Cover note to the Politics and Protest workshop:

The following is a very raw and hot off the press first draft of a review of Tilly's work that we were invited to do for the Annual Review of Sociology. *The charge was vague: we were asked to do a "biographical piece on Charles Tilly." After many many conversations with each other and revisitings of Tilly's work, we elected to focus on the problem of actor constitution as well as the development of strategies of detection, abstraction, and explanation over the course of Tilly's career. We had a lot of fun revisiting the early books, and perhaps a little less fun wrestling with our own critical perspective on the more recent work on mechanisms. Our own shared orientation toward cultural processes and network formalisms informs this work, as it informed our own relationships with Chuck in the mid to late 1990s.*

The biggest problem with the paper is that it is way too long. It probably needs to be cut back by at least a quarter. Since we just had to get it all thrown down on paper, we welcome suggestions on where and how to cut. We also welcome suggestions on how to improve the analytical coherence and narrative arc of the piece. And of course we want to hear about any glaring omissions that we should consider working into the article. Not to mention any other suggestions or criticisms you may have.

One thing we considered was having a section on how other scholars have tried to incorporate the late career work on mechanisms into their work, with varying degrees of success. But we gave this up for lack of time and space. How important is it to include something like this, or can we get away with leaving it out?

Thanks so much in advance for your feedback on this article! We look forward to the discussion.

Ann and John

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

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Writing with his colleagues, Sidney Tarrow and Doug McAdam in *Dynamics of Contention*, 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: 159).

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 forty years, beginning in his earliest work, at least to judge from his early code-books and research statements. They received provisional resolutions and bracketings along the way, but 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 *Dynamics of Contention* (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 often taken for, and more like a moment of stepping back, gathering together, and clarifying the path ahead.

This review will examine development of Tilly's analytic arsenal over the course of his long career. By focusing on his use of formalisms of various kinds as strategies for linking theory and method, we seek to clarify, as well, his recurring struggle to understand the place of actors in his work. As others have noted (e.g Steinmetz 2012, OTHERS) Tilly's work is characterized by a tension between his search for forms of generalizable explanations of historical process and attention to historical specificity and detail. Tilly "began criticizing teleological and universal models of social change long before most other historical sociologists" (Steinmetz 2010, p. 319). He made early methodological choices in the direction of historical variation and "individualizing comparisons" rather than universal laws, and his historicizing tendencies were clear in his intensely ambitious efforts in data collection and coding, as well as his insistence on beginning nearly every piece of writing with a concrete historical example. At the same time, he was not content to rest on simply explaining particular cases – he wanted to push toward more generalizing explanatory strategies. But how to do this without falling into the

traps and fallacies of historical universalism? How to do this while confronting, ultimately, the problem that people make their own history but not in circumstances (or, Tilly might add, using repertoires) that they choose freely? Tilly's wager in DOC and in the books that followed was that an approach highlighting the constitution of a wide range of social processes from different combinations of regularly recurring interactive "mechanisms" might resolve the problem.

Tilly kept many other tools at his explanatory work bench beside his late-career focus on mechanisms. He borrowed, adapted, re-purposed and pioneered a host of other analytic formalisms, ranging from his beloved two-dimensional spaces to temporal models, semantic grammars, and network diagrams, as we will explore in more detail below.   While our attention to formalisms gives this review a methodological focus, Tilly saw such formalism as a form of theorizing, generating a bridge between his empirically prodigious efforts at what he called "detection" (of events, patterns, repertoires, etc.) and his ambition to explain, and not merely describe, historical process. While we think it is wrong to pigeon-hole his work as "historical positivism" (as some critical theorists and post-modern scholars tend to do), it is important to understand his work as rooted in a realist explanatory project, which he saw as a departure both from normative theory (in its Parsonsian as well as Frankfurt School variations) and from variable-based forms of statistical modeling. At the same time, the problems of meaning-making, consciousness, motivation, and interest 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.

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. 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's 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 note that after a flurry of direct theoretical engagements in his early books, he decided to approach theory from the ground up so to speak, via his attention to historical patterns and processes. We examine the development of his impressive arsenal of *strategies of detection*, particularly as developed through his decades-long research on French and British political contention. We then examine 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 the way he marshals both detection and abstraction through evolving *strategies of explanation*, moving through successive stages of his career and culminating in the DOC effort and the dozen subsequent publications. Throughout, we attend to the ways in which these methodological engagements informed the developing ways in which Tilly understood actors in history, even amid a body of work that many have understood as resolutely structuralist.

At Work in 1966

In looking at 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 the researchers on the project (more than sixty people took part in the coding) 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. On the other hand, 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. Further, Tilly met these difficulties in ways that would shape 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, the fine-grained detail and the frequent provision made for textual commentary on the thousands of computer punch-cards involved. Formations were 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.

