

THE MISSING LINK BETWEEN STRUCTURE AND AGENCY: OUTLINE OF AN EVOLUTIONARY APPROACH TO SOCIAL MOVEMENTS*

Ruud Koopmans[†]

Theories of political opportunity structure (POS) have received ambiguous empirical support. Quite a few studies make a convincing case for POS, some find it to have no measurable effect, others show that it can have different effects in different contexts. The lack of a theory of the mechanisms that link POS to movement action is identified as the fundamental problem behind these divergent results. I suggest a dynamic and relational solution to the structure-agency problem that employs an evolutionary mode of causal explanation. I show how such an approach helps us to understand why in spite of limited information and frequent errors of judgment, actors' choices may ultimately reflect structural opportunities. I also discuss how an evolutionary approach can help explain deviations from the predictions of POS theory, e.g., why adaptation to changes in POS is slow, why opportunities are sometimes missed, and why those that are perceived cannot always be seized. I conclude with a discussion of some methodological implications.

A few years before *Mobilization's* first issue appeared, I began my own journey through the wonderful world of social movement studies. Most of the papers that I wrote in those early days remained—quite fortunately—unnoticed, and the rest of them have justifiably been forgotten, even by me. However, there is one exception of an early paper that at least I still remember. The material conditions for its reception were decidedly suboptimal: the unfortunate few who attended its presentation in the soaring Madrid summer heat on the top floor of an unairconditioned building will know what I mean. From what I recall, the paper did not offer particularly convincing answers to the question it addressed. However, the paper did have a memorable title that addressed an unresolved problem, which is at the heart of debates on social movements and collective action, then and now: “Bridging the Gap: The Missing Link between Political Opportunity Structure and Movement Action” (Koopmans 1990). It is to this question that I want to return in this article, in the hope that this renewed attempt will stand better chances of intellectual survival than its extinct ancestor.

There has been much controversy recently over the usefulness of the concept of political opportunity structure. By drawing attention to the importance of external contexts and interactions with authorities, the political opportunity perspective undoubtedly improved our understanding of social movement action when compared to the overly internal focus of both “classical” and resource mobilization perspectives. Nonetheless, political opportunity structure (henceforth POS) has increasingly gotten into trouble because of its problematic empirical record. Although there are quite a few studies that make a convincing case for the relevance of POS, others find it to have no measurable effect. Moreover, among the studies that do show POS effects, the same variables (e.g., repression or left-wing incumbency) sometimes have the opposite sign in different studies (for an overview of some of these divergent

* This article was written during my stay as a fellow at the Center for Advanced Study in the Behavioral Sciences in Stanford. I thank the Center for its generous support.

[†] Ruud Koopmans is Professor of Sociology at the Free University of Amsterdam. Please address correspondence to him at r.koopmans@fsw.vu.nl.

results, see Meyer 2004). So POS seems to explain either nothing, or it explains something and its opposite at the same time. That seems to confirm the critics' verdict: irrelevant, tautological, or both (Goodwin and Jasper 1999).

Undoubtedly, the problem can be partly repaired by using the concept in a more precise and differentiated way. POS must not in the same way and to the same extent be relevant for different dependent variables (e.g., institutional versus extrainstitutional mobilization, cross-sectional differences versus diachronic changes, levels of protest, organizational strength, or substantive success; see Meyer and Minkoff 2004). Much would also be gained if more specific POS measures would be employed that are geared to explain specific movements operating in specific policy arenas (Koopmans et al. forthcoming). We still too often see papers in which the measures of POS for a movement X reach no further than general variables such as, in the United States, Democratic presidential incumbency or the number of Democrats in congress. Finally, the predominant institutionalist POS tradition disregards the important role of public discourse in shaping opportunities for movement mobilization and therefore needs to be expanded to include discursive opportunities (Koopmans and Statham 1999a; Ferree et al. 2002; Koopmans and Olzak 2004).

