Charles Tilly
1929 – 2008

Formations and Formalisms: Charles Tilly and the Paradox of the Actor

John Krinsky[1] and Ann Mische[2]

[1]Department of Political Science, The City College of New York, New York, NY 10031; email: jkrinsky@ccny.cuny.edu

[2]Department of Sociology and Kroc Institute for International Peace Studies, University of Notre Dame, South Bend, Indiana 46556; email: Ann.E.Mische.2@nd.edu

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Abstract

Charles Tilly (1929–2008) was a pioneer in joining sociology and history. Throughout his career, he was especially concerned with the ways in which ordinary people made political claims, and how this was shaped by transformations in the state and in capitalism. Most often seen as a structuralist, Tilly was nevertheless deeply concerned with how to understand actors. This article traces Tilly's work from early research on French contention through his later, synthetic work on mechanisms and regimes to show how Tilly's understanding of actors, agency, culture, and social construction developed. Further, we show how this development went hand in hand with Tilly's development of distinctive methodological approaches to historical and sociological data.

INTRODUCTION

In an interview in 2007, Charles Tilly quoted his friend and fellow sociologist, Harrison White, saying that any good ideas that he had were "already abroad in his network." One is tempted to write this off as false modesty: Tilly was one of the most influential sociologists of his generation, a prolific researcher and writer, dedicated teacher, and sometimes-prickly debater. He had long-standing intellectual projects. And yet, writing with his colleagues, Sidney Tarrow and Doug McAdam, in *Dynamics of Contention* (DOC), Charles Tilly claimed that one of the central paradoxes of contentious politics was that "contingent assemblages of social networks manage to create the illusion of determined, unified, self-motivated political actors, then to act publicly as if they believed that illusion" (McAdam et al. 2001, p. 159). No matter how apparently self-directed and motivated he was, if Tilly gave credit to his own networks, it is because he rejected the very image of the actor upon which individuals accrue credit or blame for their deeds on their own.

The paradox of the actor in contentious politics, even if it does not sum up Tilly's perspective on sociology, nevertheless contains it in immanent form. The problems of actor constitution—that is, the illusory unity of motivations and forms of action, the unruly association of identities with relations—were all issues with which he wrestled for more than 40 years, beginning in his earliest work, at least to judge from his early codebooks and research statements. They received provisional resolutions and bracketings along the way, but the problems kept recurring even as he focused on such large processes as urbanization and industrialization, capitalist consolidation and proletarianization, war making and state formation, and trajectories of democratization. Moreover, some of the other hallmarks of the theoretical reformulations of DOC—the emphasis on processes rather than structures, the comparative focus on concatenations of mechanisms rather than covering laws or invariant stage theories—

are also prefigured in his earlier engagement in theoretical and methodological debates, making DOC seem less like the rupture in Tilly's work that it has often been taken for, and more like a moment of stepping back, gathering together, and clarifying the path ahead.

As Tilly's students in the DOC era, we find the conventional depiction of Tilly as a resolute structuralist who underwent a late career transformation to be somewhat disconcerting. Having seen—and participated in—Tilly's migration to more consciously processual accounts of social action, we were interested in clarifying the role of the actor in his earlier, more structuralist work, as well as tracking how this understanding changed over the course of his career. As we revisited his work, we realized that key elements in Tilly's analytic arsenal—particularly his enthusiastic use of formalisms of various kinds as strategies for linking theory and method—were developed precisely as means of responding to what we are calling the paradox of the actor. That is, they helped him address the problematics of unwieldy, complex, meaning-making actors generating provisional, illusory unities (what he calls formations) as they coordinate with others in a world of large processes, mostly not of their own making. Awareness of this paradox made Tilly an always-uneasy advocate of both structuralist and instrumentalist approaches.

Tilly's developing use of formalisms, we argue, is tightly linked to the problem of understanding formations—that is, the role of actors in historical process. Formalisms, as Tilly (2008c, pp. 37–38) defines them, are an "explicit representation of a set of elements and of relations among them"; while logically independent from empirical observations, they enable rigorous comparisons between the representations and observations—and also, by extension, between empirical cases. His concern with formalisms reflects the tension in his work between the search for generalizable explanations of historical process and attention to historical specificity and detail (see Steinmetz 2010). In his attempt to

link history and sociology, Tilly borrowed, adapted, repurposed, and pioneered a host of analytic formalisms, ranging from his beloved two-dimensional spaces to time series analyses, payoff matrices, semantic grammars, network diagrams, and mechanism-process models. Tilly saw such formalisms as a form of theorizing; they bridged his empirically prodigious efforts at detection and his ambition to explain, and not merely describe, historical process in ways that differed both from normative theory (in its Parsonsian and Frankfurt School variations) and from variable-based forms of statistical modeling. At the same time, the problems of consciousness, motivation, interest, and understanding were constant presences and provocations in his work, finally forced onto center stage by his own empirical struggles as well as by his engagement in debates about culture, meaning, and identity in his intellectual networks. As we argue below, the problem of how to formally represent actions—and actors—became increasingly linked in his mind with the question of how actors represent themselves.

We begin with a peek at Tilly at work in 1966, via his detailed and self-reflective 180-page codebook for studying political disturbances in France. In this early codebook, we see his vast empirical ambition as well as his nuanced attention to the problems of actor constitution, types and targets of contention, precipitating conditions, event sequences, and action coordination that would preoccupy him throughout his career, and certainly in the post-DOC period (in fact, it is tempting to derive DOC directly out of the 1966 *Codebook*). We then examine some of his early writings for the core theoretical tensions that fueled his work, particularly as they touch on the complexities of actor constitution. We examine the development of his impressive arsenal of strategies of detection through his decades-long research on French and British political contention. We show how he attempted to move from detection to explanation via strategies of abstraction—that is, through an array of

formalizing devices that shade variously toward structure, process, sequence, and interaction. We discuss how he marshals both detection and abstraction in evolving strategies of explanation, moving through successive stages of his career and culminating in the DOC effort and the dozen subsequent books. Throughout, we attend to the developing ways in which Tilly addressed the puzzles of actors in history, as well as to the challenges that his resolutions of these puzzles pose for future work.

AT WORK IN 1966

Observing Tilly at work in the mid-1960s, in the midst of his first major, systematic data-collection project on France, we see the historian and the sociologist in conversation. The *Codebook for Intensive Sample of Disturbances* guides more than 60 researchers in the minutiae of a herculean coding project of violent civil conflicts in French historical documents and periodicals between 1830–1860 and 1930–1960. The *Codebook* is impressive in its detail, as if Tilly the sociologist is guiltily giving into the demands of Tilly the historian to maintain as much precious information as possible, and not to abstract too much. In doing so, Tilly the sociologist begins to encounter a host of difficulties with which historians had begun to grapple but that had lain dormant in many sociological studies of contention. How Tilly met these difficulties shaped his research agenda for the next four decades.

The *Codebook* contains information about violent civic conflict events and charts the action and interaction sequences of various actors (called there formations) over time. The idea was to gather and record as much descriptive information as possible, rather than to impose an interpretation through a coding scheme on large chunks of information. Hence, we find fine-grained detail and frequent provision made for textual commentary on the thousands of computer punch cards involved. Formations were defined and coded as follows:

Sets of participants belong to distinct formations to the extent that they act collectively, communicate internally, oppose other sets of participants and/or are given specific identities meaningful outside the disturbance itself ("socialistes", "paysans", "gendarmes") by the observers. Many formations, however, compound several different kinds of people—for example, maîtres and compagnons; we do not assign them to separate formations unless they are reported to act independently or in significantly different ways. (Tilly 1966, p. 43)

One problem Tilly confronted in this project—and for which he made express provisions in the *Codebook*—was that political conflict involved change. Formations did not stay unified, and actors' own expression of their interests changed as they interacted with others. Though his capacious coding scheme could accommodate a lot of description of these changes, he anticipated in humorous terms its likelihood of failure. He describes "subformations" as a "pain in the neck":

In the FORMATION SEQUENCE codes, treat the subformation as a formation for the period of its collective activity—but place 01 ("formation does not exist as such at this time") in the intervals before and after. If two or more subformations comprise the entire membership of the formation from which they emerge, place 01 in that formation's code for the intervals during which they are acting. But if a small fragment breaks off from a larger formation, continue to record the activities of the main formation as well as the new subformation.

If a formation breaks up, reforms and then breaks up in a different way, assign new subformation numbers the second time.