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 01in 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, re-forms 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]

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 coding for the explicitness, unity, homogeneity, and focus of expressed objectives, as well as 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, "reported public memory of previous conflicts", and the extent to which action is coordinated by "command", by "norm", or 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 (1) categories with validity outside their actions; (2) by their own sequences of actions and interactions; and (3) by historically constituted relations with others mediated by (4) symbolic content and memory.

Ideas about coordinated action by "norm" would soon shift into Tilly's concept-metaphor of "repertoire," which he would then link to larger-scale changes in capitalist development, urbanization and national state-formation. Tilly's interest in interaction and the sequencing of contention would reenter his work in the form of "relational mechanisms" of change, and do so beyond the area of contentious politics. His interest in symbols and memories, as well as the continuing problem of the unity or disunity of actors, led into work on identity, stories, social boundaries, and the claim-making and justificatory stories people tell to forge and solidify—and break off—relations. The question about the cohesiveness of interests and motivations for action fueled a series of position-taking statements on rationality, its limits, operations, and role in problem-solving, as well as the development of his other theoretical and methodological approaches.

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 of 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 as described as royalist, anti-conscriptionist, religious, or self-interested. He argues that rather than focusing on motives (especially conscious ones), sociologically-oriented historical scholars should focus instead on

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

questions of organization, composition, and relationship among social groups, as well as on the relationship between long term changes and short term events.

> One may begin with questions about the organization and composition of the groups that supported the Revolution and the counterrevolution, about the relations among the principal segments of the population before and during the Revolution, about the connections between the rapid, drastic changes of Revolution and counterrevolution and the more general, more gradual social changes going on in eighteenth-century France. These questions occur naturally to a sociologist faced with an ebullient social movement (Tilly 1964: 9).

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, focusing on the decomposition of "big categories of actors" (peasants, artisans bourgeois, clergy, nobles) and 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 which what he considered the flattening quality of most culturalist accounts, and their neglect of complexity and specificity of historical process. "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" (1964: 314).

In *Strikes in France*, co-authored with Edward Shorter after Tilly moved to Michigan in 1974, the problem of actor-constitution still hovers uneasily in the background. He notes that that the "simple notion" of collective action "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 and Tilly 1974: 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 partway 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 and Tilly 1974: 5).

Tilly's subordination of the question of conscious motivation to more empirically "manageable" questions of the co-variation 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 if the danger of circularity: "it is so tempting to consider the development of

protest as both the consequence of solidarity and the very evidence of solidarity" (Tilly et al 1975: 8). While sympathetic to E.P. Thompson's study of the historical development of class as "process and relationship," and the association of more advanced class consciousness with higher levels of protest, they are wary of arguments based on this, 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: 12).

The problem of actor-constitution is central to the pathbreaking 1978 work, *From Mobilization to Revolution*, a remarkable book for its energetic engagement of both theory and method. This book contains perhaps his last sustained engagement with the classics of sociological theory – Marx, Durkheim, Mills, 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: 48). But 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? (1978, p. 10)

The solution, in this work, is "all of the above." Tilly moves back and forth between a focus on 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 this work also has a sustained critique of the standard versions of these approaches, mediated, arguably, by the (implicit and unacknowledged) incorporation of culture. He has an extended discussion of how to identify a population's "interest" which harkens back to 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" in discourse and practice), 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 articulations of their interests as an explanation of their interests in the short run." 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 to at

least 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 differentiating 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 – e.g., 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 aren't always associated with categorical identities (at least as imposed by outside observers). The concept of *catnet* helps to solve this problem by showing the association of relations and identities— that is, of actor-constitution— as a historically variable question. While clearly linked to Marx's problem of class consciousness ("class-in-itself" vs. "class-for-itself"; see Schwartz 20xx), 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 will later call identity (or boundary) activation and deactivation as key cultural-relational mechanisms in contentious politics and in the dynamics of social inequality.

In spite of his repeated acknowledgement that meaning, motivation and actor-constitution are central problems for analysts of political contention, Tilly is best known as a structuralist who largely abjured these problems until very late in his career. Part of this, as we have seen, is true. But if we take a step back, we see that Tilly was centrally concerned with two things simultaneously: First, he was concerned that whatever we say about actors has to be backed up by the patterns detected by systematic empirical analysis; we learn nothing about actors and social action if we infer it from anecdote. Second, he was concerned to refute Durkheim's theories of anomie as a precursor to popular contention. To do so, he sought to understand the larger contexts of and conditions for protest, which, if his hunch was right, proved Durkheimian approaches to why people protest to be "useless" ("Useless Durkheim", 1981). Hence, his apparent structuralism. Nevertheless, the nagging questions of actors, identities, and formations would remain, and they became more central to his work as he developed new strategies for detecting patterns of contention, formalizing their analyses, and explaining why they occur.