Some of the inconclusiveness of empirical results regarding the effects of POS will disappear once we specify and use the concept more appropriately along the lines of these suggestions—but only some of it. A much more fundamental problem remains, namely *how* it is that political opportunity structures (sometimes) affect movement action, and *how* it is that (occasionally) the opposite—movements bringing about structural change—may happen. In other words, we miss accounts of the *mechanisms* that link structure and action. Like many other structuralist accounts of social phenomena, the POS perspective has remained largely silent on this issue. Structures are somehow assumed to shape actors' interests and identities, and to determine their tactical repertoires, but how structures achieve these formidable feats and what role remains for agency and choice remains obscure.

Rational-choice accounts of collective actions do provide such a mechanism, namely individuals' rational calculation of the costs and benefits of the different alternatives available to them. Structures affect action, in this view, because they influence the expected utility of different options. Besides the well-known limitation that rational-choice explanations must take much of what is worthy of explanation as a given—interests, preferences, and identities—the rational-choice alternative also runs into problems because for it to work as an explanation it must impute—in spite of its self-proclaimed “realism”—supernatural faculties on actors, namely the ability to make reliable predictions of the outcomes of imaginary future interactions under conditions of limited information and fundamental uncertainty about how other actors will respond. There is overwhelming evidence that most of the time actors' choices produce outcomes they cannot possibly have foreseen: most protest events remain invisible because they fail to capture media attention, most demonstrations attract few participants, most social movement organizations are short-lived, and most movements fail to attain their objectives. There is nothing special about movements in this respect: most attempts to set up a business fail, most candidates for political office are not elected, and most scientific papers are never cited (including many of my own). Rational-choice theorists have only two options here: either they must assume that only the successful protesters, businesses, politicians, and scientists made rational choices, or they must assume that all of them made rational choices, given their limited horizons. The first explanation is tautological because rational choice is identified by its outcome; the second is trivial because any possible outcome is deemed to be the result of rational choice.

Driven by similar dissatisfaction with both structuralist and rational-choice accounts, McAdam, Tarrow, and Tilly (2001) have recently made a forceful plea to look for dynamic, relational mechanisms as solutions to the structure-agency problem. Even though I believe that they have not succeeded in developing a workable solution (see Koopmans 2003), I strongly endorse the direction of their search. In this article, I will present the beginnings of a

dynamic and relational solution to the structure-agency problem by employing the mode of causal explanation that is used in evolutionary biology. My argument will proceed as follows. First, I introduce the basic properties of the evolutionary mode of explanation in biology and identify basic similarities and differences with the properties of sociocultural evolution. I then show how a baseline evolutionary model helps us to understand how opportunity structures can shape people's actions, and why in spite of limited information and frequent errors of judgment, the aggregate of actors' choices may ultimately reflect structural opportunities. Subsequently, I discuss ways in which an evolutionary approach might help to account for the deviations from the predictions of POS theory that we encounter in the literature. In the concluding section, I discuss methodological implications of the evolutionary perspective.

BASIC BUILDING BLOCKS OF EVOLUTIONARY CHANGE

Dropping the term "evolution" sets many social scientists' alarm bells ringing. Before anything it is therefore necessary to point out what I do *not* mean by it. I use evolution not as a synonym for development, nor to refer to progress (whatever that may be) or to genetic foundations of human behavior. I also do not use it as a metaphor. Much past work on social change that draws on evolutionary thinking consists of loose analogies between natural and cultural change. Such redescriptions of known facts in different terms add little in terms of explanatory power or empirical testability. Instead, by using the term "evolutionary" I refer to a particular set of conditions and mechanisms for explaining change that were identified by Charles Darwin. Importantly, these mechanisms are—once the conditions are met—substrate-independent, i.e., they apply to any process of change, regardless of whether it is based in genes, cultural repertoires, or something else. In other words, my claim is not that evolutionary mechanisms have "parallels" in, are "similar" to causal factors in sociocultural change, and that it may somehow be helpful to redescribe social change "as if" it were like natural evolution. My claim is that social change *is* like natural change, and that the very same mechanisms operate in both processes—even though there are also some distinguishing features that make sociocultural change much more rapid, flexible, and complicated.