If fragments of different formations merge into new formations, hop around the room on one foot, shouting ILLEGITIMIS NON CARBORUNDUM.[1] (Tilly 1966, p. 95)

The problem deepens when he looks at the objectives of the formations. These, he sees, can be stable or unstable, internally consistent or inconsistent by degree, and more or less focused. He includes codes for the explicitness, unity, homogeneity, and focus of expressed objectives as well as for the extent to which a given formation developed these objectives and their expression on their own (autonomy) or with others. Further, he includes codes for whether symbols are prominently displayed, whether they are "reported public memory of previous conflicts," and the extent to which action is coordinated by "command," by "norm," or by neither. This is to say that Tilly was confronting early the problem of meaning and meaningful action, and thus, too, actors, in his data. We can see anticipations of his later work in the *Codebook*'s puzzling over how to deal with unstable actors who are defined at once by (*a*) categories with validity outside their actions, (*b*) their own sequences of actions and interactions, (*c*) historically constituted relations with others, mediated by (*d*) symbolic content and memory.

Ideas about coordinated action by norm soon shifted into Tilly's concept-metaphor of "repertoire," which he then linked to larger-scale changes in capitalist development, urbanization, and nation-state formation. Tilly's interest in interaction and the sequencing of contention reentered his work in the form of "relational mechanisms" of change, and did so beyond the area of contentious politics. His interest in symbols and memories, as well as in the continuing problem of the unity or disunity of actors and the cohesiveness of interests and motivations for action, led into work on identity, social boundaries, and the justificatory stories people tell to forge and solidify—and break off—relations. Though these cultural dynamics became explicitly problematized only in his later work, Tilly frequently acknowledged them along the way, even though he felt

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[1] "Don't let the bastards grind you down." These were both the first words of Harvard University's most popular fight song and the phrase that was associated with Senator Barry Goldwater's 1964 presidential campaign. The references, humor, and irony likely would not have been lost on his collaborators.

as if he lacked an adequate vocabulary for their analysis.

IN SEARCH OF THE ACTOR: EARLY FORMULATIONS AND BRACKETINGS

If many of Tilly's late-career concerns with relations, identities, and sequences were foreshadowed in the 1966 *Codebook*, they also received theoretical attention in his major works of that period. It is striking to note not only how many of Tilly's now classic ideas about political process were already in play in early books such as *The Vendée*, *Strikes in France*, *The Rebellious Century*, and *From Mobilization to Revolution*, but also how much his early theoretical engagements addressed the problem of actor constitution and its effects on historical interaction and political contention.

In the introduction to *The Vendée*, for example, Tilly casts his argument with traditional accounts of the counterrevolutionary uprising of 1793 against prevailing explanations based in peasant mentalities and motives—whether these motives are described as royalist, anticonscriptionist, religious, or self-interested. He argues that rather than focusing on motives (especially conscious ones), sociologically oriented historical scholars should focus instead on questions of organization, composition, and relationship among social groups, as well as on the relationship between long-term changes and short-term events.

The solution, in other words, is to focus not on what is happening inside people's heads, but rather on what is happening within the groups they form and in their relationships with each other. The problem of actor constitution is intrinsically a relational question, right from the very first work. While *The Vendée* is drawing more from community studies than from network analysis per se, it is in fact a very networky book, and his use of network imagery is intimately linked to the problem of understanding formations, as articulated in the *Codebook* during the same period. He focuses on the decomposition of "big categories of actors" (peasants, artisans, bourgeoisie, clergy, nobles), using statistical compilations to show complex patterns of occupational, neighborhood, and marriage relationships, in addition to differential participation in revolutionary and counterrevolutionary activities across different regions of France. If Tilly brackets the question of the cultural content of those ties, this is because he was so deeply unsatisfied with what he considered the flattening quality of most culturalist accounts and their neglect of complexity and specificity of collective action: "The great desire of almost all historians of the Vendée to assess the motives of 'the peasantry' now appears to have led them to neglect the crucial distinctions among artisans, farmers and other types of peasants, and to have simplified unforgivably the question of motivation" (Tilly 1964, p. 341).

In *Strikes in France*, coauthored with Edward Shorter after Tilly moved to Michigan in 1974, the problem of actor constitution still hovers uneasily in the background. He notes that the "simple notion" of collective action—developed in opposition to more psychologizing "collective behavior" approaches—"has a lot of trouble hidden in it." Populations with objectively determined common interests often do not join in collective action; when people do come together, it is hard to know exactly what populations they represent; and there are risks in ascribing objectives from the outside. "It is usually hard, furthermore, to decide just what *are* a given population's common interests and objectives, not to mention whether the interests and objectives coincide; hence innumerable arguments over the 'false consciousness' and 'true interests' of workers as a class" (Shorter & Tilly 1974, p. 5). The solution, at least in that project, was to bracket the problem. "Let us borrow a strategy from the ostrich; let us bury our heads at least part way in the sand, limit our attention to a small set of relatively unambiguous resources, and refuse to ask too insistently why people should ever bother to pool those resources and apply them to common ends" (Shorter & Tilly 1974, p. 5).

Tilly's subordination of the question of conscious motivation to more empirically manageable questions of the covariation of urbanization and industrialization with violent events continues in *The Rebellious Century* (with Louise Tilly and Richard Tilly). Here, the theoretical foils are breakdown theories and solidarity theories; the latter are problematic, he says, because of the danger of circularity: "[I]t is so tempting to consider the development of protest both as the consequence of solidarity and as the very evidence of solidarity" (Tilly et al. 1975, p. 8). While sympathetic to E.P. Thompson's (1963) study of the historical development of class as "process and relationship," they are wary of arguments based on the association of more advanced class consciousness with higher levels of protest in part because "reliable evidence on class consciousness is rare." They resist too easy an association of class position, identity, and action; "we can't lightly assume that there is a close correspondence between states of class consciousness and forms of political action. Whether that correspondence exists is one of the chief historical questions calling for investigation" (Tilly et al. 1975, p. 12).

The problem of actor constitution is central to the pathbreaking 1978 work, *From Mobilization to Revolution*, a book remarkable for its energetic engagement of both theory and method. This book contains perhaps Tilly's last sustained engagement with the classics of sociological theory—Marx, Durkheim, Mill, and Weber—as well as his first introduction of two-dimensional graphs as a powerful analytical tool. He settles himself on a pathway that he describes as "doggedly anti-Durkheimian, resolutely pro-Marxian, but sometimes indulgent to Weber and sometimes reliant on Mill" (Tilly 1978, p. 48). It is precisely this theoretical location that makes the problem of the actor so critical. He has already established in previous works that class consciousness is more tenuous, contingent, and variable than structural Marxism often assumes; he is attentive to the fact that belief systems do play a role in how movements rise and fall; and he

recognizes that strategic interest calculations also affect decisions to mobilize. But he notes the analytic problems caused by the fact that these factors do not always change in tandem:

> The fact that population, belief and action do not always change together causes serious problems for students of social movements. When they diverge, should we follow the beliefs, whatever populations and actions they become associated with? Should we follow the population, whatever beliefs and actions it adopts? Should we follow the action, regardless of who does it and with what ideas? (Tilly 1978, p. 10)

The solution, in this work, is "all of the above." Tilly alternates among the analysis of populations, groups, and events, but introduces the mediations of strategic interest calculations and forms of social relationship and organization.

If *From Mobilization to Revolution* is often considered the most structuralist and rationalist of Tilly's work, it is sometimes forgotten that the book also has a sustained critique of the standard versions of these approaches, mediated, arguably, by the (implicit and unacknowledged) incorporation of culture. Tilly has an extended discussion of how to identify a population's interest that recalls his previous wrestling with the notion of class consciousness. Should we, he asks, infer interest "from the population's own utterances and actions" (i.e., what we generally think of as culture), or from "a general analysis of the connections between interest and social position"? Both choices, he says, are highly problematic. His solution is a compromise: "treat the relations of production as predictors of the interests people will pursue on the average and in the long run," but also "rely, as much as possible, on people's own articulation of their interests as an explanation of their behavior in the short run" (Tilly 1978, p. 61). Later in his career he would take the second approach as a central object of study in such works as *Why?* and *Credit and Blame*. But for now, he was content at least to

open the door to actors' cultural accounts of their own actions as a challenge to both classic Marxist and rational choice approaches.