Strategies of Detection

Tilly's early work on French contention reveals his commitment at the time to what he called an "epidemiological" approach to "political disturbances" which he contrasted to a "clinical" approach. The epidemiological approach sought to relate contextual variables to the prevalence and forms of political disturbance, while the clinical approach follows "the origins and histories of particular participants, disturbances, or series of disturbances" (Tilly, Tilly and Tilly 1975: 13). In his work following *The Vendée,* Tilly's trajectory involved moving from variable-based questions to configurational questions, and his strategies of detection changed accordingly. There was a dialectical development between his historical investigation and his

social science methodology and a corresponding development in the questions that he asked—or thought he could answer.

A large part of the development, as Tilly readily acknowledged, was due to the advances in computer applications to his work. And yet Tilly also designed his research to be forward-looking in this regard. He anticipated the development of greater computing capability and 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, along with his collaborators, coded thousands of political disturbances—instances of collective violence and strikes, as well as—eventually—non-violent episodes—in France from 1830-1960. The punch-cards designed for the computers of the era limited much of their data to predetermined codes for characteristics of places, actors ("formations"), actions, and sequences of action. These limits helped them build standardized records, which were critical for analysis at the time, but also introduced conceptual problems, such as those cited earlier.

Nevertheless, Tilly's data collection in the French study accomplished several things that had not been done before. First, it developed a procedure for collecting systematic, longitudinal data about *contexts* and *events*, and to do so in sufficient detail that one could see how they covaried or differed over time and space, while also being able to go back to specific events and reconstruct historical records of them with relative ease. Accordingly, a book like Edward Shorter and Tilly's *Strikes in France* could bring these data to bear on the question of the validity of social breakdown theories, while a book from the same larger data-collection project, like *The Contentious French* could raise the question of changing forms of protest more clearly.

Second, the coding schemes Tilly invented were flexible enough to accommodate multiple types of sources. Though he focused on archival matter and official records for his earlier work on the *Vendée* and for *Strikes in France*, Tilly's *Contentious French* project—for which the 1966 *Codebook* is one part-- added newspaper reports to the mix of sources. Daily scans for contentious events in major newspapers were combined with verification and follow-up in other sources, such as "historical works, political yearbooks, contemporary reviews, pamphlets and commentaries, and documents…in archives" (Tilly et al 1975: 15-16). In doing this, Tilly reflected on some of the limitations and advantages of archival versus newspaper sources:

> (1)   Every source omits some of the events were are interested in and some crucial details of other events; the smaller the event the greater the omissions. (2) All the comprehensive sources pay disproportionate attention to those events which occur in central locations or have wide political impact. (3) Published sources are less reliable for details of the events than for the fact that an event of a certain kind took place. (4) For the two purposes combined, a continuous run of a national newspaper is a somewhat more reliable source (and a more practical one) than any major archival series we have encountered, a much more reliable source than any combination of standard historical works, and superior to any other continuous source it would be practical to use (Tilly, et al. 1975: 16).

The Tillys limited this finding to Germany, Italy, and France for the period they studied (1830-1930), and such a judgment would certainly not be true for eras before national media and would likely be difficult to maintain today (though there is lively debate about this, and many others have since used national runs of newspapers to detect protest events [Koopmans; Oliver et al., OTHERS CITES]). Nevertheless, Tilly's scan of newspapers was about to get more intense. In effect, he began to treat newspaper reports as he had earlier treated evidence from archival materials and official records in France. But with his study of contention in Great Britain, computer applications had already become significantly advanced. Accordingly, Tilly's research team was able to scan several periodicals for evidence of "contentious gatherings" and draw on official reports and archives, as well, for the period 1758-1834.

The Great Britain study introduced a couple of innovations in his strategies of detection. First, Tilly sought to approach event classification inductively, which is to say that he was interested in *any* gathering of ten or more people in which the claims of some (or all) these people would, if realized, affect the interests of others (e.g., Tilly 1995). In contrast to his enumeration of strikes or violent events in France, Tilly was interested in the different possible types of interaction between contenders and authorities, or among contending parties themselves (whether or not any one of them represented state actors or other authorities). "Contentious gatherings" was encompassing enough to capture reports of brawls, processions, strikes, and demonstrations, alike. Second, unlike the French data, which were limited to codes on punch-cards, the Great Britain data took advantage of new computerized search capabilities and was therefore able to preserve a great deal of original information about events and actors and their interactions. Earlier problems with limitations on the number of formations and subformations, noted in his 1966 France codebook, could be held at bay. 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.

