011).

Research organized around understanding short-term processes and outcomes has a place in the discipline. However, the costs to embracing approaches to politics that ignore long-term processes and causal relationships are significant. As Pierson (2004, 81) has pointed out, there is no reason to think that the most important or the most interesting political dynamics can be captured by accounts that are wedded to a short-run temporal structure. The radical renarrowing of our field of vision imposes severe casualties, as causes and outcomes that unfold only gradually and over long periods of time fall from view and as attention comes to be focused more narrowly on variables that, although temporally proximate to the outcome of interest, may actually play a relatively minor role in explaining this outcome (Pierson 2004, 101–2).

## Conclusion

This introduction has traced the resiliency and vibrancy of comparative-historical analysis back to the core features that define this approach. Against the backdrop of the ongoing methodological ferment that characterizes political science, one of the strengths of CHA has been its adaptability, born of an openness to engage with scholars from other approaches on substantive issues where complementarities can be leveraged to mutual advantage. CHA and large-$N$ research are in some ways the most natural complements. The strengths of CHA (internal validity) are the mirror image of those of large-$N$ research (external validity), and so these two research streams are especially able to build on each other's findings in productive ways.[22] We see overall fewer complementarities with experimental work, partly because the strengths of that line of scholarship (internal validity) and its weaknesses (external validity) are largely the same as those of CHA. While we worry about the tendencies of experimental research to narrow our research programs and temporal field of vision, we do see potential synergies with quasi-experimental designs (natural experiments, matching, regression discontinuity) and can imagine how experimental work might be useful for testing particular modules in CHA theories. Likewise, big data might also be a useful complement to CHA, for

[22] But see Slater and Ziblatt (2013) for a somewhat different view. They see the kind of "controlled case comparisons" that we associate with CHA as strong on both internal and external validity, and they note that in multimethod research, case comparisons are often used to establish external, not internal, validity.

example, as scholars deploy new possibilities to scan and analyze historical and other documents. CHA thrives partly because it is pragmatic, and the field will surely be open to incorporating any insights that might emerge from these other lines of scholarship that are helpful for answering macrolevel questions.

At the same time, however, CHA has been robust because the best work in this tradition remains true to core features that link it to the classics and that continue to define CHA as an approach – its focus on macroconfigurational explanation, its emphasis on deep case-based research, and its attention to process and the temporal dimensions of politics. While we have separated these three dimensions for purposes of exposition, in fact they exhibit strong complementarities and they are thus closely linked in the actual conduct of CHA research. Macroconfigurational explanations often have a strong temporal dimension, because the timing and sequencing of relevant events form part of the context that produces the outcome of interest. Likewise, deep case-based research facilitates the identification of causal mechanisms and interactions among different variables and processes as these unfold in time. We have argued that the core features that define CHA, taken singly and in combination, endow this approach with real advantages relative to other perspectives. The distinctive insights that emerge from this stream of scholarship, we think, contribute mightily to CHA's continuing intellectual attraction and larger disciplinary impact, as others with different tools take up the agendas initiated by CHA scholars.

At the end of the day, our view is that the most productive research communities are not so much those that are defined by a particular technique but instead those in which scholars – possibly armed with quite different methods – are all united by a shared desire to understand substantively big and important problems. Scholars coming out of different research traditions certainly do not have to agree with one another. However, to the extent that they share a common concern with addressing major questions of enduring significance and consider both micro processes and broader structural factors, they can take notice of each other's findings and use and engage them in their own work.

## Appendix A
## Recent Award-Winning CHA Books in Political Science, 2000–2014

Beissinger, Mark. 2002. *Nationalist Mobilization and the Collapse of the Soviet State.* Cambridge: Cambridge University Press.

# 8 The comparative sequential method

Tulia G. Falleti and James Mahoney

Although comparative-historical analysis (CHA) is often understood to entail the comparison of a small to medium number of cases (usually countries or other macro units), we argue in this chapter that it may be more informative to say that this field involves the systematic comparison of sequences (Rueschemeyer and Stephens 1997). We suggest that a principal overarching methodology of comparative-historical analysis is the *comparative sequential method* (see Falleti 2010, 20–4). This method is defined by the systematic comparison of two or more historical sequences. In CHA, the "cases" studied nearly always are decomposed into sequences of events, and CHA causal claims rest upon the inferences derived from the analysis and comparison of those sequences. To take a classic example, Barrington Moore's (1966) main cases in *Social Origins of Dictatorship and Democracy* include countries such as England, France, the United States, and Germany. But these cases are studied as types of sequences of events that unfold over time. These sequences are the central units of comparison, and they provide the main basis for Moore's inferences about the causes of dictatorship and democracy.

The comparative sequential method is an overarching methodology in the sense that it can and must encompass more specific methods of cross-case analysis and within-case analysis. The main cross-case methods include simple matching tools such as J. S. Mill's methods of agreement and difference as well as more complex tools such as statistical analysis and qualitative comparative analysis (QCA). The within-case methods include inductive process tracing and modes of hypothesis testing such as hoop tests and counterfactual analysis. In this chapter, we show how cross-case (in particular, Millian) methods and within-case (specifically, process tracing) are put to use to analyze and compare sequences of events in CHA. We argue that, depending on the *kind* of sequential argument, contrasting sets of methods are more or less

appropriate – and more or less useful – as tools for analyzing sequences and carrying out causal assessment.

To briefly foreshadow our arguments, we contend that process tracing is especially valuable for establishing the features of the events that compose individual sequences (e.g., their duration, order, and pace) as well as the causal mechanisms that link them together. There is no substitute for process tracing when analyzing the events that make up the sequences and processes that are studied in comparative-historical research. For their part, cross-case methods are the basis through which CHA scholars compare and contrast sequences and processes. These methods are used to evaluate whether the specific features of a sequence (e.g., the ordering of events) affect outcomes of interest in previously hypothesized ways. As we highlight, the comparative sequential method brings together the literature on temporality with the literature on case-study methods of causal inference.

## Conceptual building blocks

We begin our explication of the comparative sequential method by introducing and defining the concepts that form the building blocks of this approach, emphasizing the distinctions between event and occurrence, and between sequence and process.

### Events, occurrences, sequences, and processes

*Events* are spatially and temporally bounded happenings that can be compared across cases (cf. Abbott 2001; Griffin 1992; Sewell 1996). They are defined by general characteristics specified by the investigator, such that all instances of a given event have certain features in common. Different events are marked by different characteristics, which can vary significantly, depending on their level of analysis (e.g., an assassination versus an international systemic change), their duration (e.g., an economic shock versus an economic depression), their scope of change (a coup versus a revolution), and so on. Events have a fractal character, such that more micro events are always embedded within any given event (e.g., Grzymala-Busse 2011, 1281; Sewell 1996). By our definition, however, events are always happenings that have *general characteristics* that allow for them to apply to multiple cases. With an event, one can inquire meaningfully whether or the extent to which two or more cases experience

the same event. Although some historical events may occur only once, if they are events, they could *in principle* have occurred multiple times.

By contrast, we reserve the term *occurrence* for a noncomparable happening that is, by definition, distinctive to a single case. The assassination of Martin Luther King Jr., the Great Depression, World War I, and the 1973 military coup in Chile are examples of occurrences. An occurrence can be recast as an event by viewing it at a more general level of analysis. Thus, these occurrences could be viewed as events if recast as an assassination, a depression, a war, and a military coup. Comparative-historical researchers often discuss occurrences in their historical narratives, but, when these occurrences are given analytic weight in explanation, they are treated as events – that is, as instances of more general phenomena that can be compared across units (Gerring 2007).