To free his analysis from an overly constraining association between populations and categories, Tilly incorporates Harrison White's notion of "catnets" (gleaned from lectures he attended at Harvard a decade earlier). Calling group taxonomies "the most insipid wines in the sociological cellar," he notes that by distinguishing between what he calls "catness" (clearly articulated common identity) and "netness" (internal networks of association and mutual obligations), you get a more powerful analytic lens on forms of organizations—i.e., the degree to which categorical identity is associated with bonds of familiarity and reciprocity. This is a somewhat dramatic "Aha!" moment. He has known since his work on *The Vendée* that local relations are important and that they are not always associated with categorical identities (at least as imposed by outside observers). The concept of catnet helps to solve this problem by posing the association of relations and identities—that is, of actor constitution, or the emergence of formations—as a historically variable question. While clearly linked to Marx's problem of class consciousness (class-in-itself versus class-for-itself; see Schwartz 2008), it is also more contingent and changeable than either structuralist Marxist or Durkheimian approaches allow. Again, this opens the door to an examination of actors' own processes of what he later called identity (or boundary) activation and deactivation as key cultural-relational mechanisms in contentious politics and in the dynamics of social inequality.

STRATEGIES OF DETECTION

Tilly's early work on French contention followed what he called an "epidemiological" approach to "political disturbances," which he contrasted with a "clinical" approach. The epidemiological approach sought to relate contextual variables to the prevalence and forms of political disturbance, whereas the clinical approach follows "the origins and histories of particular participants, disturbances, or series of disturbances" (Tilly et al. 1975, p. 13). Thus, Tilly focused on context—structure—as opposed to actors or, particularly, to actors' states of mind. Having traced out configurations of collective actors in *The Vendée*, Tilly turned his critical attention to theories of protest that drew on Durkheim's theories of structural breakdown and *anomie*. The epidemiological approach, which involved building catalogs of protest events and seeing how protest was distributed over time and place, was important for testing whether, in fact, explanations based on *anomie* were plausible. Tilly's commitment to historical detail led him to wager that he could debunk Durkheimians by marshaling enormous amounts of evidence against them. By the mid-1980s, however, Tilly's discovery of regularities in protest forms—"repertoires of contention"—led him to embrace more formal configurational strategies of detection and analysis as well as process-tracing of configurational change through time.

The initial project and the shift were facilitated by advances in computer applications to Tilly's work. He designed an ambitious course of historical discovery whose analysis became easier over time, but also deeper and more sophisticated. A pioneer in the use of computers for recording event data, Tilly and his collaborators coded thousands of contentious events from archival and newspaper sources over the course of his France and Great Britain studies. In each case, Tilly was careful to mark the limitations and strengths of the data sources and their relation to the historical developments at the core of his study (e.g., Tilly et al. 1975, pp. 15–16).[2] In the beginning, the punch cards designed for the computers of the era limited much of their data to predetermined codes for the characteristics of places, actors (formations), actions, and sequences of

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[2] The Tillys' discussion of newspapers and other sources (Tilly et al. 1975) anticipates later debates about newspapers as sources for the study of movements (e.g., Koopmans 2004, Oliver & Maney 2000).

action. However, by the mid-1980s computing had advanced to a point at which Tilly could study "contentious gatherings" of all sorts without classifying them or their participants first. Moreover, the actions people took within contentious gatherings could be classified according to frequently occurring verbs and verb categories, thus removing significant coder bias from the results and eventually allowing Tilly to look at how actors and their interactions constituted each other.

Through these new detection procedures, Tilly was able to approach the "conflicts and transitions of the 1820s and 1830s...from behind" rather than "head on" (Tilly 1981a, p. 150). By keeping as much data as possible, but enabling its formalization in comparative study, Tilly's larger approach to data took shape by the early 1980s. It can be summed up as follows: Use your data twice: once to learn the details of the phenomenon you want to study, and once to subject your evidence to formalization and comparative modeling.

Tilly never fully abandoned his interest in contextual variables, but these increasingly served as background to processes and relations within the conflictual events themselves (see Tarrow 1996). In particular, he became more attentive to developing patterns of interaction among authorities, challengers, and bystanders of many sorts. He developed his concept of repertoires of contention by noticing broad changes in the public performances of French protest, and linked these changes epidemiologically to changes in the centralization of the French state and the increasing spread of capitalist relations. His insight into changes in authorities' organization and repressive activities also illustrated, *in potentio*, the idea that there are repertoires not just of contention but of governance. Furthermore, changes in state organization, and in the ways the state amassed resources, combined with changes wrought by successive rounds of contention and reform to compose political opportunity structures.

The Great Britain data showed how forms or repertoires of contention changed over the course of the years 1758–1834. In his preserved descriptions of 25,239 verbs with objects during contentious gatherings, Tilly discovered what he understood as the invention of the national social movement. It is not that his data simply showed that the mode of claim-making had changed; rather, it showed that the range of performances in the repertoire had changed toward a combination of special-purpose associations, campaigns, and "ostentatious" displays of "worthiness, unity, numbers, and commitment" or "WUNC" (Tilly 2004b). This is exactly what most analysts mean when they speak of social movements today, while marking a clear distinction from earlier modes of protest and petition. Tilly made no grand claims that the social movement as it arose in Great Britain in the early nineteenth century fully displaced earlier modes of protest, either quickly or completely (see e.g., Tilly & Wood 2003). But it did vindicate his reluctance, from his earliest work, to take the social movement as his unit of analysis or as an actor itself. Instead, his larger focus on multiple modes of contention and claim-making revealed the historical development of the social movement as a social form that contemporary analysts often took for granted as a unitary actor. It did this while also introducing a range of methodological innovations to study this development as it unfolded (Tilly 2005c, pp. xi–xxiii).

STRATEGIES OF ABSTRACTION

Tilly's intense dedication to historical detection allowed him to tame, organize, and read volumes of messy historical detail, but he still faced the challenge of making sense of it all. How, that is, could he turn it into the technical accounts of social scientific explanation that he would later write about in works such as *Why?* The critical intervening factor between detection and explanation lay in his use of formalisms of various types to abstract from the data and gain analytical leverage on social process. In examining his evolving strategies of abstraction, we can also see how the problem of the actor kept pushing itself back in, in a

somewhat awkward dialogue with his focus on large-scale structures and processes.

Tilly the social scientist was deeply concerned with complexity and variation in historical context, but he was also looking for patterns that would give him explanatory leverage on historical process. In a late essay, he notes that "formalisms play their parts in the space between the initial collection of archival material and the final production of narratives" (Tilly 2008c, p. 40). He saw his own use of formalisms not as a distinct analytical stage, but rather as a continuum beginning early in the data collection stage and continuing to late in the analysis: "[T]hey range from estimates of selectivity in the sources to tabular analysis, blockmodeling, and standard statistical treatments." He expressed admiration for the wide range of formalisms used in historical analysis, including sequence analysis, models of discourse, economic models, network analysis, and demographic accounting models. Moreover, he saw such formalisms as key to his own cross-disciplinary positioning: "History joins with social science when its organizing arguments become explicit, falsifiable, and theoretically informed. Formalisms cement that junction" (Tilly 2008c, p. 40).

Given his own perception of formalisms as bridging theory and data, it is worthwhile to look closely at how his use of different kinds of formalisms developed and changed over the course of his career. His three early books based on his France study—*The Vendée*, *Strikes in France*, and *The Rebellious Century*—do not yet contain some of the signature formalisms that became important to his work, including two-dimensional graphs, relational models, causal pathways, and actor trajectories. But they do show a proliferation of tables and figures and a deep investment in marshaling supportive evidence. *The Vendée*, for example, contains many tabular arrangements of demographic or economic information, as well as distributions of statements of grievances across segments of the population (early examples of using cultural evidence to see how people themselves articulated their interests). Although there is

only one time series graph, he makes ample use of maps to show comparative distributions of things such as income, wine growing, textile production, and ecclesiastical oaths across cantons and subregions. And he has his first fledgling network diagram, based on an index of occupational intermarriage among different segments of peasant, artisan, and bourgeois classes.

Temporal Formalisms: From Conditions to Events in Time Series Analysis

The use of tables and figures explodes in *Strikes in France*, with 51 tables, 28 maps (mostly with distributions of strikes, strike rates, and union members), and 34 figures. Here we see the first heavy use of time series analysis based on event and organizational data, including temporal tracking of strikes (and strike rates), magnitudes of violence, strike outcomes, and unionization. We also see Tilly trying to make a formal move from data marshaling to theoretical explanation through the use of statistical path analysis (mostly abandoned in later work), as well as through more abstract modeling of the causal argument. *The Rebellious Century* continues along these lines, with heavy use of time series tracking and geographic mapping. The book has 21 tables, including distributions of (and correlations with) collective violence as well as compilations of demographic, economic, and political data to support the arguments about the relationship between collective violence and processes of industrialization and urbanization.