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." That is, rather than directly engaging the great British historians of the day through confronting their evidence and theories by "argu[ing] out the conditions under which a revolution could have occurred, and assess[ing] the available evidence concerning both the chances of revolution and the effects of Reform," one could instead "examine a wide range of conflict, collective action, and change in Britain, place the 1820s and 1830s in comparative perspective, treat the particular struggles which took place around Reform as variants of collective action and conflict in general, and only then attempt to trace the ways in which those struggles were extraordinary" (Tilly 1981: 150). Tilly's approach (for which he did not claim superiority, only necessity), sought to assemble and keep as much data as possible, but also enable its formalization in comparative study. Thus, Tilly's larger approach to data took shape in this period. 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. This period also marks Tilly's move away from the "epidemiological" approaches of his earlier projects (see Tilly 1981: 71) and toward a synthesis of epidemiological and clinical approaches through large-scale process-tracing of change.

And yet, in the short-term, this detection opportunity did not fully displace Tilly's epidemiological approach. The synthesis with the clinical approach would come only gradually. In the meantime, Tilly began to see theoretical possibilities in new detection strategies. His Great Britain project underway, and his France project behind him, he began to emphasize the *interactive* element of collective action and collective violence. Here, action by authorities becomes especially important, whether it takes the form of direct repression or channeling of challengers claims into less-threatening forms. And the responses of authorities depends both on larger-scale shifts in the organizational form of that authority and on smaller-scale, or more immediate, shifts in alliances among authorities and their regime partners.

Though Tilly developed his concept of "repertoires of contention" based on his 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.[2] Further, changes in state organization, and in the ways in which 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 the ways in which the forms or repertoires of contention changed over the course of the years, 1758-1834. The new level of detail was important for several reasons: First, it differed from the French data in that the transition from the familiar 18th century repertoire of "parochial, particular, and bifurcated" action to the 19th century repertoire of "cosmopolitan, modular, [and] autonomous" action occurred earlier and more steadily in England. Second, because of the more finely grained data, which, for example, preserved descriptions of 25,239 verbs with objects during contentious gatherings, Tilly was able to get to a level of detail at which he could readily check his more formalistic analyses against the contents of the contentious gatherings. This double-use of the data was one of the elements that, no doubt, made his work increasingly compatible with network analyses that tried to model social ties based on specific kinds of claim-making activities

In his study of Great Britain Tilly discovered what he understood as the invention of the national social movement. It is not simply that his data showed that the mode of claim-making had changed; rather, it showed that it changed toward a combination of special-purpose associations, campaigns, and "ostentatious" displays of "worthiness, unity, numbers, and commitment" or "WUNC" (Tilly 2004). This is both exactly what most analysts mean when they speak of "social movements" today, and extremely different 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 19th century fully displaced earlier modes of protest, either quickly or completely (see e.g., Tilly and Wood 2003). But it did vindicate his reluctance from his earliest work, to take "the social movement" as his unit of analysis; instead, his larger focus on multiple modes of contention and claim-making revealed the historical development of a form that contemporary analysts often took for granted.

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[2] George Steinmetz (1994) suggested affinities between Tilly's work and that of the Regulation School of neo-Marxist political economists. Tilly never followed up on this connection.

Thus, it was the intense dedication to historical detection that led to some of his most important substantive and theoretical contributions. But if his increasingly sophisticated strategies of detection allowed him to tame, organize, and "read" all of this messy historical detail, he was still faced with the challenge of making sense of it all, that is, 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 kinds 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.

Strategies of abstraction

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. There is a continuous tension between historicism and generalizing abstractions, with the abstractions themselves taking a number of different forms over the course of his career. Tilly was quite clear that the link between history and theory lay in the use of what he calls "formalisms." 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." (2008a: 40). His 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; "they 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" (2008a:. 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 would be important to his work, including 2-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 populations (early evidence of using cultural evidence to see how people themselves articulated their interests). He also makes ample use of maps to show comparative distributions of income, wine-growing, textile production, and ecclesiastical oaths across different cantons and sub-regions. And he has his first fledging network diagram, based on an index of occupational intermarriage among different segments of peasant, artisan, and bourgeois classes. At this point, however, there is only one time series graph (tracking the value of textile production) and no attempt to tease out causality through two-by-two tables or abstract representations of causal pathways.

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 (based on both demographic and event data) 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 of collective violence to processes of industrialization and urbanization.

While both the French and Great Britain studies make use of event and non-event time series data as evidence, there's 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* and *Contentious Performances*, 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, Coercion Capital and European States*, and *Work Under Capitalism*, but then comes into more vigorous use in his post-DOC work on collective violence and democracy, as we will discuss below.