Both events and occurrences take place against the backdrop of – and interact with – temporal and spatial *contexts*. The contexts in which events and occurrences occur provide them with meaning and shape their causal effects. A given occurrence or event may trigger a certain reaction or series of events and ultimately an outcome in a given context but a different sequence and outcome in an alternative context (Falleti and Lynch 2009). For example, the bipolar international context of the post–World War II period made the rise of leftist ideologies and governments in the 1960s and 1970s in Latin America a serious political threat in the eyes of large portions of the population. Within that international context, many saw the military coups of that time as a remedy to or a lesser evil than the threat of communism. However, since the inception of the new century, and in a unipolar international context, the rise of the Left in Latin America does not invoke the same ideas of political threat that could explain or justify military intervention.

A *sequence* is a temporally ordered set of events that takes place in a given context (cf. Abbott 2001; Aminzade 1992; Pierson 2004). For example, and to oversimplify, Moore constructs the following sequence for England in the context of early modern Europe: royal peace (event *A*) → commercialization of agriculture (event *B*) → destruction of traditional peasantry (event *C*) and emergence of a strong bourgeoisie (event *D*) → parliamentary democracy (outcome). The "case" of England is decomposed into events like these that unfold over time in the narrative. Likewise, to use the example of Elizabeth Wood's (2000) insurgent path to democracy, the following sequence of events led to pacted transitions to democracy in El Salvador and South Africa in the specific context of oligarchic societies with extra-economic coercion of labor: sustained mobilization from below (event *A*) → decline of profits in the

traditional economic sectors (event *B*) → change of elite's economic interests (event *C*) → negotiated transition to democracy (outcome).

In the narratives by Moore and Wood, events are presented as occurrences distinctive to particular cases. For instance, the development of capitalist agriculture in England is discussed by Moore as the Enclosure Movement, which was a singular occurrence. However, he makes it clear that the Enclosure Movement was a transition to capitalist agriculture. Likewise, in Wood's narrative, events such as sustained mobilization from below took different specific forms in El Salvador and South Africa. In El Salvador, sustained mobilization entailed a civil war led by the FMLN (Farabundo Martí Front for National Liberation), whereas in South Africa labor militancy – not guerilla actions – constituted the ANC (African National Congress) as an insurgent counterelite (Wood 2000, 132). While the occurrences are distinctive in each case, they constitute the same event: sustained mobilization from below. When comparative-historical analysts assert that their arguments are consistent with nuanced historical evidence, they often mean that the events in their sequences encompass key occurrences from the societies under study.

Last, a *process* is a particular type of sequence in which the temporally ordered events belong to a single coherent mode of activity. Processes often describe transitions between states, including movement toward a new state or movement away from a prior state. Examples of social, political, and economic processes are democratization, social mobilization, privatization, flexibilization of labor, regulation, and decentralization (examples of natural processes are aging, photosynthesis, evaporation, and combustion). Like events, processes have a fractal character in that smaller, partial, or more restricted processes may be part of larger and more encompassing ones. For example, the process of suffrage expansion is part of a larger process of democratization.

Within a process, the researcher can identify the component events that unfold over time from the start to the end of the theoretically relevant period of analysis. The researcher can identify such events because they belong to a single coherent pattern of reproductive or transformative activity. Thus, the researcher can establish whether the temporal succession of events tends to reproduce the initial conditions and early characteristics of the unit of analysis or whether the events trigger reaction/counterreaction dynamics that considerably change the unit of analysis. In her study of postdevelopmental decentralization in four Latin American countries, Falleti (2010) identifies the specific policies and legal and constitutional changes of administrative, fiscal, and political decentralization, which are the three main component events of

the process of postdevelopmental decentralization. She also explains why the process of decentralization had reproducing features in the cases of Argentina, Brazil, and Colombia but entailed a reactive logic in Mexico.

We contend that CHA is often fundamentally concerned with the comparison of sequences operating in particular contexts, whether these are composed of events that are part of a single underlying process or events that refer to multiple processes. For instance, and to oversimplify again, part of Moore's narrative sequence for China is maintenance of traditional agriculture (event A) → lack of empowerment of the bourgeoisie (event B) and empowerment of the peasantry (event C) → revolution from below (event D) → communist dictatorship (outcome).[1] When one compares this sequence with the earlier sequence for England, one can start to see how Moore arrived at his central insights, such as the necessary role of the commercialization of agriculture (an event that refers to a process of economic transformation) and a strong bourgeoisie (which refers to a process of social class formation) for democracy as well as the importance of a strong traditional peasantry (class formation) and revolution (social mobilization) for communist dictatorship. In Wood's case, the comparison of two dissimilar cases allows her to isolate the common contextual factors (oligarchical societies with extra-economic coercion of labor) that triggered the common sequence of events (protracted mobilization from below and change in elites' interests) and that resulted in negotiated democratic transitions.

Elucidating the concepts of event, sequence, and process allows us to understand the basic units of comparison in much CHA. While CHA scholars do make comparative statements about "whole cases" (e.g., England versus China), these comparative statements are grounded in more disaggregated comparisons of events, sequences, and processes. These disaggregated comparisons are the basis through which CHA researchers make generalizations about the macro units under study.

## Types of sequences and processes

Works of CHA vary in the kinds of sequences they construct and compare. In classifying and analyzing ideal-typical sequential arguments, we proceed

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[1] As this example suggests, causal sequences may be composed of "nonevents" in which the absence of a happening during a specific temporal period is causally consequential. The outcomes of sequences may also be nonevents. A good example is Tannenwald's (2008) explanation of the "nonuse" of nuclear weapons in the United States since World War II.

in four stages.[2] First, we classify sequences according to whether their constitutive events are causally connected and distinguish between *causal sequences* and *strictly temporal sequences*. Second, we argue that the order and pace of events can be causally consequential for the outcome of interest. We thus also identify *ordered* and *paced* sequences to describe those sequences (whether causal or strictly temporal) in which event ordering and pace matter.

Third, we distinguish process-type sequences depending on whether the direction of initial steps helps establish the direction of the entire sequence. Do initial steps in a particular direction (e.g., toward a particular outcome) induce further movement in that same direction? We specifically distinguish between *self-reproducing processes* (the direction of early steps is followed) and *reactive processes* (the direction of early steps is not followed).

Finally, we distinguish three kinds of self-reproducing processes by taking into account the specific nature of reproduction. In particular, we consider whether the reproductive pattern involves a process of continuity, expansion, or diminishment. On this basis, we identify: *continuous*, *self-amplifying*, and *self-eroding processes*.

These distinctions are analytically and methodologically important because different sequences and processes must be analyzed in different ways, including often with distinct methods. For example, the ways in which process tracing can be most productively applied varies depending on the *kind* of sequence under analysis. Thus, we return to these distinctions in the next sections when we explore cross-case and within-case methods.

## Causal and strictly temporal sequences

Most CHA studies formulate *causal sequential arguments* in which the events in a sequence are understood to be causally connected to one another. These causal chains start with an antecedent cause or condition (*X*) and, through a series of causally connected events (events *A, B, C*, and so on), culminate in a final outcome of interest (*Y*), as illustrated in the top left quadrant of Table 8.1. These types of sequential arguments can be thought of as pathway explanations. The nature of the causal linkages among events can vary: each event may be understood as necessary for each subsequent event, as

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[2]  It is worth emphasizing this is an ideal-typical classification of sequences, which for the most part thinks of sequences as self-contained units. In reality, however, sequences are often multilayered or interact and intersect with other sequences in complex ways. Some of these nuances will come to the fore in the analysis of Goldstone's (1998) work below.