While both the France and Great Britain studies make use of event and nonevent time series data as evidence, there is a shift in the Great Britain study toward comparatively less reliance on demographic and economic data and more emphasis on time series analysis derived from contentious gatherings (formations, issues, actions, arrests, deaths, occasions, claims, etc.). This trend continues in his later work with books such as *Regimes and Repertoires* (2006a) and *Contentious Performances* (2008a),

which both draw heavily on time series data based on events, with demographic and economic trajectories virtually disappearing. In addition, he begins to incorporate depictions of temporal trajectories that are increasingly abstract, rather than representing actual data counts. Many of these represent pathways (of regimes, industries, and repertoires) through two-dimensional analytic space, a strategy that begins to appear occasionally in his mid-career work such as *Big Structures*, *Large Processes*, *Huge Comparisons* (1985), *Coercion*, *Capital and European States* (1990), and *Work Under Capitalism* (1998), but then comes into more vigorous use in his post-DOC work on collective violence (Tilly 2003) and democracy, as we discuss below.

Dimensional Formalisms: From Variation to Trajectories in Two-Dimensional Space

A turning point in Tilly's analytic strategy comes in *From Mobilization to Revolution*, a landmark book in terms of his energetic (and, at the time, experimental) use of a whole arsenal of formalisms to stake out new theoretical territory. While the use of time series analysis that dominated the earlier works on France temporarily disappears, we see a vigorous application of abstract causal modeling as well as the frequent use of two-dimensional space to map relations between variables (the book contains 17 two-dimensional figures in all, more than in any of his subsequent books). He uses these figures for numerous purposes, including to represent major theoretical perspectives, to elaborate on White's catnet idea, to compare repressive versus tolerant regimes, and to examine the relationship between revolutionary situations and outcomes. In contrast to the major data compilations of the previous books, it is noteworthy that no data are actually plotted in any of these two-dimensional figures. They are all theoretical efforts to map out typological possibilities of different kinds of collective actors, regimes, and situations.

Although the use of two-dimensional graphs is a stock element in the sociological toolkit, it is worth noting why Tilly was particularly enamored of it and how it positioned him in contemporary methodological debates. The simple, juxtapositional technique allowed him to move beyond a taxonomic (or cataloging) approach to collective action and gain theoretical leverage on empirical variation in formations and repertoires. At the same time, it enabled him to avoid some of the more deterministic tendencies of a conventional variable-based (and covering law) approach in historical analysis. An early defense of this technique comes from his sympathetic critique of Gamson's (1975) attempt to catalog all challenger groups in American politics:

> Instead of attempting to prepare an unbiased list of all potential mobilizers, we can take one or two dimensions of differentiation that are of theoretical interest, search for evidence of group formation and then of mobilization, at different locations along the dimension, letting the differentials test more general assertions concerning the determinants of organization and mobilization. (Tilly 1978, p. 65)

If his first generation of two-dimensional graphs was largely about providing theoretical grounding for typologies, he grew increasingly dissatisfied with static categorization. Along with his self-conscious move toward dynamics and relations came an increase in figures in which various kinds of entities travel across two-dimensional analytic space. Once again, these are largely based not in exact numbers but in his own graphic representation derived from his and others' cumulative research. We also see him linking trajectories through two-dimensional space to his emerging focus on mechanisms. For example, his 2007 book *Democracy* contains 10 two-dimensional figures mapping state capacity by democracy, many of them showing the zigzagging democratization and de-democratization trajectories of particular national regimes. He argues that these trajectories are generated by particular sets of mechanisms, which include "some combination of 1) material equalization across categories and 2) buffering of public politics

from categorical inequality" (Tilly 2007b, pp. 118–19). In these cases, mechanisms help move objects around the analytic spaces that structured Tilly's earlier abstractions.

Rational Formalisms: From Payoff Schemas to Transaction Costs

In addition to the introduction of two-dimensional theorizing, *From Mobilization to Revolution* also engages—for Tilly's first and last time—in a somewhat experimental use of payoff schemas for explaining strategic collective action. Drawing on Mill as well as rational choice decision models, he introduces a set of assumptions that continue to inform later work, namely, that collective action has both costs and benefits that are counted and weighed by contenders, even though these are uncertain due to imperfect information and the contingencies of strategic interaction. While he notes that the Millian focus on "rational pursuit of interest is a welcome antidote to notions of crowd action as impulsive and irrational," he argues that it still falls short for understanding collective action: "Yet so far the followers of Mill have not given us much insight into the ways those interests arise and change. They have not said much about the way people define, articulate, and organize their interests" (Tilly 1978, p. 37). Here again, the problem of actor (and interest) constitution troubles and provokes his evolving use of formalisms.

Bracketing this concern for the time being, Tilly proposes to improve on the limitations of conventional rational choice models through a two-dimensional formalization of cost-benefit analysis, examining how the decision to mobilize varies according to the value of resources expended and collective goods produced. The result is a quite elegant abstract formulation that acknowledges different kinds of interest-orientations among actors (e.g., zealots, misers, run-of-the-mill contenders, and opportunists). He also (more famously) shows how the calculation of interests shifts according to both the political context and the local mobilizing structures.

Although these rationalist assumptions softened in later work, in the late 1970s they furnished Tilly with an alternative to the Durkheimian theories of collective emotion that dominated the study of protest and posed a challenge to even more rationalist assumptions that tended to ignore the limits to rationality. The use of formal payoff schedules quickly disappeared from his analytical arsenal owing to his dissatisfaction with methodological individualism's approach to actor constitution. However, his focus on cost-benefit analysis received a relational (and cultural) reformulation via the discussion of transaction costs in his later work on economics and inequality. As we discuss below, this work highlights the heuristic value of storytelling and categorical identities in reducing the costs of interaction, thus linking his remaining rationalistic inclinations to his emerging relational ontology.

Network Formalisms: From Catnets to Semantic Grammars and Boundary Mechanisms

Tilly's fascination with network formalisms dates from his adoption of the catnet notion (Tilly 1978), which, as we have seen, helped him solve some of the problems of the association between relations and categories—that is, the emergence of formations—that had perplexed him since *The Vendée*. From the very beginning, his use of network concepts is thus intimately linked to questions of culture, meaning, and identity. The catnet idea continues to hover underneath the data collection effort of the Great Britain study; by the mid-1990s, as he elaborated a series of essays on identities and stories in politics (Tilly 2002), Tilly made the leap by which he explicitly linked repertoires, relations, and cultural understandings. "A repertoire," he wrote, "depends on an existing web of social relations and understandings among parties to the interaction" (Tilly 1995, p. 44). Announcing his "exit from the debate" between partisans of "perceptions and identities" and "calculating rationality" in explanations of political contention, Tilly

argues that intentions and identities are rarely "unitary and clear, exist[ing] prior to action." He calls for "a shift from the consciousness of actors to relations among actors and the shared understandings they entail" (Tilly 1995, p. 22).

As the Great Britain project developed, Tilly adopted a new network formalism by which he constructed relations out of accounts of contentious events, showing how these changing relations provided evidence of a larger-scale process of popular contention, concentration of state power, and parliamentarization. He adopted Roberto Franzosi's (2004) "semantic grammar" approach of connecting subject-verb-object triads into network analytic statistics and diagrams. Drawing on the capabilities that he built into his data collection—and that were prefigured by formation and action sequences as early as the 1966 punch cards—Tilly examined how particular actor formations (subjects) directed actions (verbs) toward other formations (objects). For example, he derived network relations from event records reporting that "crowds attack officials" or "repressive forces control workers" or "electors make claims on Parliament." By using these story-generated relations as the basis for network simplification and visualization techniques such as blockmodeling, he was able to track the formation of new sorts of networks in the British polity and, thus, the creation of new categories of national citizens, authorities, and indeed, the social movement itself (Tilly 1997, Tilly & Wood 2003, Wada 2012).

Once armed with the idea that networks were composed of culturally laden interaction—much as Harrison White's (1992) "types of tie" are composed of shared "story sets"—Tilly's use of network formalisms took off, sometimes lurking in the background and sometimes playing an explicit part of the explanation. In *Durable Inequality*, basic network structures such as chains, hierarchies, triads, organizations, and categorical pairs (Tilly 1998b, p. 48) are all described as being formed through changing streams of meaningful interaction, but also as forming the foundation of new possible interactions that generate or limit inequality. In *Work Under Capitalism* (Tilly & Tilly 1998), relational structures governing the direction of work-related benefits from producer to consumer combine with the two dimensions of supervision and monetization to inform a comparative understanding of labor contracts and segmented labor markets.