Perhaps the most central idea at the basis of Darwin's theory—inspired by Thomas Malthus's work on population growth—was the insight of a severe discrepancy between the amount of individuals of any species that can be sustained by a particular ecosystem, and the exponential reproduction rate of each species in the absence of environmental constraints (Darwin 1968 [1859]: 117-118). The logical conclusion is that only a small part of the offspring of any species will be able to survive, and this in turn implies heavy competition, both between individuals of any given species, and between different species with overlapping ecological niches. Darwin's second insight was that there was variation within each species—as well as, of course, between species—and that this meant that some individuals or species would have better chances of surviving and producing offspring under particular environmental conditions than others. As a result, the average characteristics of any population will gradually change as a function of environmental selective pressures, and given enough time such change may culminate in the formation of new species. This, in a nutshell, is the process of natural selection. Contrary to what is sometimes thought, the most important source of selection was in Darwin's eyes not so much the physical environment (e.g. climate or topography), but the biological environment in the form of food and prey, predators, parasites, and competitors (Darwin 1968 [1859]: 123ff.). In that sense, it is better to speak of *coevolution*, since evolutionary change consists of many different agents simultaneously evolving and in close interaction. In this view, changes in one species depend on, and affect many others. This is also the reason why evolutionary processes are contingent, why their outcomes cannot generally be anticipated by the actors involved, and why there is a great discrepancy

between evolutionary theory's explanatory power regarding past events and its very limited ability to predict the future. The great appeal of evolutionary theory lies in its potential to explain very complex outcomes through the interplay of just a few key mechanisms: variation, selection, and reproduction.

Whether Darwin's logic of evolutionary process is applicable to social change depends on the fulfillment of four conditions:

1. *Superabundance*

For evolution to be possible, the supply of a potential object of selection must be larger—preferably, but not necessarily, much larger—than the amount that can be sustained given the available resources that are necessary for survival (often referred to as the “carrying capacity” for a given object of selection). In the absence of such superabundance, selection could not take place and there would be a place under the sun for each and everyone. At least since man and woman were expelled from the Garden of Eden, this condition holds for human culture as much as for nonhuman nature. Social movements provide ample illustration of this. Even though there is an almost irresistible tendency to focus academic attention on those movements that “made it”, most mobilization attempts fail in their early stages, simply because the carrying capacity of every arena that movements have to deal with is severely limited. You could easily fill the columns of all the nation's newspapers and fill the airtime of each and every radio or television station with nothing else than reports on the activities, demands, and proposals produced on a daily basis by social movement activists. Legislators could easily spend all their debating time on petitions and letters written to them by concerned citizens. Governments could easily spend all their resources meeting social movement demands. And still it would not be enough to accommodate all of them, if only for the fact that the demands of many contenders can only be met by denying others attention, legitimacy, and resources. In short, in contentious politics, we can safely assume superabundance—without it, politics would not be contentious at all.

A clarification is useful here about the nature of the competition for scarce resources that follows from the state of superabundance. Evolutionary theory is often associated with the notion of “survival of the fittest,” which has done much harm to its reputation in the social sciences, but which actually does not come from Darwin, but from his contemporary, the social theoretician Herbert Spencer. Against the imagery of direct competition that this notion evokes, it is important to emphasize—as Darwin did—that competition is often very indirect. In a cultural context, one may add that competition in the evolutionary sense of the word need neither be perceived nor intended. Take the example of social movement activists “competing” for limited media attention. There is no need at all to assume that the organizers of a widely reported protest event tried to mobilize media attention in order to deny it to other activists. In fact, they may sympathize with many other movements and wish them all the good luck in the world to be as successful as they are in gaining media attention. Of course, there are indeed cases where media attention for one protest actually helps other protests to get coverage (e.g., in the rising phase of protest cycles), but it can simply not be like that all of the time, or even most of the time. If protests usually had positive effects on the chances of other protests, the media would very soon be filled with nothing but protest. Thus, social movement organizations compete in an evolutionary sense with others within and outside their own movement even if there is no explicit and intentional competition between any of the actors involved.