**Table 8.1** Types of sequential arguments in CHA

| According to type of linkage between events | According to temporal effects of events | |
| --- | --- | --- |
| | **Ordered** | **Paced** |
| **Causal** | *Causally ordered sequences* | *Causally paced sequences* |
| $X \to A \to B \to C \to Y$ | $X \to A \to B \to C \to D \to E \to Y$ | Fast $A \to B \to Y$ |
| $\sim X \to \sim A \to \sim B \to \sim C \to \sim Y$ | $X \to A \to C \to D \to E \to B \to \sim Y$ | Slow $A \to B \to \sim Y$ |
| (Ex.: Rustow 1970) | (Ex.: Rueschemeyer, Stephens, and Stephens 1992) | (Ex.: Collier and Collier 1991; Ahmed 2013) |
| **Strictly temporal** | *Temporally ordered sequences* | *Temporally paced sequences* |
| $A - B \to Y$ | $A - B - C \to Y$ | Fast $A - B \to Y$ |
| $B - A \to \sim Y$ | $C - B - A \to \sim Y$ | Slow $A - B \to \sim Y$ |
| (Ex.: Dahl 1971) | (Ex.: Falleti 2010; Smith 2007) | (Ex.: Skocpol 1979) |

*Notes:* $\to$ indicates causal relationship; $-$ indicates lack of causal relationship.

probabilistically increasing the likelihood of each subsequent event, or as a part of conditions that are sufficient for each subsequent event.

Rustow's (1970) theory of the origins of democracy provides a good example of a causal sequential argument, in which the earlier events are necessary conditions for later ones.[3] Rustow starts his model with national unity, which he considers a necessary background condition ($X$) (we can also call it context) before the process of democracy can take off. The timing of this event in relation to the first stage of democratization is irrelevant; it may have happened in the recent or in the distant past (Rustow 1970, 351). The process of democratization itself starts with the preparatory phase (event $A$), a period of prolonged and inconclusive political struggle among social classes. Next is the decision phase (event $B$), when the political leadership accepts the existence of diversity and institutionalizes some crucial aspects of democratic procedure (355). This second phase leads to the final habituational phase (event $C$), when the population at large accepts the leadership agreement. In Rustow's model, each event (using our terminology, or phase, using his) is a necessary cause for the event that follows, and the end result is democracy. In this type of causal sequential argument with necessary conditions, the absence of any event entails the absence of outcome.

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[3] In an excellent analysis of the comparative politics literature on democratization in relation to temporal and institutional arguments, Barrenechea, Gibson, and Terrie (forthcoming) cite the works of Rustow and Dahl as examples of sequential arguments. We draw from their article to further explore these early works of democratization as examples of *causal* and *strictly temporal* types of sequential arguments.

CHA works also often encompass the analysis of sequences in which the events are not causally connected to each other, but the temporality of these events (their duration, order, pace, or timing) is causally consequential for the outcome of interest (see second row in Table 8.1). We call these *strictly temporal sequential arguments*.

Dahl (1971) provides excellent examples of strictly temporal sequences in his analysis of the historical events leading to democratization. Dahl asks: "Does sequence matter? Are some sequences more likely than others to lead to mutual security and thus to facilitate the shift toward a more polyarchal regime?" (31). His answer is a resounding yes. When the process of liberalization (or increased public contestation, event *A*) precedes the process of inclusiveness (or increased popular participation, event *B*), the resulting polyarchal regime is more stable (*Y*), as was the case in England and Sweden. On the contrary, "when the suffrage is extended *before* the arts of competitive politics have been mastered" [event *B* before *A*], the resulting political regimes are unstable and could easily reverse to authoritarianism, as was the case in Weimar Germany (Dahl 1971, 38 and following). But contestation does not cause participation, or vice versa (see also Grzymala-Busse 2011, 1275). Instead, Dahl argues that the order of these events is causally consequential for democratic stability as a result of an exogenous factor: the process of political socialization of the excluded social strata, which takes place between the time of increased elite competition and the time of increased popular participation (Dahl 1971, 36). In other words, Dahl suggests that elite competition causes political socialization and the moderation of the masses, a phenomenon that in turn facilitates political regime stability provided it happens before increased participation. Hence, the order in which participation and competition occur is consequential to the political regime's stability, but competition does not cause participation (or vice versa).

## Ordered and paced sequences

In both the causal and strictly temporal types of sequential arguments in CHA, the order and pace of the events may be causally relevant. Thus, we distinguish between *ordered sequential arguments* and *paced sequential arguments*. With ordered sequential arguments, the temporal order of the events in a sequence is causally consequential for the outcome of interest (Abbott 2001; Aminzade 1992; Falleti 2010; Jacobs 2008; Pierson 2004). *Timing matters* in the sense that the temporal relationship among events is consequential. For example, Smith (2007) makes an ordered sequential argument: the timing of

oil wealth exploitation in relation to economic development and state institutional building is consequential to regime stability. As he writes, "The effect of oil wealth on politics and institutions is not a question of *whether* oil but *when*" in relation to economic development and state institutional building (193). Falleti (2010) makes a similar ordered sequential claim. She argues that if political decentralization precedes administrative decentralization in the sequence of decentralization reforms, subnational governments are likely to end up with higher levels of political and fiscal autonomy than if the order of events is the reverse.

The events in an ordered sequential argument may or may not be causally connected. Rueschemeyer, Stephens, and Stephens's (1992) classic work on capitalist development and democracy provides a good example of a causal and ordered sequential argument. In this pathway explanation, the earlier events are (for the most part) sufficient for each subsequent event. Schematically, the authors argue that capitalism, with its consequent process of industrialization (event *A*) weakens the landed upper class (event *B*) and strengthens the working and other subordinate classes (event *C*), who are brought together in factories and cities, where they associate and organize (event *D*). Capitalism, moreover, improves the means of communication and transportation, facilitating nationwide organization (reinforcing event *D*). Thus, the working class can successfully demand its own political incorporation (event *E*), which results in successful democratization (outcome *Y*) (Rueschemeyer, Stephens, and Stephens 1992, 271–2).[4] If the sequence was different, such that the weakening of the landed upper class happened after labor class incorporation (i.e., event *E* preceded event *B*), the result would be a highly unstable regime or a reversal to authoritarianism (as was the case in Argentina after working class incorporation with Peronism).

*Paced sequential arguments* are similar to ordered sequences except that the speed or duration of events – not their timing relative to one another – is causally consequential (Abbott 2001; Aminzade 1992; Grzymala-Busse 2011; Pierson 2004).[5] For example, in Collier and Collier's (1991) causal sequential argument of regime type, the unusually extended duration of labor incorporation in Mexico (slow event *A*) meant that this episode lasted until the

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[4]  Rueschemeyer, Stephens, and Stephens (1992) also analyze transnational and state-centered processes in their explanation of democracy.

[5]  Our general category of paced sequential argument encompasses more fine-grained distinctions found in other work on temporality (e.g., Aminzade 1992; Grzymala-Busse 2011). For our purposes here, the general category of paced sequential argument is useful, though we recognize that it includes considerations about duration, speed, and pace that others may want to keep distinct.