Tilly discovered that the network modeling of interactions by way of semantic grammars could yield a powerful picture of new actor constitution and repertoire change. As he moved toward a mechanism-based understanding of social processes, his formal account of boundary mechanisms represented another such advance. He was not content to note that categorical boundaries varied in their association with network relations, as indicated in the original version of the catnet idea. Rather, he sought to track the causal sequences underlying the transactional processes by which boundaries are encountered, imposed, activated, deactivated, attacked, and defended (Tilly 2005a,b). In other words, mechanisms helped put catnets in motion so that transformations in identities, understandings, and relations could be understood as more than sudden switches between stable, static entities.

STRATEGIES OF EXPLANATION

Tilly's evolving use of pattern detection strategies and formalisms shows an early concern with processes and relations, but also an increasing determination to pull these together into a coherent analytical framework. He wanted to move beyond simply cataloging actors and events (or aggregating their manifestations over time) in order to pull out the important theoretical factors that contributed to the constitution and transformations of interests, power relations, and forms of organization. At the same time, he was increasingly focused on how formations of different types (challengers and powerholders, actors and targets) were engaged in shifting relationships with each other and how these relations—and

not just the formations or entities themselves—moved around the theoretical dimensions he abstracted from his own investigations and those of his colleagues and collaborators. In this section, we track some of the major shifts in his strategies of explanation of substantive historical processes, beginning with his mid-career work on state transformations, through the first systematic articulation of an approach to mechanisms in his work on revolutions and inequality, to the DOC reformulations, and finally to his application of the fully developed "relational realist" approach to the problems of identity formation, collective violence, and democracy.

By the early 1980s, having started his Great Britain project, Tilly began to see analytic possibilities beyond the epidemiological approach he had taken earlier. In 1981, he announced that he was finished with trying to prove Durkheim wrong. Taking up "Stinchcombe's Challenge," he argued that "one does not apply theory to history; rather, one uses history to develop theory" (Stinchcombe 1978, p. 1, cited in Tilly 1981a, p. 7). He resolved to approach theory from the ground up, so to speak, via his attention to historical patterns and processes. In fact, it was not just Tilly's allergy to Parsonsian theory that led him to spurn Durkheimian explanations of contention, nor his annoyance that "sociologists always have one more version of Durkheim to offer when the last one has failed" (Tilly 1981a, p. 107). Rather, it was that the data did not fit the theory. Having satisfied himself through epidemiological studies that social strain models poorly predicted the formation of collective protest, he began to turn toward more clinical analyses of states and, later, of social movements that could chart their transformations in relational terms. Yet the turn to clinical analysis never abandoned the historical context so important to his earlier studies.

From State Formation to Transformation

As Tilly turned a comparative eye outside of France and Great Britain toward other European states, he sought to map changes in the interests, organization, and relative power of contentious groups—that is, actor constitution and relationships—to the shifting demands of war making and the rapid urbanization and proletarianization of the nineteenth century. Amid a lively debate about contention, revolutions, and the development of contemporary capitalist states in Europe and elsewhere, Tilly both highlighted the central contradiction between capitalist exploitation and state legitimization (which reduces the costs of coercion) that neo-Marxists tended to treat categorically (e.g., O'Connor 2002 [1973]) and historicized it. Inquiring into the interests, organization, and power of contentious groups in Europe over 10 centuries, Tilly concluded that contemporary European states did not develop according to a logic of capitalism, but rather formed as a consequence of efforts of ruling elites to make war and thus to extend their dominion.

As his perspective on the "mechanisms of state formation" (Tilly 1990, p. 13)—and not simply its conditions—developed, it became clear that Tilly was offering "alternative histories of state formation from continuously-varying combinations of concentrated capital, concentrated coercion, preparation for war, and position within the international system" (Tilly 1990, p. 14). This perspective could account for variation while putting preparation for war at the center of questions of territorial control, state organization, resource extraction, and popular resistance. In building this account, he needed to specify relations among various actors and how they changed over time.

As a result, state formation as an analytic category had to give way to state transformation (Tilly 1994). This apparently innocuous turn of phrase marked several changes in Tilly's thought as he moved from Michigan to the New School, and as he spent time with the behavioral economists at the Russell Sage Foundation in the mid-1980s. Though long suspicious of teleology, through his account of state formation, Tilly always flirted with it. By focusing on transformation, Tilly now firmly announced his interest in process.

Transactions, Relations, Identities

This focus on process and transformation, which began with his abandonment of epidemiological studies of protest in the early 1980s, led him by the early 1990s to understand interests as linked closely with transaction costs. This had two consequences, related to the cultural construction of interests, on one hand, and to the processes of contentious interaction, on the other. First, as he explained in *Durable Inequality*, transaction costs, or "the energy expended in . . . interchanges" in which "one actor changes the state of another actor" (Tilly 1998b, p. 53) must be represented in the costs of action. Of course, these are not calculable a priori, and their calculation is itself an element in such expenditures of energy. Some account of their calculation—or of the construction of interests and transactions in interaction—would remain on the agenda even as his critique of methodological individualism intensified.

Second, Tilly had—already for a long time—understood that contentious political action unfolds in regular ways that change only slowly and are bound by time and space. These repertoires of contention had already worked their way into Tilly's theoretical arsenal by the mid-1980s. With a theory of transaction costs, however, these routinized processes made even more sense. Heuristics—whether scripts or intensively accumulated local common knowledge—generally reduce the transaction costs of interacting, particularly in unfamiliar situations. And yet, as heuristics, scripts may become less useful than local knowledge, as the latter enables improvisation. Here, we can see Tilly shifting away from the distinction between command and norm present in his 1966 *Codebook*, instead embracing the partially scripted, partially improvisational nature of most transactions. Yet Tilly's concern with interaction clearly dates back to his earliest work, as the formation and action sequences in his 1966 *Codebook* show.

Toward the end of his years at the University of Michigan and during his years at the New School for Social Research in New York, Tilly was frequently confronted by a range of arguments—many, as he recognized, extending E.P. Thompson's (1963) work in *The Making of the English Working Class* (Tilly 2008c, pp. 180–82)—that began to deny the salience of class for collective action. Many of these arguments sought to show how other identities—based on race, ethnicity, nationhood, religion, gender—were equally or more salient than class for explaining social processes. Another strain of argument took this further and claimed that no subject position could be understood from the outside, so to speak, and that attention to the power dynamics of the epistemology of social science revealed any attempts to understand subjectivity as power-laden social constructions.

Tilly began to engage these debates with a full-throated defense of class, based on the different positions groups of people have relative to the processes of production (Tilly 1981b). However, he soon decided that it would be best to "tunnel under" the postmodern challenge, as he described it, and really try to understand what transactions went into the constitution of categories that social constructionists claimed were socially constructed (see Zelizer 2006, 2010; Mische 2011). To do this, he had to come to terms with the ways in which his work was already oriented toward culture and use that to meet the challenges of his variously Foucaultian, Gramscian, Arendtian, and Habermasian colleagues (all in the mix in the sometimes-raucous New School debates), who argued that his models did not take culture into account.

Moving Toward Mechanisms

In the late 1980s, several strains came together to help Tilly fashion a distinctive perspective on social processes that would, by the late 1990s, put him in the position to make progress on how the cultural construction of identities occurred. First, in *European Revolutions, 1492–1992*, the last in a series of monographs on multiple centuries' worth of European history, Tilly (1993) focused on explaining the creation of

revolutionary situations and outcomes. Instead of emphasizing the large-scale shifts that made up his earlier epidemiological approach, Tilly sought transformation in dynamics that were closer to the ground. In one of his early formulations of the concept of mechanisms, Tilly wrote that, "in different combinations, the character of taxation, the availability of powerful allies for popular rebels, the forms of succession, the vulnerability of monarchies to disputed succession and a number of other mechanisms promoted or inhibited revolutionary processes. . . . Historical regularities exist; they lie in the operation of those mechanisms" (Tilly 1993, p. 18). Or, as he would say in a later interview, "Concatenation is contingent, but [mechanisms] are lawful at this level" (Tilly 2007b).