Also, there is no implication that social actors who *do* directly and intentionally compete with other actors (e.g., a movement organization that intentionally tries to “steal” another organization's media attention) would do any better in an evolutionary sense than actors who maintain friendly and cooperative relations with other organizations. In many situations, evolution may well put a premium on cooperative strategies. Cooperative organizations—in spite

of their noncompetitive subjective attitude—will out-compete noncooperative organizations if the former are ultimately more successful than the latter in securing attention, support, legitimacy, and other scarce resources from the social environment. Evolutionary game theory has recently made important advances in showing that cooperative, trustful, and even forgiving strategies (at least if they are not completely naïve), which seemed doomed to failure from the perspective of traditional, static game theory, can be very successful once one looks at strategic interaction from a dynamic perspective in which strategic repertoires are allowed to evolve over time as a function of their past performance (Axelrod 1984; Macy and Skvoretz 1998; Bendor and Swistak 2001).¹ In short, the competition that is implied by evolutionary theory is a statement about an undeniable fact of life, not a prejudgment of the factual or normative superiority of a particular type of social strategy.

2. Undirected Variation

Superabundance of one and the same thing provides no basis for an evolutionary process. If those that are lucky to survive are identical to those that perish, stasis prevails. However, variation abounds in social life. No two social movement organizations, even from the same movement, will share the exact same collective identity, no two will have entirely the same demands, no two will frame them in just the same way appealing to precisely the same constituency, and no two will choose perfectly identical organizational forms and tactics. Next to variation among actors, there is also sufficient variation within the repertoires of single actors that can provide raw material for selection. All movement organizations have multilayered identities and multiple goals, and they rarely put all their money on one single tactic.

Besides a sufficient *amount* of variation, an additional requirement is that such variation must be *undirected* (see Gould 2002: 144-146). This does not mean, as is sometimes falsely assumed, that variation must be haphazard in the sense of being truly random. If this were the case, the evolutionary argument would be untenable for cultural change. Clearly, social movement actors do not randomly vary their identities, demands, frames, and tactics, but display a substantial degree of consistency, both over time, and among the elements of their repertoire. But so it is with biological organisms. There is as little variation among horses in wing length, as there is among white supremacist movement organizations in arguments for racial equality. All that is required for the evolutionary logic to prevail is unbiased variation around the modal type of an existing, genetic or cultural repertoire. Such variation can only be called random in the very limited sense of equal probability of deviations in any direction away from the presently modal repertoire. This point is important because at first sight human cultural variation seems—in line with rational-choice assumptions—unmistakably directed and this is often used as an argument against the application of evolutionary thinking to cultural change.² Science, for instance, clearly does not proceed by way of the generation of random hypotheses (“let’s test today whether apples fall upward”) but by way of a highly focused problem-solving effort. The focused appearance of this effort is, however, created by the fact that hypotheses tend to be variations around accumulated existing knowledge (Isaac Newton’s famous “shoulders of giants”). The variation of new hypotheses around this accumulated knowledge can essentially be assumed to be undirected, unless scientists can know in advance in which direction to look *beyond* the boundaries of existing knowledge (Kuhn 1962).³

3. Differential Environmental Selection

Superabundance and variation are insufficient for an evolutionary process to unfold because random selection of variations would over time only lead to fluctuations around given population averages, but not to any form of directional change. The third requirement is

therefore that selection of variations operates in such a way that some variations' chances of survival and producing offspring are systematically enhanced over those of other variations. In the biological context, the mechanism that ensures this is natural selection through the different ability of variations to secure food sources and mates, and their differential vulnerability to predators, parasites and the physical conditions of life.⁴ Much of the past work on human cultural change from an evolutionary perspective has focused on selection of cultural varieties by the physical environment. Such explanations include sweeping claims about the availability of domesticable plants and animals as an explanation for the ultimate domination of Eurasian cultures over other global regions (Diamond 1997); overexploitation of ecological resources as an explanation for the demise of cultures (Harris 1977); or the addition of the potato to the European menu as a factor changing the course of world history (McNeill 1999). Interesting and provocative as such approaches may be, they remain highly speculative. Moreover, the physical environment seems negligible or not relevant at all as a selective factor for most contemporary sociocultural phenomena, including social movements.