Great Depression (event *B*), which in turn helps explain the radical form of party incorporation in Mexico (outcome ∼*Y*). That is, if the labor incorporation period had been shorter in Mexico (as in most of Latin America), it may well have been less radical in content. In her study of electoral system choice in the USA and Europe, Ahmed (2013) provides another example of a causal and paced argument. She argues that the time elapsed between industrialization and the electoral incorporation of the adult male population was consequential to the relative strength of labor organizations. Where suffrage was extended soon after industrialization (event *B* quickly follows event *A*), unions remained weak. The longer suffrage expansion (event *B*) was delayed after industrialization (event *A*), the more likely that workers would organize to achieve their political and economic goals (49). Skocpol's (1979) classic work on the outcomes of social revolutions contains a strictly temporal *and* a paced type of argument. She argues that the pace at which revolutionaries consolidated state power affected the extent to which they transformed state, class, and societal structures. In Russia, revolutionaries were forced by circumstances to rapidly consolidate power, which implied a more thoroughgoing transformation than in France, where the revolutionary reconstruction of state power unfolded more gradually.

## Self-reproducing and reactive processes

Whether causal or strictly temporal, ordered or paced, sequential arguments can be further differentiated depending on whether their events follow a self-reproducing or reactive logic. On the one hand, sequences may embody events that move consistently in a particular direction and that track an outcome over time. Adapting Stinchcombe's (1968) terminology, we call these sequences *self-reproducing processes*. On the other hand, early events in a sequence may produce a series of reactions and counteractions that do not move the process in a consistent direction. With a *reactive process*, early events are followed by backlashes and reversals of direction, which in turn may trigger further backlashes and reversals, such that the final outcome of the sequence may appear unrelated to early events in the sequence (Mahoney 2000).

If a sequence of events is characterized by a *self-reproducing process*, the movement of initial events in a particular direction induces subsequent events that move the process in the same direction. Over time, it becomes more and more difficult to reverse direction or return to the original starting point (Hacker 1998, 2002; Pierson 2000; see also Thelen 1999, 2003). Although the events are linked by self-reproduction mechanisms, the underlying process may (1) remain unchanged (e.g., a background constant condition); (2)

**Table 8.2** Types of processes in CHA

| Type of process | Definition | Diagram of process | Examples |
|---|---|---|---|
| *Self-reproducing* | Initial events in a particular direction induce subsequent events to move the process in the same direction. | *Continuous process*<br>A → A → A → A → A | Jacobs (2010); Skocpol (1999) |
| | | *Self-amplifying process*<br>ᴀ → A → A → A → A | Arthur (1994); David (1985); Spruyt (1994) |
| | | *Self-eroding process*<br>A → A → A → A → ᴀ | Onoma (2010); Rosenblatt (2013) |
| *Reactive* | Events are linked via reaction/counterreaction dynamics. | A → ~A → B → ~B → Y | Collier and Collier (1991); Riofrancos (2014) |

amplify (e.g., the concentration of elite power over time); or (3) erode (e.g., institutional decay dynamics). These differences in reproductive logic permit us to distinguish three types of self-reproducing processes: *continuous*, *self-amplifying*, and *self-eroding processes*, represented graphically in Table 8.2.

In a *continuous process*, an early event is stably reproduced over time or leads to other events that maintain the underlying process in (approximately) a continuously stable form. Scholars often formulate continuous sequential arguments to characterize the perpetuation of longstanding policies, such as social security in the United States (Jacobs 2010). Organizational continuity often can also be described as a continuous process (e.g., Skocpol 1999).[6] Other phenomena that are often analyzed as continuous processes include cultural characteristics, institutional outcomes, and geographic features.

With a *self-amplifying process*, the initial events move the sequence in a particular direction, such that it becomes more and more likely that the process will be expanded, increased, strengthened, or otherwise enhanced. Over time, the process (or its outcome) does not remain stable but increases, grows, or becomes more prominent as a result of self-amplifying mechanisms. Famous examples of self-amplifying processes come from economic history, where technologies capitalize on small initial advantages and experience rapid proliferation via increasing returns (e.g., Arthur 1994; David 1985). Likewise, evolutionary processes are often subject to self-amplification as an innovation and adaptation spreads within a population. The proliferation of the modern state has been explained in these terms (Spruyt 1994). Economists characterize self-amplifying processes with the expression *increasing returns*.

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[6] At times, a continuous background process may become, in the words of Soifer (2012), a permissive condition for change, combining with an intersecting sequence of events, at which juncture the process's logic of reproduction may change to a self-amplifying or self-eroding one.

In such processes, the probability of further steps along a given path increases with each move down that path (Arthur 1994; David 1985). Each individual step may be only a small change, but each step reinforces the direction of the prior one, and together the steps add up to a large cumulative effect.

With a *self-eroding process*, the logic of transformation is self-reproducing, but each event in the sequence serves to weaken, diminish, or undermine the configuration found in the early stages of the sequence. Each step down the path moves away from the established outcome associated with the early process and makes it increasingly less likely that the outcome or the process itself will be sustained. The status quo becomes harder and harder to maintain. Gradual processes of decay, drift, and exhaustion may be examples of self-eroding processes: in these sequences each event can feed into the next and diminish a prior pattern or process. For instance, the institutionalization of private property rights in Kenya was marked by a sequence in which the land titling process was rigged with fraud. Each fraudulent move triggered another fraudulent move and made the preservation of legal practices less and less likely over time, eroding the institutionalization of private property rights (Onoma 2010). Likewise, in Rosenblatt's (2013) comparative study of political party vibrancy, the phenomenon of trauma – the shared experience of a revolution or a civil war – activates retrospective loyalty and enhances party vibrancy. However, trauma is marked by decreasing returns: as time goes by, the generation that suffered political trauma ages out and the new generation does not forge the strong bonds that previously kept the party vibrant.

Finally, sequences may also unleash *reactive processes* in which events are linked together via reaction/counterreaction dynamics (Mahoney 2000). Each event is a cause of each subsequent event because it triggers a reaction or a response to the prior event. The events in these sequences are *transformative* in the sense that they change and perhaps reverse prior events (Sewell 1996). Often, reactive processes entail causal chains in which the initial event and the final event seemingly bear little relationship to one another, yet they are connected by virtue of the reaction/counterreaction dynamics that compose the overall causal chain. For example, in Collier and Collier's (1991) argument, the reactive sequences marking populist/postpopulist dynamics in Latin America moved countries from labor incorporation periods to party system regimes through a complex set of intermediary steps marked by reversals and backlashes. Riofrancos (2014) also makes a reaction/counterreaction sequential argument when analyzing the political interactions between indigenous movements and the state in Ecuador from the early 1990s to the present. In her explanation of the institutionalization of an extractivist discourse, Riofrancos traces the succession of political events

that confront indigenous movements with the state and through which the discourse of *extractivismo* evolves.[7] In both examples, the basic mechanism of change is reaction/counterreaction.