Dimensional formalisms: from variation to trajectories in 2D 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 seventeen 2D figures in all, more than in any of his subsequent books).[3] He uses these figures for a number of purposes, including to represent major theoretical perspectives (e.g., Durkheim's theory of differentiation or Huntington's modernization theory), to elaborate on White's *catnet* idea, to compare repressive vs. tolerant

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[3] These kinds of figures in Tilly's work are usually described anecdotally as "2 by 2 tables." However in our survey of formalisms across all of his books, we found that nearly all of these figures were in fact composed of two-dimensional graphs, implying differences in magnitude of a particular variable or factor, rather than categorically different "types." Even distinct types were presented on a continuum that often implied dimensional gradation (e.g., Figure 2.1 in *European Revolutions*, in which the dimensions are direct vs. indirect relations and territory- vs. interest-based groups, with types of coalitional formations mapped out variously across the space.) As a result we are referring to kinds types of formalisms as two-dimensional graphs rather than 2X2 tables.

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 is 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.

By arranging concepts and data along two possible dimensions, he seeks to get an analytical handle on some of the recurring problems of actor-constitution and mobilization by showing the positioning of collective action in different kinds of contexts and relationships. His discussion of the value of 2D mapping is very interesting in this respect, coming out of a sympathetic critique of Bill Gamson's attempt to catalogue all challenger groups in American politics. He suggests a more theoretically grounded alternative:

> 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. (1978: 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 more self-conscious move toward dynamics and relations came an increase figures in which various kinds of entities travel across two-dimensional analytic space. In *Coercion, Capital and European States,* this includes pathways of state development across the dimensions of capital accumulation and concentration of coercive power. In the Great Britain study (1995, 2005c) it includes meetings and the objects of their claims. In *Work Under Capitalism* it includes industries and types of labor contracts arranged by the extent of short-term monetization of labor and the extent of supervision; in the late work on democracy and collective violence (sprinkled across several books, including 2001, 2002, 2003? 2004, 2007) it includes types of states and regimes. Once again, these are largely not based in exact numbers, but in his own graphic representation derived from his and others' cumulative research.

In his late-career books, we also see him linking trajectories through 2D space to his emerging focus on mechanisms. For example, his 2007 book *Democracy* contains ten two-dimensional figures mapping state capacity by democracy, as well as four more mapping political by civil liberties. Seven of the former show the zig-zagging democratization and de-democratization trajectories of particular national regimes (France, Switerland, South Africa, Russia, Spain, Ireland, and Venezuela). He argues that these trajectories are generated by particular set of mechanisms, which include "some combination of 1) material equalization across categories and 2) buffering of public politics from categorical inequality" (*Democracy* p. 118-119). In these cases, mechanisms of various kinds 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 a

series of payoff schemas for strategic collective action. This use of economistic, rational choice models (justified theoretically with reference to Mills) is what gives this work the reputation of being the most rationalistic of his books. 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 (1978:. 99). He presents (and somewhat discounts), the logic of prisoners' dilemma type calculations, arguing that while the Millian focus on "rational pursuit of interest is a welcome antidote to notions of crowd action as impulsive and irrational," it still falls short for understanding collective action. Interestingly, the major shortcoming he sees in rational choice approaches has to do, once again, with the problem of actor-constitution, particularly in regards to the formulation of interests: "Yet so far the followers of Mill have not given us much insight into the ways those interests arise and change. They have not set much about the way people define, articulate, and organize those interests" (1978: 37)

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. He demonstrates how the schedule of returns on action is limited by the availability of opportunities, on the one hand, and resources for mobilization, on the other; and how the range of acceptable action changes for zealots, misers, run-of-the-mill actors and opportunists. The result is a quite elegant abstract formulation that acknowledges different kinds interest-orientations among actors, thus providing more insight than most rationalistic accounts into the diversity of action orientations. He also (more famously) shows how the calculation of interests shift according to both the political context and the local mobilizing structures.

These rationalist assumptions would soften in later work, but during the late 1970s, they furnished Tilly with an alternative to 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. While the use of formal pay-off schedules disappears from his analytical arsenal, the focus on cost-benefit analysis receives a relational, mechanism-focused reformulation via the discussion of "transaction costs" in his work on economics and inequality that we discuss below.

Network formalisms: from catnets to semantic grammars and boundary mechanisms

The other major formalism introduced in *From Mobilization to Revolution* is that of the *catnet*, discussed above, which constitutes his first explicit adoption of network-analytic terminology. The notion of catnet plays a relatively minor place in this work (although critical to the notion of actor-constitution), but it continues to hover underneath the data collection effort of the Great Britain study and comes back in full force in his later work on identities, boundaries, and inequality. In fact, it is interesting that from the very beginning, his use of network concepts is intimately linked to the problem of culture, meaning, and identity.