Social scientists' attention should therefore primarily go to how other actors in the socio-cultural environment affect the survival and reproduction chances of cultural variations and the actors that carry them. Most of the selection that is relevant for explaining social change is based on social interactions and consists of the reactions of relevant actors in the environment to a given actor's actions. Such reactions may be those that are often designated as "rewards" or "benefits" (concessions, attention, legitimacy, recognition, etc.), or those that we tend to call "sanctions" or "costs" (repression, countermobilization, condemnation, critique, etc.). I hesitate to use these terms here because they reflect the rational-choice overestimation of the accuracy of actors' expected utility calculations in relation to social interactions. For instance, repression may be intended as a sanction, but whether it indeed has the effect of limiting the survival and reproduction chances of the movement actors against whom it is applied is far from certain. This is because in a coevolutionary system, dyadic interactions often have reverberations that affect many other actors, e.g., when repression draws new parties into a conflict or raises levels of media attention. These uncertainties about aggregate outcomes notwithstanding, we will usually find the criterion of nonrandom differential selection satisfied. Even though they may often miscalculate about its impacts, governments do not apply repression randomly, but direct it systematically more often to groups that use some tactics, aims, or collective identities rather than others. Similarly, newspaper editors have systematic criteria for choosing which stories, and which aspects of those stories they report and which they ignore. The latter example makes clear that no reaction is also a form of selection. Especially for weaker actors such as social movements that depend strongly on their environment to extract the resources that they need for growth and reproduction, nothing can be as lethal as no reaction from the environment at all (e.g., editors' decisions not to report most protest events that occur; see Koopmans 2004a).

4. Moderately Faithful Reproduction of Selected Variations

Even the combination of superabundance, variation, and selection does not guarantee evolutionary dynamics. Selection will only have evolutionary consequences if it can be translated into actually increased or decreased reproduction of variations. It is in the mechanisms of reproduction of selected variations that we find the largest differences between natural and sociocultural evolution. The most important difference is that in natural reproduction only innate characteristics (genes) can be transmitted to a next generation. By contrast, cultural evolution (in humans and to a lesser extent in some higher animals) allows the transmission of acquired, learned repertoires to a next generation by way of socialization and instruction. Moreover, in addition to such "vertical" transmission, cultural repertoires lend themselves to "horizontal" transmission from one individual or collective actor to another (see Boyd and Richerson 1985; Cavalli-Sforza and Feldman 1981). Finally, human cultural

systems such as organizations or religions can, in contrast to organisms, in principal last forever. Therefore, cultural reproduction can also occur by way of the continuous reproduction of one and (almost) the same entity.

Whereas I have argued that variation and selection can be regarded as essentially blind processes, in which foresight is necessary nor likely, cultural reproduction is at least partly based on a form of rational choice, albeit of a limited and special variant. This follows from the facts that (a) actors have preferences (which may themselves evolve by way of an evolutionary process); (b) actions generate outcomes (with no outcome at all as an important variant); and (c) all cultural transmission requires a decision from the transmitting party, the receiving party, or both. The choice assumption that we need to make is just that actors decide to reproduce, to discontinue, to propagate, or to imitate cultural variations on the basis of the demonstrated merits of different variations in the light of the respective actors' present preferences. However, contrary to conventional rational-choice theory, such decision making, which is sometimes referred to as "backward-looking rationality" (Macy 1993), is based on *realized* outcomes, not on *expected* utility.