## Sequences and processes applied to the CHA of industrialization

Examples of several of the sequences and processes described above are found in Jack Goldstone's (1998) work on the origins of the Industrial Revolution (see Figure 8.1). In this work, the environmental sequence (events *A–E* in Figure 8.1) is a causal sequence in which each event is a logical response to each prior event; at certain points (e.g., $C \rightarrow D$), the sequence moves along via reaction/counterreaction dynamics, such that it has components of a reactive sequence. By contrast, the industrialization sequence (events *M–R*) is a self-amplifying process and exhibits positive feedback. Each step in the causal chain serves to expand a process of industrialization that was launched with the invention of the steam engine. By the end of the sequence, industrialization has amplified to the point that a return to a preindustrial past is impossible. The example also contains a continuous process represented by the stable reproduction of a liberalizing culture open to technological experimentation. The endurance of this background event is important because it influences the industrialization sequence at various points. Most important, this continuous sequence intersects with the environmental sequence to produce the first steam engine (event *M*), which in turn launches the industrialization sequence. This "coming together" or collision of separately determined sequences is common in comparative-historical research, and it is sometimes described as a *conjuncture* (e.g., Mahoney 2000).

The Goldstone example is an illustration of a sequential argument in which the timing and duration of earlier events matters for subsequent events. For example, the long duration of context condition *A* (limited forest area, abundant coal, and cold climate) was essential for the environmental sequence to continue along its path. This event had to endure for England to become dependent on coal (event *B*), itself a long-run event, and eventually exhaust much of the coal supply (event *C*). Issues of duration, speed, and order can also affect the dynamics of self-reproducing sequences. For example, the ordering of events is consequential in the self-amplifying industrialization sequence of

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[7]   At times, counterreactions may seek to preempt more radical change. Other examples of preemptive counterreactions can be found in the literature on the origins of social welfare provision. In her analysis of social policy creation in Uruguay at the beginning of the twentieth century, for instance, Castiglioni (2014) argues that the Uruguayan state sought to preempt or anticipate the otherwise likely mobilization of the working class.
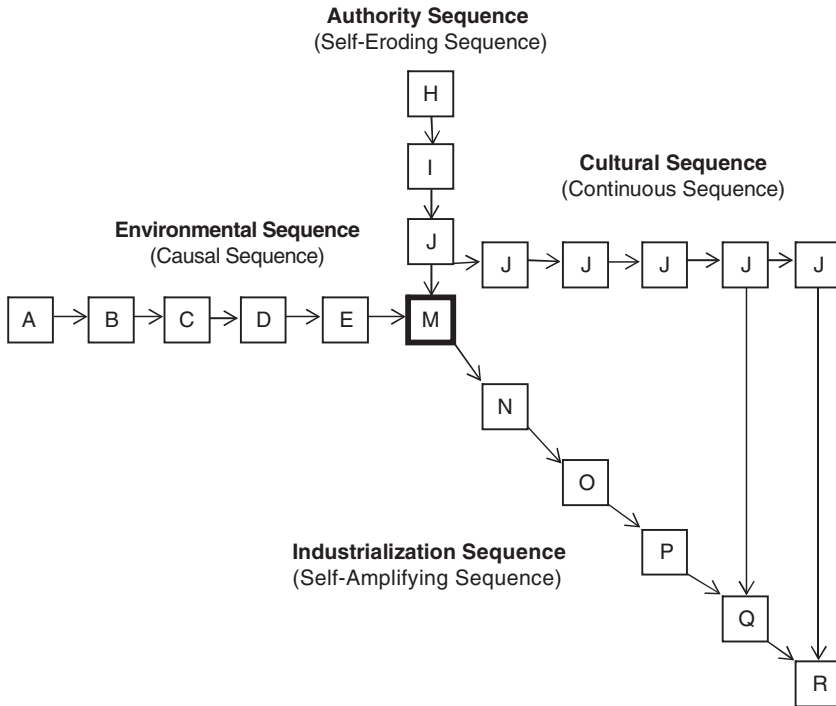
Key:
A: Limited forest area, abundant coal near sea, and cold climate.
B: Long-term heavy reliance on coal for heat.
C: Surface coal is exhausted.
D: Effort to dig for deeper coal.
E: Ground water fills mine shafts.

H: Limited monarchy.
I: Limited Anglican authority and toleration.
J: Liberalizing culture open to technological experimentation.

M: Development of first steam engine.
N: Improvement of steam engine.
O: Reduction in coal prices.
P: Reduction in price of iron and steel.
Q: Development of railways and ships.
R: Mass distribution of industrial production and goods.

Note: Adapted from Mahoney (2000).

**Figure 8.1**    Goldstone's explanation of English industrialization

the Goldstone example. A reduction in the price of iron and steel (event *P*) would not have spurred the development of railways and ships (event *Q*) if it had occurred substantially earlier. With many chains of events, in fact, it is difficult to imagine a different ordering. For instance, it seems inconceivable

that the development of railways and ships (event $Q$) could occur before the development of the first steam engine (event $M$). The more basic point is simply that issues of order and pace frequently are important to the logic of all kinds of sequences in CHA work.

Finally, the Goldstone example illustrates how a single-country study may embody multiple sequences and processes. It has long been noted that multiple observations may be contained within a single case, such that a small-$N$ study actually entails a large number of observations (Campbell 1975; Collier 1993; George and Bennett 2005; Rueschemeyer 2003). Our point here, however, is that one can view the main "cases" of a comparative-historical study in terms of sequences. This is certainly true for any historical work that systematically compares two or more sequences within a given case. With these studies, the sequences are central units of analysis, not only the national or other spatial unit in which they are located. In turn, when one treats sequences as central units of analysis, it is possible to revisit traditional CHA methods, which are often understood to apply mainly or exclusively to the macrospatial unit under analysis. A new vantage point for thinking about CHA methods comes into being by treating sequences and processes as core units of analysis and comparison.

## Cross-case methods

In this section, we consider how the kinds of sequences and processes under analysis can shape the kinds of methods (or specific applications of a given method) that are most appropriate for assessing causal hypotheses. Perhaps the most basic comparative techniques are J. S. Mill's method of agreement and method of difference. As conventionally employed, the method of agreement matches cases that share a given outcome, and it eliminates any potential causal factor that is not shared by these cases. The rationale of this eliminative procedure is that the factor is not *necessary* for the outcome. By contrast, as conventionally used, the method of difference compares a case in which the outcome is present to a case in which it is absent. If these cases share a given causal factor, that factor is eliminated as a potential explanation. The logic of this eliminative procedure is that the factor is not *sufficient* for the outcome (Mahoney 1999).

When used in isolation, the methods of agreement and difference are weak instruments for small-$N$ causal inference. Most simply, while these

methods may be able to discover that an individual factor is *not* necessary/sufficient for an outcome, they cannot establish that a given condition *is* necessary/sufficient. Small-*N* researchers thus normally must combine Millian methods with process tracing or other within-case methods to make a positive case for causality. Alternatively, they can attempt to use stronger variants of cross-case methods, such as QCA and statistical analysis (Lieberman, Chapter 9, this volume; Ragin 2000, 2008). However, these methods may require the analysis of a medium number of cases, such that the design is no longer a small-*N* analysis.

The application of Millian methods for sequential arguments has not been systematically explored, although we believe it is commonly used in practice. With ordered sequential arguments, one evaluates hypotheses about the relative timing of events by comparing two or more sequences. Normally, the design entails the use of the method of difference, but it can also be combined with the method of agreement. For example, Ertman (1997) hypothesizes that the early timing (before 1450) of sustained geopolitical competition for Latin Europe led these countries to develop patrimonial states (rather than bureaucratic states). If Ertman had only analyzed the Latin European countries, the resulting method of agreement design would have led him to depend on counterfactual reasoning to support his argument about the importance of timing. However, Ertman also carried out a method of difference design by comparing Latin Europe to the German countries, cases where bureaucratic states were created. In the German states, Ertman shows how the late timing (after 1450) of sustained geopolitical competition allowed leaders to take advantage of the latest techniques of administration and finance and thereby develop more coherent bureaucracies. While this method of difference comparison does not clinch Ertman's ordered sequential argument, it does make it more plausible and allows him to avoid a purely counterfactual argument.