Rather than focusing on events and eventful histories that select widely known periods of sudden change as significant (Sewell 1996), Tilly instead attended to what Trotsky called the "molecular processes" of change that both prepared the ground for great events and ran through them. This idea could also be applied to repertoires: If, instead of larger-scale events, one focused on smaller processes that unfolded together, but at different points and at different speeds, one could square this with Tilly's (1986) findings in *The Contentious French* that contentious repertoires were only partly transformed by the Revolution. The unevenness allowed by the enumeration of key mechanisms could explain why the widespread adoption of performances that compose repertoires was sometimes delayed, and thus why wholesale shifts in repertoires did not occur until long after the apparently focal events (see Tarrow 1996).

In *Durable Inequality*, Tilly (1998b) took this initial exploration of mechanisms as an explanatory tool in a more formal, systematic, and abstract direction. He presented four mechanisms as concatenating in different ways to produce different patterns of what he called "categorical" inequality. The two main mechanisms of inequality are opportunity hoarding and exploitation; the former refers to efforts to close off the benefits of membership in a category, a network, or a group to outsiders, whereas the latter refers to relationships in which the benefits of the relation systematically flow from one party to another. These are bolstered by the mechanisms of emulation and adaptation, which minimize transaction costs. For Tilly, "[d]urable inequality among categories arises because people who control access to value-producing resources solve pressing organizational problems by means of categorical distinctions" (Tilly 1998b, pp. 7–8). The importation of external distinctions—say, black and white—into workplaces that have their own internal distinctions—say, skilled and unskilled workers—often reinforces both (and the distinction between external and internal categories breaks down over time). These mechanisms are reinforced—even produced—mainly by the stories people tell to justify them.

The advances here are significant because they mark a radical reformulation of the catnet idea from its first appearance in Tilly's work in *From Mobilization to Revolution*. Here, Tilly begins to address problems of actor constitution via a blending of cultural content—the storied justifications of categories and inequality—with transaction cost–based ideas of interest, as well as with ideas about how network ties become segmented through interaction into categorical pairs. In contrast to the content-rich mechanisms of *European Revolutions* (e.g., characteristics of taxation, availability of powerful allies, etc.), the mechanisms in *Durable Inequality* are stripped down to formal abstractions, applicable not just, say, to European history, but more generally to human interaction itself.

Synthesis and Reformulation

Dynamics of Contention (DOC) marked the watershed of this new synthesis because it spoke directly to the issues that had most preoccupied Tilly and his coauthors in the previous decades. In DOC, McAdam et al. (2001) took the abstract formalism of *Durable Inequality* and applied it to social movement

theory as it had developed over the course of the prior 25 years. Frustrated that even their own theoretical contributions to this work had been assimilated to social movement scholarship as static variables, they set about using the framework of mechanisms to inject dynamism and process back into a set of theories that, though they did not use this language, had again become epidemiological in its spirit of inquiry.

DOC introduced more than 40 mechanisms at different levels of generality and abstraction to explain how a wide range of processes in contentious politics works. Far more than in *Durable Inequality*, mechanisms were portrayed as the fundamental building blocks of larger-scale processes, unfolding in different sequences and combinations across particular episodes of contention. In DOC, McAdam et al. distinguished among relational, cognitive, and environmental mechanisms, but focused mainly on relational ones—that is, mechanisms that emerge as a result of interaction between or among specifiable actors. In an echo of *From Mobilization to Revolution* (and the 1966 *Codebook*), DOC focused much of its attention on the formation of actors and relations, from actor constitution to boundary activation/deactivation to scale shift (i.e., the broadening of claim-making from smaller to larger numbers of people). It paid much less attention to environmental mechanisms (read: changes in decision rules due to the changing environments of action, in the spirit of the Millians Tilly engaged in the late 1970s) and cognitive mechanisms (read: processes internal to individual actors, in the spirit of the Weberians).

DOC's reception was decidedly mixed. Among the coauthors, Tilly was probably the most partisan in its defense, particularly of its focus on mechanisms and their concatenation as providing explanations for social processes. The book seemed to demand too much: a reorientation of social movement theory away from social movements and toward a more encompassing field of contentious politics; adoption of a whole new language of explanation based on microinteractions gathered together into larger ones—something like a microbiology of contention as opposed to an epidemiology; and an uncertain epistemological frame in which mechanisms could seemingly be abstracted from any portion of any narrative of contention.

For Tilly, however, mechanisms were the cornerstone of a new approach he came to call "relational realism," an approach that informed the rest of his work. He described relational realism as "the doctrine that transactions, interactions, social ties, and conversations constitute the central stuff of social life." Tilly (2002, p. 72) reminded us that this perspective was once the dominant one in social science:

> Classical economists Karl Marx, Max Weber, and Georg Simmel all emphasized social relations, regarding both individuals and complex social structures as products of regularities in social relations. During the twentieth century, however, relational realism lost much of its ground to individualism and holism. Only in American pragmatism, various versions of network analysis, and some corners of organizational or labor economics did it prevail.

Mechanisms allow for the direct identification of transactions, interactions, social ties, and conversations at a number of different scales without constant recourse to either "large structures" or inferences of actors' states of mind. It involves a fairly simple epistemology: This approach accepts social categories as socially constructed, but argues that this should not impede our observation of the processes of social construction itself (implicitly including the academic constructions of social science). In other words, rather than be caught up in the infinite regress of postmodern skepticism, it challenges us to observe and understand social regularities within and across social sites, while recognizing that this understanding will never be perfect and unmediated by our own processes of social construction. It acknowledges that analysts' constructions are observable and amenable to parallel sorts of analysis, but it is simply unbothered by this.

Further, Tilly saw relational realism as a riposte to hermeneutic social science and history in which the meaning of social action could be gleaned from its place in a larger system of cultural meanings. This hermeneutical glossing was one variety of holism against which relational realism was pitched. For Tilly, meanings were created through interaction and transaction, via the claims and stories people direct at each other as part of these relations. Again taking a cue from Harrison White, Tilly came to see these claims and stories as dynamically constitutive of social relations (Mische 2011; see also Mohr & White 2006). And, consistent with his understanding of repertoires, Tilly saw these stories and claims as clustered in regular types of performances and genres that formed the basis for mutual understanding, but also for problem solving, improvisation, and eventually their own change (Tilly 1998a, 2008a; Tarrow 2008). This perspective brought relational realism close to a kind of nonteleological dialectic, akin to American pragmatism or to the dialogic theories of the Russian literary theorist Mikhail Bakhtin (e.g., Gross 2010, Steinberg 1999). It was for this reason, as well, that a great deal of Tilly's later work draws examples from political ethnography (e.g., Ashforth 2005, Auyero 2003, Roy 1994; also see Castañeda 2009). Now praising a clinical approach that moves between holism and particularism, Tilly wrote, "Ethnography engages the analyst in looking at social processes as they unfold rather than reasoning chiefly from either the conditions under which they occur or the outcomes that correlate with them" (Tilly 2007a, p. 248).

Communication, Stories, and Explanations

Tilly's interest in boundary making and communication within networks found an outlet in several of his later books that focus on the role of trust networks in politics, including *Contention and Democracy in Europe, 1650–2000* (2004a), *Trust and Rule* (2005b), and *Democracy* (2007b). In these books, he focused on the differential integration and exclusion of existing trust networks into public politics. Trust networks are composed of people connected through regular transactions, in which at least some of them put valued resources at the risk of others' poor performance. As with his analyses as early as *The Vendée*, Tilly focuses on how everyday trust relations—including investment, marriage, shared enterprise, etc.—intersect in unexpected ways with politics. And here again, Tilly is interested in avoiding dispositional or attitudinal understandings of trust, focusing instead on how people construct social relations through a combination of capital—valued resources—and commitment. Tilly argues that trust networks can (and should) be integrated into public politics through a relatively open state structure; this means that local us-them boundaries are potentially compatible with democratization, and that democratization at the level of the national polity is compatible with exclusive practices at the level of trust networks.

Tilly thus cut against common-sense understandings of the role of trust in democratization. But this was part of the appeal of the transactional approach of relational realism and of its underlying pragmatist understanding of communication. Such explanations "have the disadvantage of contradicting common-sense accounts of social behavior, and thus of articulating poorly with conventional moral reasoning." However, they "have the advantage of placing communication, including the use of language, at the heart of social life" (Tilly 2005b, p. 24).