By the mid-1980s, as Tilly develops the concept of *repertoires* through *The Contentious French*, it becomes clear that repertoires are routines of collective action that link "some

concrete group of people to some other individual, group, or groups. Each originates and changes as a function of continuing interaction—struggle, collaboration, competition, or some combination of them, among groups" (1986: 4). Though still roughly sketched, the link between social ties and cultural content remains. By the mid-1990s, as he finished the Great Britain project and elaborated a series of essays on identities and stories in politics (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 interaction" (1995: 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" and argues for a shift from the consciousness of actors to relations among actors and the shared understandings they entail" (1995: 22).

As the Great Britain project developed, Tilly adopted a new formalism by which he constructed relations out of accounts of contentious events, and showed how these changing relations provided evidence of larger scale historical process of popular contention, concentration of state power and parliamentarization. He adopted Roberto Franzosi's "semantic grammar" approach of connecting subject-verb-object triads into network analytic statistics and diagrams CITES). Drawing on the capabilities he built into his data collection, and which 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, national authorities, and, indeed, of the social movement itself (Tilly 1997; Tilly and Wood 2003; Wada).

Once armed with the idea that networks were composed of culturally laden interaction—much as Harrison White's "types of tie" are composed of shared "story sets" (1992)—Tilly's use of network formalisms took off, sometimes lurking in the background, and sometimes an explicit part of the explanation. In *Durable Inequality*, basic network structures such as chains, hierarchies, triads, organizations, and categorical pairs (1997: 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*, relational structures governing the direction of benefits from work 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 *catnet* idea; rather he sought to track the causal sequences underlying the transactional processes which boundaries are encountered, imposed, activated, deactivated, attacked and

defended (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 glimmerings 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: 1, cited in Tilly 1981: 7). 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 1981: 107). Rather, it was that the data did not fit the theory.[4]   Having satisfied himself through epidemiological studies that social strain models poorly modeled or predicted the formation of collective protest, he began to turn toward more "clinical" analyses of states, and later, 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, his concern with actor constitution and relationships – to the shifting demands of war-making and the rapid urbanization and proletarianization of the 19th century. Amid a lively debate about contention, revolutions, and the development of contemporary

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[4] Hunt (1984) argues that Tilly's emerging perspective should have sent him to the Durkheim of *Elementary Forms* rather than to the *Division of Labor in Society*, as that could ground the more cultural vision he was developing. See also Emirbayer (1996).

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 1973), and historicized it. Applied to the European case over ten 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: 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" (1990: 14). This perspective could account for variation while putting preparation for war at the center of questions of territorial control, the organizational form of the state, resource extraction and popular resistance to state power. In other words, he had to begin to specify *relations* among various actors and how they changed over time.

As he would write in a collection of essays (Tilly and Blockmans, eds. 1994), state formation as an analytic category had to give way to state *transformation*. This apparently innocuous turn of phrase marked several changes in Tilly's thought as he moved from Michigan to the New School, and 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 having to do with the cultural construction of interests, on one hand, and concerning 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 1997a: 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. In collective action, as in the making of social distinctions, some combination between scripted and improvisational action tends to govern how interactions unfold among and within social sites (which recursively affects transaction costs). 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 work on the *making* of the English working class (2008: PAGE)—that began to deny the salience of class for collective action, and 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 attempt to understand subjectivity as power-laden social constructions.

Tilly began (1981b) 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. 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). In order 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 Foucaultian, Gramscian, Arendtian, and Habermasian colleagues that his models did not take culture into account.

Moving toward mechanisms

It was at this point that 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 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 focused on explaining the creation of revolutionary situations and outcomes. Instead of emphasizing the large-scale shifts that made up his earlier epidemiological approach (focused on "big structures and large processes"), Tilly instead sought transformation in dynamics that were closer to the ground. Using the language 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: 18). Or, as he would say in a later interview (CITE), "Concatenation is contingent, but [mechanisms] are lawful at this level."

Rather than focusing on "events" and "eventful histories" that select widely known periods of sudden change as significant (Sewell 1996a, b), 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 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 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 categorye, a network, or a group to outsiders, while the latter refers to relationships in which the benefits of the relation systematically flow from one party to another. These are bolstered by transaction-cost-minimizing mechanisms of "emulation" and "adaptation." 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" (1998: 7-8). Further, categorical distinctions are either "internal" or "external" to a given institutional or organizational setting. When distinctions—say, black and white—are imported into workplaces which have their own distinctions—say, skilled and unskilled workers—they often reinforce both. Moreover, Tilly acknowledges that over time, the distinctions between internal and external tend to break down as the institutions themselves change. But more than this, these mechanisms are reinforced—even produced—mainly by the stories people tell in order 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 marked the watershed of this new synthesis, since it spoke directly to the issues that had most preoccupied Tilly and his coauthors for the previous decades. In *DOC*, McAdam, Tarrow and Tilly took the abstract formalism of *Durable Inequality* and applied it to social movement theory as it had developed over the course of the prior twenty-five 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 forty mechanisms at different levels of generality and abstraction in order to explain how a wide range of processes in contentious politics work. Far more than in *Durable Inequality,* mechanisms were portrayed as the fundamental building blocks of larger scale *processes* that unfolded, according to different concatenations of mechanisms, differently across *episodes* of contention. A representative list of mechanisms in contention is shown in Box 1. In *DOC,* McAdam, Tarrow and Tilly distinguished among relational, cognitive, and environmental mechanisms, but focused mainly on relational ones. In an echo of *From Mobilization to Revolution* (and the 1966 Codebook), *DOC* focused much of its attention on the "formation" of contentious processes, 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, 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, and among the co-authors, Tilly was probably the most partisan in its defense, and particularly of its focus on mechanisms and their concatenation as providing explanations for social processes (CITES). 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 micro-interactions 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.