Moreover, these decisions are taken on the basis of a limited set of information. While we may assume that each actor has complete information about her own actions and their outcomes (although usually not about the causal relations between actions and outcomes), she will only be able to see a small proportion of all the relevant actions and outcomes of other actors (and the information on these will be patchy and partial). Most potentially relevant options to imitate remain invisible because they have never elicited significant reactions from other actors (e.g., the media or authorities) that could make them available as templates for adoption. In other words, actors make decisions about which variant to adopt and which to reject on the basis of very limited, but highly *prestructured* information. In this sense, what we are dealing with here is very different from the rational-choice concept of "bounded rationality" (Simon 1982), which states that actors will never consider all possible options and have perfect knowledge of the relative utilities of different alternatives because of limited cognitive capacities, and because the search for information is itself costly and therefore subject to rational choice. By contrast, the evolutionary perspective refers to information that is limited not because of the agent's cognitive limitations or the choice to restrict search costs, but because of other actors' prior decisions that affect if and how different alternatives become visible. Paraphrasing the famous one-liner about the role of agency in history one might say that people make their own history but on the basis of an information input not of their own making. Nonetheless, decisions made on the basis of the limited information that passes the selection process can be highly efficient, and much more so than the same amount of information randomly chosen on the basis of a limited search budget. After all, much of what is left out of the picture that actors get to see consists of examples that are not worthy of adoption anyway, precisely because they have not been able to provoke much attention. Conversely, the actions that do become visible are those that have elicited significant responses from other actors. The value of this information is large regardless of whether these responses were negative or positive, for it is as important to know what to avoid as it is to know what to choose.

Reproduction must be sufficiently faithful, but not too much. Cumulative evolution becomes impossible if actors copy tactics because of their proven usefulness in the past or in the repertoire of other actors, but do so in such an imperfect way that they become entirely different tactics. Evolution will also soon come to a halt in the opposite case, if actors would reproduce their own and others' successful repertoires in 100% perfect ways. This would eventually destroy the condition of variation and evolution would end in stasis. We do not have to worry, however, that the latter situation will ever occur, because the first 100% faithful copying process has yet to be discovered, and cultural evolution certainly approaches that extreme much less than genetic evolution. The condition of sufficient copying faith-

fulness may sometimes be more problematic given the ease with which error can slide into the communication and implementation of learned cultural repertoires. The optimal mix between the flexibility and creativity of variation, on the one hand, and the conservation of acquired knowledge by way of faithful reproduction, on the other, is probably context-dependent, and lies for social movements probably closer to the flexibility pole than for actors operating in more stable social contexts.⁵

I posit that the four preconditions discussed in this section are fulfilled in most social situations that social scientists would find worthy of analysis. I grant that it is easy to point out exceptions to each of them, but none of these exceptions strike me as significantly undermining the basic argument:

- For limited times and places, carrying capacities may expand faster than the frequency of a particular sociocultural phenomenon, i.e., the superabundance condition would then not be fulfilled. In less prosaic terms, this is a different way of stating the famous “moments of madness” when “everything is possible” (Zolberg 1972; Tarrow 1989). Logic dictates, however, that such situations cannot last very long;
- As in nature, there are doubtlessly many cultural variations that are “selectively neutral” in the sense that possessing them or not is entirely inconsequential in social interactions with other actors. Much of movement folklore is probably of this type. Being aware of the existence of neutral variations is not unimportant, because inconsequential things may suddenly become consequential when the context changes. But as long as this is not the case, social scientists are usually not interested in explaining things of no consequence;
- Selection in the form of reactions by other actors may often be haphazard, and therefore inconsequential for cultural reproduction chances. I repeat my former point: this may be true, it may even often be true, but is not likely to be true in cases that would interest us much;
- There is quite a lot of possibility for “noise” in the cultural reproduction process. As a result, it is not always sure that positively selected variations will be reproduced with sufficient accuracy to ensure evolution. Why certain selected variations fail to reproduce accurately and others not, is an important part of the explanation of social change. However, by definition, the social world as we know it consists largely of sociocultural phenomena that demonstrably can be reproduced with sufficient accuracy.

While one may disagree with my assessment of the degree to which each of these conditions hold, once these four conditions hold, cultural evolution follows: Anything that is produced in superabundance and that displays substantial variations, which meet with differential environmental responses that affect the reproduction of these variations, will evolve. There is just no way around it.