Toward the end of his life, Tilly articulated this perspective in two books at a remove from the main empirical material that anchored his scholarly inquiries. In *Why?* (2006b) and *Credit and Blame* (2008b), he extended relational realism to more popular accounts of general processes of explanation. In *Why?*, Tilly distinguished among genres of conventions, codes, technical accounts, and stories, making a further distinction between standard and superior stories. Conventional explanations and codes have little cause-effect reasoning and depend on "rules of appropriateness rather than of causal

adequacy" (Tilly 2006b, p. 40), whereas technical accounts are full of causal linkages and make claims to specialized knowledge and comprehensiveness. Stories present links between causes and effects in a simplified manner, but they also have conventional aspects; there are only a relatively small number of familiar plots, and certain stories play better in certain groups than in others. Ever suspicious of purely narrative history, Tilly preferred superior stories to standard stories, the latter of which are told from the circumscribed point of view of actors who are limited in time and space and see causes located in their own consciousness. Superior stories, in contrast, split the difference between technical accounts and standard stories: "[W]ithin their limited frames, they *get the actors, actions, causes, and effects right*. By the standards of a relevant and credible technical account, they simplify radically, but everything they say is true. Superior stories make at least a portion of the truth accessible to nonspecialists" (Tilly 2006b, p. 172).

Why? and *Credit and Blame* are meant to strike a balance between technical accounts and superior stories. But even as Tilly does not use the language of mechanisms in these books, they suggest something important about mechanisms and the process of abstraction from which they derive. Mechanisms are a way of building technical accounts from a comparison of superior stories told across cases. Like superior stories, mechanisms contain a simplification of relations that nevertheless aim to "get actors, actions, causes, and effects right," with "right" meaning single, noncontradictory, predictable results from the operation of the mechanism taken by itself. The more complex, contextualized, and systematic elements of explanation come in the technical accounts of processes built up from these simpler, more formulaic mechanisms. This point, we argue, is key to understanding where Tilly was heading at the end of his career. He sought to sharpen and operationalize his comparative-analytic approach to mechanisms at the same time that he pondered the relationship between lay and

specialist interpretations of social and historical process—and saw each as the key to unlocking the other.

If we then return to the question of the paradox of the actor in contentious politics, we can better understand McAdam et al.'s mechanism-based account of actor constitution in DOC. In ways that recall Tilly's self-conscious switch from state formation to state transformation in the early 1990s, the key to understanding actor constitution lies in understanding the process historically. Accordingly, in DOC, McAdam et al. argue that the process of actor constitution begins with elements of the mobilization process and that new identities are not fixed prior to mobilization. Rather, they are developed through mechanisms such as social appropriation, innovative action, attributions of opportunity and threat, and processes of certification (and decertification) of emerging or existing actors. The formation of new categories of identity—and the movement between different kinds or levels of identities—generates new political actors out of "contingent assemblages of networks" (McAdam et al. 2001, pp. 317–18). These new formations then act and make claims "as if" they are indeed "determined, unified, and self-motivated."

RELATIONAL REALISM AND ACTOR CONSTITUTION: GAINS, AMBIGUITIES, AND CHALLENGES

Before concluding, we would like to take a critical look at Tilly's late formulation of relational realism, taking stock of its strengths, difficulties, and ambiguities. After looking back over Tilly's early scholarly conundrums, we can see why he thought he gained analytic leverage with a theory of mechanisms. Together with his relational ontology and pragmatic perspective on communication, the mechanism-based approach allowed him to resolve some of the recurrent dilemmas related to actor constitution that we saw in his earliest work: How do you associate populations with categories? Do we trust actors'

accounts of their own interests and motives, or do analysts have a sharper understanding? How do you deal with the fact that populations, beliefs, and actions do not always change in tandem? And increasingly, what is the association between actors' own difficulties in representing their identities, actions, and understandings and the challenges of historical analysts in explaining processes of social change?

Tilly's late elaboration of his relational realist perspective gave him a set of answers to most of these questions. While no explanations are perfect, he told us, some are better than others, because there is a real world to be explained, and this world (as pragmatist semiotician Charles Peirce argues) pushes back on our attempt to understand it. The work of explanation does not happen within solitary minds (whether lay or scholarly), but in our attempts to manage and account for relationships; the stories we construct provide heuristics that allow us to reduce the transaction costs of interaction. While identities, boundaries, and populations are continuously in (not always synchronized) motion, they interact—at the level of both interpersonal practices and historical processes—in causally patterned and systematic ways. We call these causal patterning mechanisms, and mechanisms—rather than variables—should be the building blocks of theories. By seeing how mechanisms concatenate historically into larger-scale processes, we have the best of both worlds—generalizability and context, patterning and contingency. This in turns allows us to build comparisons between superior stories into compelling technical accounts.

The elegance and pragmatism of these solutions are persuasive. And yet, many ambiguities remain that have often made Tilly's mechanism-based approach difficult to apply in practice. We focus on two sets of questions: Are mechanisms simply useful heuristics, or do they provide compelling technical accounts? And should they be conceived at the level of actor practices and strategies, or at the level of emergent historical interaction?

Mechanisms as Heuristics or Technical Accounts?

Tilly the historian understood well the variability that underlay the generality of his mechanisms. As Oliver (2003) and Demetriou (2009, p. 448; see also B. Dubreuil, unpublished manuscript[3]) note, each of these mechanisms is "multiply realizable" and the energies of researchers are well spent understanding the varieties of ways in which these mechanisms can unfold. At each turn in the specification of mechanisms, Tilly stops at the point at which he can get enough of the process right without going deeper into the peculiarities of the case. However, for many commentators, this is not enough. Mechanisms, as comparable, abstracted, superior stories, are only a plausible heuristic (Demetriou 2009). Both Oliver and Demetriou long for mechanisms to be built upon—and to support—a more clearly specified technical account.

As B. Dubreuil (unpublished manuscript) argues, treating mechanisms as heuristics dampens the punch of the realism in relational realism. Drawing on the philosophy of other mechanism-based approaches in the (resolutely realist) natural sciences, he claims that the reality of mechanisms depends primarily on two elements: First, mechanism-based approaches must specify clearly the explanandum, and not simply take the presence of the explanandum as evidence of a given mechanism (a problem indicated by several authors in the presentation of mechanisms in DOC; see Koopmans 2003, Oliver 2003). Second, mechanism-based approaches should move, as Machamer et al. (2000) and Norkus (2005) indicate, from mechanism sketches to mechanism schemas in which the account of the concatenation of mechanisms into processes outlines a clear, abstract set of dynamics that can be filled in with specific content from case to case. Dubreuil argues that DOC fails these tests,

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[3]This unpublished paper is available at **http://bdubreuil. quebecdoc.com/IMG/doc/Mechanism-Tilly.doc**.

whereas the relative circumscription of the number and scope of the mechanisms discussed in *Democracy* comes much closer to fulfilling the relational realist undertaking.

Interestingly, Tilly's late work on democracy is the work in which he most strongly attempts to combine his new mechanism-based approach with his old explanatory friend, two-dimensional graphs (now given dynamism via regime trajectories). This suggests that to provide effective relationally realist explanations, we need to combine schematic accounts of social processes with location in variable-determined, multidimensional space. That is, clinical and epidemiological approaches come back together as dialectical co-constituents of technical accounts.

Mechanisms as Practices, Strategies, or Emergent Interactions?

If we are to solve the puzzle of the actor in Tilly's work—the formations and recombining subformations that could be a 42-year-old pain in the neck—we need to come to grips with another difficulty: whether to understand mechanisms as things actors do (purposefully or not), or as emergent, externally constructed accounts of historical interaction. Gross (2010), for example, has suggested that we understand mechanisms as practices, grounded in what Dewey calls "habits" and evolving according to the process of problem solving, experimentation, and habituation described in pragmatist theory. Likewise, Emirbayer (2010) has pointed out strong underlying similarities between Tilly's work and that of Bourdieu, with its focus on habitualized repertoires mobilized in strategic interactions, within a relationally (and categorically) structured field of action (Bourdieu 1977, 1993).

Although a person-centered focus on practice and strategy is an attractive way to link actors and mechanisms, Tilly's own somewhat uneven specification of mechanisms makes such a resolution difficult. In DOC, for example, "attribution of similarity" appears as something someone does for an audience with greater or lesser success. But other mechanisms seem less dependent on conscious action by a given actor. Similarly, emulation is "deliberate," whereas boundary activation may or may not be. Each depends to some degree on interpretation by the actors who are enacting mechanisms. Some mechanisms seem to be more significantly cognitive (e.g., boundary activation), whereas others seem more organizational (e.g., brokerage), and still others are unclear in their scope (Barker 2003, Falleti & Lynch 2008). Koopmans (2003) suggests that this ad hoc quality of mechanism naming makes it difficult for researchers to establish rules to guide them and therefore hampers the scientific usefulness of the strategy. Without the dizzying erudition and decades of historical study of a Charles Tilly, establishing the generality of a mechanism would be difficult, to say the least.