The joint application of the methods of agreement and difference also can be used with paced sequential arguments. One compares cases that are matched on a number of dimensions but that experienced a causal process at a different speed or with events of varying durations. For example, Prasad (2012) uses the method of difference in conjunction with a paced sequential argument to explain why the United States did not develop a robust public welfare state whereas European cases did. She argues that the stunning endurance of US economic prosperity during the late nineteenth and early twentieth centuries, itself rooted in the vast material resources of the country, set the United States down a path that allowed the government to

avoid building a welfare state to reconcile citizens to capitalism. At the same time, Prasad applies a method of agreement design to account for the similar outcomes among the European cases, where sporadic and unreliable growth consistently encouraged welfare state formation.

The matching logic of Millian-type methods furthermore is often implicitly used for the study of self-reproducing sequences. For instance, with a self-amplifying logic, scholars may employ time periods as their cases and treat each increase in the magnitude of the phenomenon of interest as an outcome that repeats across multiple periods. The method of agreement can then be used in the search for a common source of the repeating outcome; factors that are not shared across each time period can be eliminated as nonessential. This logic applies well to famous examples of path dependence and technological standards, such as the QWERTY keyboard (David 1985). In the explanation of QWERTY, technological efficiency is eliminated as a possible explanation, given that efficiency was present only in the initial time periods when QWERTY was first adopted. Thereafter, QWERTY was inferior to available alternative options, such that technological efficiency was not necessary for QWERTY's reproduction over time.[8]

When temporal sequences are analyzed as particular types of processes, it is natural to treat those processes as the centerpiece of the comparative analysis. One compares and contrasts the nature of democratization, bureaucratization, colonization, and so on. With such comparisons, however, *events* are the basis for the similarities and differences that exist across sequences. For example, consider Kohli's (2004) argument about the colonial origins of types of states in the developing world. In Korea, the sequence of events is approximately as follows: Japanese colonial strategy of economic transformation and political control (event *A*) → introduction of new state personnel, bureaucratic techniques, and well-organized police force (event *B*) and modernization of agriculture and promotion of exports (event *C*) and control of peasants and workers (event *D*) → cohesive-capitalist postcolonial state (event *E*). In Nigeria, by contrast, indirect British colonial rule followed a

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[8] Recent work on critical junctures also suggests new ways in which Millian methods may be used for sequential analysis. For example, Soifer (2012) recommends that scholars first select potential critical juncture cases by matching them on the outcome of interest (i.e., applying the method of agreement). If these cases are marked by critical junctures, he argues, they all must feature a "permissive condition" – that is, an underlying context in which the causal power of agency is increased (see also Capoccia, Chapter 6, this volume). The permissive condition must be present because, in Soifer's (2012) framework, permissive conditions are *necessary* but not sufficient for a critical juncture. As he puts it, "Cases where the permissive condition is absent are not relevant for testing" (1590). The eliminative logic of Millian methods thus serves as a first cut for testing potential critical junctures.

quite different sequence: British colonial strategy of rule "on the cheap" (event *A*) → empowerment of traditional chiefs and hands-off administration (event *B*) and maintenance of traditional agriculture (event *C*) and manipulation of ethnic divisions (event *D*) → patrimonial postcolonial state (event *E*). While Kohli certainly compares Korea and Nigeria, he does so by assessing the sequences of events in their colonial and postcolonial histories. The macro units differ because of the contrasting sets of events that constitute colonial and other processes in their histories.

CHA scholars employ different strategies when analyzing and aggregating events to compare sequences and processes. For example, Kohli's (2004) approach is to examine how similar processes are constituted by contrasting forms of events across different countries. Thus, Kohli studies events across countries that are part of the same kinds of colonial processes: colonial state building, colonial agricultural policy, and colonial political governance. These two countries differ because they sharply contrast in the events that constituted these processes, which also allows Kohli to generalize broadly about differences in processes of colonialism itself (e.g., intensive and transformative colonialism in Korea versus indirect and laissez-faire colonialism in Nigeria). Other scholars aggregate events based on their intensity or their temporal properties. For example, Skocpol's (1979) comparative study of social revolutions compares processes such as international pressure across cases by exploring how events endowed those processes with different intensities and durations. The differences at the level of events allow her to generalize across cases about differences in the nature of the process of international pressure.

Finally, it bears emphasis that, even with Millian methods, the analysis of sequences usually demands a focus on *combinations of factors*, not individual factors. These combinations are often temporal configurations. For example, with ordered sequences, the analyst explores combinations of temporally ordered causal factors, such as *AB* versus *BA*, treating each combination as an individual factor for the purposes of using Millian methods. Likewise, analysts may distinguish two sequences with the same basic events (e.g., *ABC*) on the basis of the duration of those events (e.g., whether event *B* was long or short in duration). This kind of comparative analysis is like QCA in that it puts the emphasis on the effects of packages of variables or configurations, not the effects of discrete individual variables. However, unlike atemporal versions of QCA, it assumes that the causal contribution of each event within a combination depends on its temporal characteristics and its temporal position within the configuration.

## Process tracing

Process tracing is the foundational method of within-case analysis in CHA. Yet, the literature on process tracing has generally not explicitly engaged the literature on temporal analysis. Here we try to begin to correct that omission by linking process tracing to the analysis of sequences and the temporal effects of events as they unfold over time.

From the rapidly growing literature on process tracing (Beach and Pedersen 2013; Bennett and Checkel 2015; Kittel and Kuehn 2013), two basic logics of inquiry may be distinguished. The first mode of process tracing is an inductive approach in which the analyst derives propositions and formulates sequences from empirical observations (Hall 2013, 27). This mode of process tracing is often used for the purpose of *theory development* through the identification of key events and through the specification of hypotheses about how these events connect together to form sequences and processes. The second mode of process tracing embodies a deductive logic of inquiry, in which scholars deduce propositions from more basic premises and carry out (implicitly or explicitly) *process tracing tests*. This mode is often used to test specific causal claims that were initially formulated from inductive process tracing or derived theoretically. We discuss each logic in turn.

### Inductive process tracing

Inductive process tracing is perhaps the most powerful method in CHA for formulating new theory. It is commonly used to identify the events that comprise the core sequences and processes at the center of most CHA works. Inductive process tracing plays a large role in the construction of any complex, conjunctural, and multilayered historical narrative, including – we presume – the Goldstone (1998) example summarized above. Inductive process tracing is essential to the enterprise because the analyst cannot anticipate in advance many of the key events that comprise sequences and processes of central analytic importance. As a result, inductive analysis must be used to formulate historical-sequential arguments in most CHA studies (Bennett and Elman 2006, 263).

Inductive process tracing operates on two levels. At one level, it allows for the discovery of specific events in a sequence that were not anticipated (i.e., novel theory generation). These discoveries may then lead the scholar

to reformulate key aspects of the originating theory. At another level, the inductive approach is particularly useful for pulling out and assembling events into coherent and connected sequences. Inductive process tracing allows the CHA researcher to go back and forth between theory and events to build a coherent sequential argument that can then be evaluated further using other within-case tests or comparisons to other cases.