REDEFINING POLITICAL OPPORTUNITY STRUCTURE IN AN EVOLUTIONARY FRAMEWORK

According to Sidney Tarrow’s authoritative definition, political opportunity structures are “consistent—but not necessarily formal or permanent—dimensions of the political environment that provide incentives for people to undertake collective action by affecting their expectations for success and failure” (1994: 85). I have long believed this to be a wonderfully succinct and accurate definition. However, seen from the evolutionary angle, the emphasis on expectations in Tarrow’s definition now seems too strongly to imply a rational-choice approach to the link between structure and action. For reasons given above, I believe the ex-

pected utility framework to be untenable. A second problem that I now see in Tarrow's definition is that it—in contrast to the sensitivity to interaction and interdependency that characterizes Tarrow's work—does not sufficiently reflect the fact that movement actors do not make their collective action decisions in isolation, but draw on the experiences of other collective actors, in the same movement, and in other movements. Finally and related to the former point, the definition does not do justice to the fact that structures may affect action in two different ways. There is the direct effect on the “incentives” for different collective action options that Tarrow's definition alludes to, e.g., when authorities repress or facilitate a movement. But of at least equal importance is that structural factors affect the information input that reaches movement activists. By shaping and filtering the information that reaches actors about events beyond their own immediate social horizon, political opportunity structures delimit the range of options that become available for choice, and affect the perceived costs and benefits of these preselected options. For these combined reasons, I propose an elaboration of Tarrow's definition that is perhaps less elegant and succinct, but also, I hope, more accurate: *political opportunity structures are consistent—but not necessarily formalized or permanent—dimensions of the political environment that affect the outcomes by which people judge the success or failure of their own collective action, and the information that becomes available to them about the nature and outcomes of other collective action that is relevant to them.* “Consistently” here means both that similar actions should have similar outcomes, and that different actions have consistently different outcomes. “Outcomes” can be anything that a given movement seeks to achieve (support, attention, recognition, legitimacy, concessions, etc.) or to avoid (repression, ignorance, exclusion, condemnation, loss of entitlements, etc.).

This redefinition has a number of important implications that resonate with criticisms that have been brought against “traditional style” POS. First, by referring to outcomes of prior actions the definition reflects the emphasis on the role of agency in these criticisms, i.e., on the “making,” “seizing,” or “revealing” of opportunities. It implies that there is no POS without a prior history of collective action. Put in different terms, political opportunity structures are only meaningfully defined in relation to existing repertoires of contention—an interpretation that should please Charles Tilly who has hammered home to us the importance of repertoires, but, I dare say, without being sufficiently understood (e.g., Tilly 1995). POS manifests itself through consistent response patterns of actors in the political environment that emerge *as a result of* collective action, and it is therefore meaningless to speak of an opportunity structure for something that has not yet occurred. Would anybody before Mahatma Gandhi have been able to say what the opportunity structure in British India looked like for tactics of civil disobedience? The implication of the traditional POS view is that this would have been possible and that Gandhi indeed made his tactical choice on the basis of the expectation that civil disobedience would be successful. Granted that this is certainly what Gandhi *hoped*, how could he possibly have *known*? The question also remains why other political entrepreneurs chose other tactics in the struggle for Indian independence even though they were confronted with the supposedly same POS. Again, there are only two choices: either Gandhi was the better rational choice maker, or everybody involved thought they were making reasonable choices, but Gandhi's *turned out* to be the most effective one, and through its demonstrated success, became the example that was followed.

A second important criticism that has been advanced against traditional POS, and again one that points at the role of agency, has been the claim that only perceived opportunities can influence movement action (Gamson and Meyer 1996). The alternative definition meets this criticism to the extent that movement action is not supposed to be influenced directly by abstract structural dimensions but by the concretely visible response patterns of authorities and other relevant actors in the environment. Moreover, the definition explicitly points at the importance of the highly selective information that becomes available to movement actors. If such *emergent visibility* as a result of interaction is what Gamson and Meyer and others meant

by perceived opportunities, I would fully agree. If, however, they meant to say that what counts is what opportunities people *think* are available, *prior* to their mobilization decisions, than I must disagree. Of course, people's perceptions of reality determine their actions, but people imagine all kinds of things. Some people believe that world peace can be achieved by way of collective meditation; others believe that people greet you with open arms if you invade their country under false pretexts. But what is the analytical worth of an opportunity structure concept that includes anybody's guess? The solution can neither be to say that only *correctly* perceived opportunities (correct in the sense that the outcomes match the expectations) matter, because that is obviously not true. Incorrect strategic decisions are as consequential for the further development of contentious interactions as correct ones, simply because people learn as much from their (and others') errors as from their (and others') correct decisions. In the light of this latter point, we should also qualify the notion of the "making" of opportunities. The process of strategic choice need not be as planned and conscious as the verb "making" suggest. Probably more often than not, different groups of activists simply try different strategies, until one of them finds a successful recipe for action that provokes favorable responses from actors in the environment. One may call this "making" opportunities, but "stumbling on" opportunities is sometimes at least as accurate a description.