BOX 1. Representative Mechanisms in Contentious Politics, from Castañeda and Tilly (2007)

Attribution of similarity: *identification of another political actor as falling within the same category as your own*.

Boundary activation/deactivation: *increase (decrease) in the salience of the us-them distinction separating two political actors*.

Boundary formation: *creation of an us-them distinction between two political actors*.

Boundary shift: *change in the persons or identities on one side or the other of an existing boundary*.

Brokerage: *production of a new connection between previously unconnected or weakly connected sites*.

Certification: *an external authority's signal of its readiness to recognize and support the existence and claims of a political actor*. (*Decertification*: *an external authority's signal that it is withdrawing recognition and support from a political actor*.)

Co-optation: *incorporation of a previously excluded political actor into some center of power*.

Defection: *exit of a political actor from a previously effective coalition and/or coordinated action*.

Diffusion: *spread of a contentious performance, issue, or interpretive frame from one site to another*.

Emulation: *deliberate repetition within a given setting of a performance observed in another setting*.

Repression: *action by authorities that increases the cost—actual or potential— of an actor's claim making*.

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. This was, "the doctrine that transactions, interactions, social ties, and conversations constitute the central stuff of social life." Tilly 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 continuously (2008: 7).

Mechanisms allow for the direct identification of transactions, interactions, social ties and conversations at a number of different scales without constant recourse either to "large structures" or inferences of actors' states of mind. It also involves a fairly simple epistemology: it 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 poses the challenge that we can both observe and understand social regularities within and across social sites, but that this understanding will never be perfect and unmediated by our own processes of social construction, which are, at the same time, observable and amenable to parallel sorts of analysis. 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 action. 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). 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. This perspective brought relational realism close to a kind of non-teleological dialectics, akin to American pragmatism or to the dialogic theories of the Russian literary theorist, Mikhail Bakhtin.

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* (2004); *Trust and Rule* (2005a), and *Democracy* (2006). 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 the ways in which 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 they construct social relations through a combination of "capital"—valued resources—and "commitment." Rather than a general feeling of trust being necessary for democratization, Tilly argues, trust networks must 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.

These sorts of insights cut against commonsense understandings of the role of trust in democratization. But this was part of the appeal of the transactional approach of relational realism, and its underlying pragmatist understanding of communication. Such explanations "have the disadvantage of contradicting common-sense accounts of social behavior, and thus articulating poorly with conventional moral reasoning," but "have the advantage of placing communication, including the use of language, at the heart of social life" (2004: 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?* (2006a) 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" (2006a: 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 also have conventional aspects; there are only a relatively small number of familiar plots and certain stories play better in certain groups than others. Ever suspicious of purely narrative history, Tilly preferred "superior" stories to "standard stories" 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, however, split the difference between technical accounts and standard stories: "within 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 available to nonspecialists" (2006a:171-172).

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*. Within each mechanism, we find a simplification of relations that nevertheless aims to "get actors, actions, causes, and effects right," with "right" meaning single, non-contradictory, predictable results from the operation of the mechanism taken by itself; the more complex elements come in the specialist accounts of processes built up from mechanisms.

If we then return to the question of the paradox of the actor in contentious politics, we can better understand McAdam, Tarrow, and Tilly's mechanism-based account of "actor constitution" in *DOC*. In ways that recall Tilly's self-conscious switch from state formation to state *trans*formation in the early 1990s, the key to understanding actor constitution lies in understanding the process historically. Accordingly, in *DOC*, McAdam, Tarrow and Tilly 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 shifts between different kinds or levels of identities -- generate new political actors out of "contingent assemblages of networks" (McAdam et al 2001: 317-8). These new formations then act and make claims "as if" they are indeed, "determined, unified, and self-motivated."