Inductive process tracing furthermore works well for identifying the events that comprise specific kinds of processes. With self-reproducing sequences, an inductive process tracing approach can help the analyst assess the amplitude of change (or lack of change) between events. In these sequences, the order of events might be theoretically deduced in advance, but the understanding of the extent to which the unfolding of events leads to a continuous reproduction of the underlying process of interest, the amplification of that process, or to its self-erosion will most likely require an in-depth analysis of the events and direction (or trajectory) of the sequence. At least to some degree, the process tracing researcher must let the events and their effects "speak for themselves" when establishing the specific logic of self-reproduction. The occurrences and events themselves – as found in the established historical evidence – can make it clear to the researcher whether a reactive or reproductive logic is at work, and, if the latter, whether that logic involves continuity, amplification, or erosion. When formulating theory and building sequential hypotheses, therefore, the process tracing researcher might be best served by not deploying too-strict theoretical expectations that could act as blinders and straightjacket the interpretation of the process under study.

Strictly temporal sequences also lend themselves naturally to the application of this kind of inductive process tracing. With these sequences, researchers do not propose or presume causal connections among the events of interest. Nor do they explore the historical material to determine whether a specific piece of evidence is present in order to carry out a process tracing test. Instead, they situate events from the historical record into a larger (temporal or spatial) context and analyze whether the order in which they unfold is consequential for the outcome of interest. For example, Caraway's (2004) recommendation of "episodic analysis" for single-country studies of democratization presupposes this approach. For Caraway, each episode corresponds to the inclusion of previously excluded groups based on class, gender, or race. Inductive process tracing allows the researcher to "consider the *sequencing* of the extension of democratic citizenship, the *extent to which previous expansions of the franchise affected the next round of democratization*, and the extent to which transnational factors altered domestic debates" (455,

emphasis added). This approach to temporal sequences facilitates an in-depth analysis of the unfolding of events and their cumulative or interactive effects on the outcome of interest.

While inductive process tracing is significantly a tool for theory formulation, it has substantial implications for theory testing. In CHA, as in other modes of research, the omission of essential variables or the misspecification of relationships among variables can cause serious problems for causal analysis. Inductive process tracing is a key instrument for avoiding omitted variable bias and for formulating theories that are correctly specified. Both the capacity of CHA to generate new theory and the capacity of CHA to build theories that can withstand intense empirical scrutiny depend on sound inductive process tracing.

## Process tracing tests

Process tracing tests – such as hoop tests and smoking gun tests – are also a central mode of within-case analysis used with the comparative sequential method (Bennett 2008; Collier 2011; Mahoney 2012; 4 Rohlfing 2013; Van Evera 1997). These tests have a deductive logic in which an analyst combines specific insights from a case with established principles and general knowledge to make a logical (deductive) inference about that case. When compared to inductive process tracing, deductive process tracing tests usually have a more focused purpose. They are often applied to specific links within inductively or deductively derived causal chains. They can be used to help show that controversial links in a sequence are in fact causal. Process tracing tests can also be used to determine whether specific hypotheses about ordering and pace are correct.

All process tracing tests leverage specific pieces of evidence, typically events from within a case. Scholars use the existence of certain events (or the absence of certain events) as their evidence for making inferences (Bennett 2008; Collier, Brady, and Seawright 2010; Mahoney 2010; McKeown 1999).[9] CHA researchers often actively search for specific revealing pieces of evidence in much the same way as a detective looks for key clues to solve a case.

For some hypotheses, a specific piece of evidence from within a case (e.g., the presence of some specific event) in effect *must* be present for the hypothesis to be true. This kind of evidence allows for a *hoop test*: the hypothesis must

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[9]  As Bennett (2008; Bennett and Colin 2006) points out, process tracing is closely analogous to Bayesian inference in the sense that the discovery of evidence can lead us to update our subjective beliefs about the validity of particular explanations (see also Humphreys and Jacobs 2013).

"jump through the hoop" (e.g., the event must be present) to warrant further consideration. Failing a hoop test in effect *eliminates* a hypothesis, but passing a hoop test does not confirm a hypothesis (though it can lend support for the hypothesis).

In other cases, the existence of a given event can strongly suggest the validity of a hypothesis. This kind of evidence allows for a *smoking gun test*: the evidence (e.g., the existence of the event) is strong proof that the hypothesis is correct. Passing a smoking gun test in effect *confirms* a hypothesis, though failing a smoking gun test does not disconfirm a hypothesis (but it can count against a hypothesis).

As an example of a hoop test, consider Luebbert's (1991, 308–9) critique of Gerschenkron's (1943) sequential argument about the origins of fascism in Germany. Gerschenkron links powerful landed elites to fascism via an electoral mechanism, arguing that landed elites are able to deliver rural electoral support to fascist parties by ensuring subordinate peasants support their candidates. Thus, the basic sequence is landed elites exercise control over peasantry (event *A*) → peasants vote for fascism (event *B*) → fascist electoral victory (outcome *Y*). Luebbert suggests that if Gerschenkron is correct, one should expect to observe rural electoral support for fascism in areas where landed elites predominate. In fact, however, Luebbert's historical research shows that rural support emanated from the family peasantry, not peasants controlled by labor-repressive landed elites. He therefore concludes that Gerschenkron's proposed causal sequence and event chronology cannot possibly be right: subordinate peasants did not deliver large number of votes for fascists in Germany.

A standard way of conducting hoop tests and smoking gun tests involves examining the intervening steps between *X* and *Y*. One can look for specific intervening events that should be present (or should be absent) to make the case that *X* causes *Y*. For example, in his comparative-historical explanation of failed industrialization in India, Chibber (2003) hypothesizes that the direct opposition of domestic capitalists blocked state managers from building the institutions that could sustain successful industrialization during the critical juncture of 1947–51. To test this hypothesis, he suggests that one should be able to find evidence that efforts by big industry (e.g., lobbying, personal pleas, slowing down investment) actually influenced state managers and changed the direction of state policy and institution building. The discovery of this evidence by Chibber amounts to passing a difficult hoop test, which lends support for his overall argument about the role of domestic capitalists as key cause of failed industrialization.

Process tracing tests often leverage the fact that it is easier to establish causal connections between temporally proximate events than between temporally distant events. For example, imagine that one seeks to show that $X$ is necessary for $Y$. The challenge is often to find a well-established causal connection in which a more proximate event $E$ is necessary for $Y$. If one can then show that $X$ is necessary for $E$, one can make the logical inference that $X$ must also be necessary for $Y$ (this inference takes the form of a smoking gun test). Likewise, if one knows that the proximate $E$ is sufficient for $Y$, and one can show that a more remote $X$ is sufficient for $E$, then one can reason logically that $X$ must also be sufficient for $Y$. This is the kind of reasoning that animates Rueschemeyer, Stephens, and Stephens's (1992) sequential argument about capitalist development and democracy, discussed above. They connect together temporally proximate sufficient links to make a long but compelling causal chain; the overall claim that capitalist development is approximately sufficient for democracy is built from the sufficiency links in the chain.

To illustrate how this kind of sequence elaboration can work with a smoking gun test, it is helpful to return to the environmental causal sequence in the Goldstone example above (see Figure 8.1). How do we know the contextual feature $A$ (i.e., limited forest area, abundant coal near sea, and cold climate) is causally connected to the outcome $M$ (i.e., the development of the first steam engine)? Goldstone persuades readers by appealing to the tightly coupled events that compose the middle of the sequence (i.e., $B$, $C$, $D$, and $E$). In effect, he makes a logical inference about the connection between $A$ and $M$ on the basis of his confidence in the validity of these intervening steps. His narrative suggests that the connection for each small step is highly plausible, intuitive, or even obvious. On this basis, he can deduce that it is extremely likely that $A$ is also connected to $M$.