Moreover, Tilly underspecified the levels of analysis at which mechanisms work. Some mechanisms reappear as processes (depending on what is being explained) and the lines among cognitive, environmental, and relation mechanisms are not well drawn. As such, mechanisms can be unfulfilling as microfoundations. This is all the more the case because Tilly does not even argue for their causal priority as such. Instead, Tilly argues that significant causal power lies at the level of situated processes; mechanisms gain their causal force through combination with others, in different sequences, and in different "conjunctions" (Tilly 1993, p. 8). Accordingly, figuring out what is mechanism and what is context is a problem of "lumping" and "splitting" (Barker 2003; see also Zerubavel 1993) and of abstraction.

At their best, mechanisms blur structure and agency and, in a sense, sublate both by their very dialectical interconnection. Like the concept of activity in Marxism (particularly developed in Vygotskian psychology, with strong links to pragmatist theory; see e.g., Stetsenko 2005, Krinsky 2008, Krinsky & Barker 2009), mechanisms define structured action away from individuals and their attributes and toward collective processes that unfold among actors (who may be individual or

collective, and who may be acting fully or partially consciously). Perhaps Tilly would agree with Bourdieu, who argued that the perception of strategies (and interests) depends on the analyst's standpoint, i.e., whether one focuses on the subjective stance of the actor or the objective structuring of the field. Likewise, Tilly's mechanisms look different when seen from the point of view of the relationally embedded, meaning-constructing, repertoire-performing (collective) actor than they do when one zooms out and takes an emergent view of historical process. While human practices and emergent processes clearly constitute each other, the difference in analytic focus is useful to preserve. It parallels Tilly's distinction between standard stories and technical accounts; since people cannot see all of the embeddings and outcomes of their actions, a focus on "mechanisms" pinpoints how goals and practices fit into larger processes that may be (partially) out of view.

One potential limitation to Tilly's approach is his relative lack of attention to the strategic uses of ambiguity. Unlike network analysts such as Harrison White (1992) and Eric Leifer (1988)—and unlike his student, Marc Steinberg, who focuses on the multivocality of discourse (Steinberg 1999)—Tilly emphasized the simplifications that stories offer about relevant actors, actions, processes, and outcomes in contrast to the more complex—and therefore more costly to understand—specialist accounts. This is in contrast to the work of sociologists such as Francesca Polletta, who claims that in many social movement stories, "ambiguity about agents and agency, not their clarity, successfully engaged listeners" (Polletta 1998, cited in Tilly 2006b, p. 72). Likewise, the political scientist Deborah Stone (1997) calls ambiguity the "glue of politics" because ambiguous, rather than clarified, claims allow others to appropriate claims to their own projects. Ann Mische (2003, 2008), shows how the interplay between ambiguity-fostering and -clarifying mechanisms leads to different sorts of coalition formation, and how, seen as strategies, these communicative mechanisms concatenate into different activist styles. And John Krinsky (2007) shows how the maintenance of multivocal claims across institutional fields allows authorities to withstand multiple challenges from within these fields.

Until the end, the question of consciousness still plagued Tilly's analysis of actors and action, even as he steered away from "phenomenological individualist" accounts, on one hand, and coldly rationalist accounts on the other. Without engaging the issue head on, as such, Tilly comes close to articulating a theory of social cognition in which cognition itself is intrinsically relational, dynamic, and communicative. Perhaps we can read the most vivid summary of his late career understanding of the complexities of actor constitution in the following passage:

> Humans live in flesh-and-blood bodies, accumulate traces of experiences in their nervous systems, organize current encounters with the world as cognitions, emotions, and intentional actions . . . [but] turn out to be interacting repeatedly with others, renegotiating who they are, adjusting the boundaries they occupy, modifying their actions in rapid response to other people's reactions, selecting among and altering available scripts, improvising new forms of joint action, speaking sentences no one has ever uttered before, yet responding predictably to their locations within webs of social ties they themselves cannot map in detail . . . . If social construction occurs, it happens socially, not in isolated recesses of individual minds. . . . Hence the difficulty of reconciling individualistic images with interactive realities (Tilly 2005a, pp. 59–60).

CONCLUSION

It is difficult to live down great work. *From Mobilization to Revolution* helped to define the fledgling field of studies of social movements and political contention. It laid down a model of mobilization that emphasized interests, resources, organization, and opportunities (repression and facilitation) to counter structural

breakdown theories and psychological models of collective action. As we have seen, *From Mobilization to Revolution* did mark a significant advance in Tilly's thinking in the late 1970s as he transitioned from his study of French contention to British contention, from epidemiological to hybrid studies of contention, and toward increasing formalization and theory construction. Nevertheless, although Tilly challenged simple rationalist formulas and ideas about unitary actors in that book, the overall *gestalt* of rationalism and structuralism stuck. Even more than 20 years later—amid serious conceptual advances on his part—the reputation of rationalist structuralism clung to Tilly's work.

As students of Tilly from the mid-1990s through the early 2000s, we have some difficulty in recognizing resolute rationalism and structuralism as being at the heart of Tilly's work. Instead, we traveled the road with Tilly as he was articulating the strongly interactive and relational program on which he settled in his later work. At the heart of this program lay what we have called the "paradox of the actor," a strongly dialectical understanding of social actors as constituting and continually emerging from social interaction, and of this interaction as being conditioned by shared representations and their histories, often as internalized and embodied in social actors themselves.

In this review, we endeavored to understand the development of this perspective amid Tilly's changing objects and manner of study, only to discover that the basic outlines of the problem of actor constitution could be found in his earliest work. And although he bracketed this problem in some of his work, it kept coming back, not as that which was repressed, but as a key element in each new formalism and in each new explanation of political contention and state transformation throughout his career. As we have shown, his struggles over how to formally represent actors and their relations led him directly into his own relational conception of the process of representation itself. That is, ontology meets epistemology, despite Tilly's frequent denials of interest in the latter.

We have presented Tilly's work here as the development of a unified, self-directed actor, when he would have been the first to say that his own work was the result of a vast array of conversations and interactive processes. Given constraints in time and space, this review has neglected these extensive, still vibrant networks and conversations.[4] There is certainly much more to say about Tilly's influence on the field of historical sociology more generally.[5] Nevertheless, we hope that we have been able to tell a "superior story" about the complex interweavings of research, method, and theory in the formation—and reformulation—of a pioneering sociological perspective. Although incomplete, Tilly's work bequeaths a powerful set of tools to social scientists who are concerned with explaining social processes through sustained research and not through speculation.

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[4]A very incomplete accounting of the ongoing conversations among Tilly's former students and colleagues would include efforts to build more explicit foundations for mechanism-based explanations (Demetriou 2009, 2012); extend Tilly's later work back into his early interest in urbanization (e.g., Hanagan & Tilly 2011); join Tilly's network-sensitive later work with more closely ethnographic studies of protest (e.g., Auyero & Moran 2007, Wood 2012); deepen the cultural aspects of Tilly's analysis of mechanisms and repertoires (Demetriou 2007, Fukase-Indergaard & Indergaard 2008); expand on the links between contention and states, regimes, and repertoires (e.g., Tarrow 2012); develop new measures of repertoires and their diffusion (e.g., Wada 2012); apply Tilly's *Durable Inequality* to comparative immigration (Poros 2011); explore the link between narrative and boundaries (Smith 2004); and, as here, link Tilly's developing theories of social action to his broader analysis of political contention (Goldstone 2010).

[5]For a detailed discussion of Tilly's legacy, see the special issue of the *American Sociologist* coedited by Koller & Nichols (2010). Beyond Tilly's own students, his influence can be seen in the work of a younger generation of historically inclined scholars at Columbia and elsewhere, including Erikson & Bearman (2008) on the formation of global trade networks; Erikson & Parent (2010) on the mechanisms producing effective centralized authority; Hillmann (2008) on brokerage dynamics and alliance formation leading up to the English Civil War; Parigi & Sartori (2012) on political cleavages and party formation; Vedres & Csigo (2002) on political discourse dynamics; and Barkey (2008) on mechanisms of imperial rule under the Ottomans.

DISCLOSURE STATEMENT

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