Understanding the paradox of the actor, therefore, requires (1) a technical account driven by (2) a historicist and dialectical understanding of actors and their contexts; built on (3) mechanisms derived from superior stories of actor-constitution across cases and (4) understanding that these mechanisms will likely occur in ways that are broadly consistent with existing repertoires of interaction and will be (5) reinforced by sets of simplifying stories that characterize the categorical-network ties that define the new actor.

Relational realism and actor constitution: gains, ambiguities and challenges

As we pull this essay to a close, it is worth taking a critical look at Tilly's late formulation of relational realism and taking stock of where it helps moves research forward, and where some of the difficulties and ambiguities still lie. After looking back over Tilly's early scholarly conundrums, we can easily see the analytic leverage (and even breakthrough) he saw in 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 actor's 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 don't always change together? And increasingly: what's the association between actors' own difficulties in representing their identities, actions and understandings, and the challenges of historical analysts in explaining longer term processes of social change? Or more concisely, how do we come to grips with the question of *Why?*

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 continously in (not always synchronized) motion, they interact – both at the level of 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 will 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 Pamela Oliver (2003) and Chares Demetriou (2009; see also Dubrueil, n.d.) note, each of these mechanisms is "multiply realizable" and the energies of researchers are well-spent understanding the varieties of the ways that 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 details and the peculiarities of the case. However, for many commentators, this is not enough. Mechanisms, as comparable, abstracted, superior stories, do not solve the paradox for Oliver, and act only as a plausible heuristic for Demetriou. Each longs for mechanisms to be built upon—and support—a more clearly specified "technical account."

That mechanisms were "multiply realizable" would have posed no great challenge to Tilly's approach, and therefore would have left his account of actor constitution relatively unscathed. The process appears as a kind of analytic scree plot in which abstraction ends with a judgment about how much more explanatory power would be gained by disaggregating networks and interactions further. In this sense, Demetriou's (2009) claim that mechanisms are best understood as heuristics rather than as ontologically "real" makes a good deal of sense.

As Dubrueil (n.d.) argues, however, 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 do 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. Dubrueil argues that *DOC* fails these tests, while 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' late work on democracy is also the work in which he also 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 explanation, we need to combine schematic accounts of social processes with location in variable-determined, multi-dimensional space. That is, clinical and epidemiological and 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 forty-two 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. Neil 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, Mustafa 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.

While 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. Take, again, for example, the list of mechanisms in contentious politics (Box 1): *Attribution of similarity* appears as something someone does for a specific (or unspecific) audience with greater or lesser success. But other mechanisms seem less dependent on conscious action by a given actor. Similarly, *emulation* is "deliberate," while *boundary activation* may or may not be. Each depends in some degree on interpretation by the actors who are enacting and tripping mechanisms. Some mechanisms seem to be more significantly cognitive (e.g., *boundary activation*), while others seem more organizational (e.g., *brokerage*), and others are unclear in their scope (Barker 2003; Falleti and 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 was always a bit hesitant to come down clearly on the question of levels of analysis. Some mechanisms reappear as processes (depending on what is being explained) and the lines between cognition, 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 "conjunctures" (1993) and "cultural milieus" (2001, cited in Steinmetz). Accordingly, figuring out what is "mechanism" and what is "context" is a problem of "lumping" and "splitting" (Barker 2002; Dubrueil n.d.) and of abstraction. Dubrueil suggests that a useful guide to distinguishing context from mechanism

is Craver's critierion of "mutual manipulability" (2007), whereby, if a change in the context implies a change in the mechanism, and *vice-versa*, the changeable part of the context should be reformulated and re-specified as mechanism.

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), 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). Interestingly, too, as they concatenate into larger political processes, mechanisms often imply their "reverse": thus, *certification* of one actor or one activity by another, more powerful one, will often imply both *decertification* of others and will involve *boundary-shifting* and some level of *cooptation* so that the actor, thus certified, becomes a *different sort of actor*.

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 (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" (1998, cited in Tilly 2006: 72). Likewise, the political scientist, Deborah Stone calls ambiguity the "glue of politics" (1997) 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 lead 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.

How one views mechanisms – and the actors and the action they describe – depends both on the mechanisms themselves (some seem much more intentional and deliberate than others), and on whether one sees them as problem-solving practices, as strategic interventions in a field, or as agentic moments in a structuralist universe. Perhaps Tilly would agree with Bourdieu, who argued that the question 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.

Nevertheless, 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, individualist accounts on the other. Without engaging the issue head-on, as such, Tilly comes close to articulating a theory of social cognition, although one 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 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 (2005b: 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) in order 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 travelled 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 essay, 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 while 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, each new explanation for political contention and state transformation throughout his career. 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. Nevertheless, we have done so

in order to tell what we hope is a "superior story" about the complex interweavings of research, method, and theory in the reformulation—and in some ways, confirmation of—a sociological perspective that, while incomplete, 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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