Process tracing tests can also be used for hypotheses concerning temporal ordering or pace. One possibility is to carry out a test with counterfactual analysis: one imagines a different ordering or a different pace. If the counterfactual thought experiment makes it clear that a different outcome would have followed, one has, in effect, carried out a smoking gun test. In some cases, an alternative order seems almost inconceivable. For example, in Goldstone's narrative one cannot imagine the improvement of the steam engine without first allowing for the invention of the steam engine. Likewise, Falleti (2010, 57–8) counterfactually argues that if after an initial political decentralization reform a reactive (instead of self-reinforcing) type of mechanism were to ensue, the second type of decentralization reform to be adopted likely would

be administrative (instead of fiscal) decentralization, leading to a lower degree of power for subnational officials.

Finally, process tracing tests are often used implicitly when scholars construct arguments about the mechanisms driving self-reproducing sequences. The processes underlying these sequences consist of causally connected events; in turn, the connections among these events can be evaluated with process tracing tests. Consider, for example, the self-eroding process that Onoma (2010) documents for property rights in Kenya. The erosion of property rights begins in the early postcolonial period with small-scale fraud carried out by conmen posing as real estate agents. These fraudsters are successful precisely because the colonial period left behind a relatively functional land rights system that established trust among individuals buying and selling property. In time, however, the process of fraud spreads as more and more conmen became active; it reaches a culmination point when high-level politicians themselves become key agents of land fraud. To establish that early episodes of fraud generated later ones, Onoma searches for and finds much evidence that criminals and, later, politicians learned from prior examples. In effect, Onoma shows that his hypothesis can pass a hoop test: if events did not show a process of copying and learning by example, the hypothesis about a self-reproducing cycle of fraud likely would be wrong. But the evidence is present, which, while not fully confirming his argument, adds support in its favor.

To conclude this section, process tracing – inductive and deductive – is an indispensable component of CHA work. It is a central tool that CHA researchers use for establishing causal linkages between events when constructing sequences. In conjunction with cross-case comparison, it is essential to the family of methods that compose the comparative sequential method.

## Conclusion

The comparative sequential method is the basic overarching approach used by CHA researchers to formulate arguments and make inferences. On the one hand, this method is a set of tools and concepts for constructing different types of sequences and processes. On the other hand, it encompasses a set of cross-case and within-case methodologies for making causal inferences. Thus, the comparative sequential method brings together two literatures that rarely are connected explicitly: the literature on temporality and the literature on

case-study methods of causal inference. Elucidating the comparative sequential method invites a conversation among these literatures.

First, concerning the temporal components of the comparative sequential method, specific historical occurrences within cases are the starting point of the method. These occurrences are typically cast as more general events, which in turn form the building blocks of sequences. Sequences, as they unfold within certain contexts, then are at the very heart of much CHA work. They are often the central units of analysis and the main components of comparison. Comparative-historical work, including work focused on a single national unit, is comparative in part because different sequences of events are systematically juxtaposed. Sequences themselves may be causal or strictly temporal; they may be temporally ordered or temporally paced. Processes, a subset of temporal sequences, may also be differentiated according to whether they follow a self-reproducing or reactive logic. Among self-reproducing processes, further important distinctions concern whether their logic is continuous, self-amplifying, or self-eroding.

Second, concerning its methodological tools, the comparative sequential method often involves the use of variants of Millian methods, but these methods are usually applied to sequences and processes, not whole cases as traditionally understood. For some sequences, such as ordered sequences, cross-case comparison is essential to the analysis because it allows the researcher to avoid having to depend on only counterfactual reasoning when making causal inferences. The comparison of sequences and processes also underscores the fact that CHA is typically focused on combinations of factors – causal configurations – rather than individual variables viewed in isolation.

For within-case analysis, process tracing is the central method used with the comparative sequential method. For analytic purposes, we distinguish inductive and deductive applications of process tracing. Inductive modes of process tracing are commonly used to identify key events and arrange them into coherent sequences and processes. Among other things, inductive process tracing allows the researcher to carry out an in-depth analysis of the unfolding of events when the events are not presumed to be causally linked or when they follow an ongoing process of self-reproduction, such as amplification or erosion. Process tracing tests, such as hoop tests and smoking gun tests, are at the core of deductive uses of process tracing. These tests are routinely used in conjunction with causal sequences and reactive sequences, given that these kinds of sequences are composed of tightly coupled events whose causal linkages can be established through specific pieces of within-case data. Process tracing tests are often applied after the analyst has carried out

inductive process tracing and initially specified tentative linkages among events in sequences.

CHA is a field that is centrally concerned with – indeed, centrally animated by – the study of both time and causality. These two components of CHA become thoroughly integrated and work together with the comparative sequential method. By fusing these two elements, the comparative sequential method arguably merits the distinction of being the principal overarching methodology for CHA in general.

# References

Abbott, Andrew. 2001. *Time Matters: On Theory and Method.* Chicago: University of Chicago Press.

Ahmed, Amel. 2013. *Democracy and the Politics of Electoral System Choice: Engineering Electoral Dominance.* New York: Cambridge University Press.

Aminzade, Ronald. 1992. "Historical Sociology and Time." *Sociological Methods and Research* 20:456–80.

Arthur, W. Brian. 1994. *Increasing Returns and Path Dependence in the Economy.* Ann Arbor: University of Michigan Press.

Barrenechea, Rodrigo, Edward Gibson, and Larkin Terrie. Forthcoming. "Historical Institutionalism in Democratization Studies." In *The Oxford Handbook of Historical Institutionalism*, edited by O. Fioretos, T. G. Falleti, and A. Sheingate. Oxford: Oxford University Press.

Beach, Derek, and Pasmus Brun Pederson. 2013. *Process Tracing Methods: Foundations and Guidelines.* Ann Arbor: University of Michigan Press.

Bennett, Andrew. 2008. "Process Tracing: A Bayesian Perspective." In *The Oxford Handbook of Political Methodology*, edited by Janet Box-Steffensmeier, Henry E. Brady, and David Collier, 217–70. Oxford: Oxford University Press.

Bennett, Andrew, and Jeffrey Checkel, eds. 2015. *Process Tracing: From Metaphor to Analytic Tool.* Cambridge: Cambridge University Press.

Bennett, Andrew, and Colin Elman. 2006. "Complex Causal Relations and Case Study Methods: The Example of Path Dependence." *Political Analysis* 14:250–67.

Campbell, Donald T. 1975. "'Degrees of Freedom' and the Case Study." *Comparative Political Studies* 8:178–93.

Caraway, Teri L. 2004. "Inclusion and Democratization: Class, Gender, Race, and the Extension of Suffrage." *Comparative Politics* 36 (4): 443–60.

Castiglioni, Rossana. 2014. "Paths to Welfare: Class Coalitions, Ideas, and Party Politics in Chile and Uruguay." Paper presented at the REPAL Annual Conference, Instituto de Ciencia Política, Universidad Católica de Chile, Santiago, Chile.

Chibber, Vivek. 2003. *Locked in Place: State-Building and Late Industrialization in India.* Princeton, NJ: Princeton University Press.