HOW OPPORTUNITY STRUCTURES WORK: DIFFERENT MECHANISMS FOR THE SAME OUTCOMES

There are two ways in which an evolutionary approach can improve our understanding of social movements and collective action. First, there are many instances where an evolutionary perspective would lead to the same expectations about correlations between opportunity structures and movement actions as those that can be derived from traditional structural and rational-choice theories. However, in those instances evolutionary theory can help us by providing a better explanation of the causal mechanisms that are responsible for these outcomes. In other cases however, knowing how these mechanisms work will lead us to different predictions of correlations between structures and actions. Let us begin in this section with the first scenario and take an example from cross-national comparative analysis: why is it that French social movements employ more radical and more centralized action repertoires than their Swiss counterparts? In Switzerland, structuralists would point to the institutional openness, accommodating elite strategies, and fragmented decision-making power that "invite" moderate and decentralized strategies. In France they would point to the closed institutions, exclusionary elite strategies, and highly centralized competencies that "push" activists towards more radical and centralized strategies. How exactly structures achieve these impacts remains obscure, even though the account seems plausible and neatly fits the data (Kriesi et al. 1995). A rational-choice account of the same material would say that French activists survey the different options available to them and conclude that radical strategies provide the most promising balance of expected costs and benefits. Their Swiss counterparts would survey the Swiss political system in a similar way, only to arrive at the conclusion that they would be best off by choosing more moderate strategies. Unlike the structuralist account, the mechanisms are specified here, only they are based on implausible assumptions. To begin with, activists cannot be assumed to conduct an in-depth study of all possibly relevant institutions, legal frameworks, and policy arenas before they take action. Second, activists cannot possibly consider all the conceivable tactics, organizational forms, frames, and combinations of them that they could possibly use, and the equally manifold ways in which their opponents might react to these.

The evolutionary solution to these problems is straightforward: activists adapt their strategies to available opportunity structures by way of an iterative trial-and-error process. As a thought experiment, we may conduct an exchange program in which French and Swiss activists swap places. The structuralist model would suppose that French activists now mys-

that what decisions, actions, but heaved by ns if you opportunity that only 1 the ex- re as cons, simply l others') on of the and cons s of acti- ction that 'making" scription.

nding of lutionary ortunity ural and p us by ese out- different with the s it that res than al open- "invite" itutions, vists to- impacts 2riesi et activists vide the uld sur- at they unt, the o begin institu- cannot nations onents

at their ess. As l Swiss v mys-

teriously come under the spell of the pushes and pulls of the Swiss system. The rational-choice model would see Swiss activists engaging in elaborate expected utility calculations based on an analysis of the intricacies of French politics. In the evolutionary perspective, one's best initial guess is that the French activists confront Swiss authorities with the same strategies they used to employ in France. However, their "outrageous" tactics and "inflammatory" language while battering at the gates of the federal government offices in Berne would show little substantive results and would only invite moral outrage among the public and cause the movement to lose many of its allies. Meanwhile, the Swiss activists would be busy addressing local authorities in the French province with friendly petition drives. They would be simply ignored, and in the unlikely case that a local authority, curious to learn more of these funny characters, would give them a hearing, they would learn that local institutions can do little to advance their cause.

However, not all Swiss and not all French activists are alike. This variation ensures that some of the displaced French will be more moderate than others, and some less focused on central authorities than others. These activists will be more successful than their more radical, more centrally focused counterparts. They will receive more favorable media attention, allies who withdraw support from the radicals may transfer their support to the more moderate activists, and the latter's attention for subnational authorities may even bring them some first substantive successes. Likewise, some of the transplanted Swiss will use more disruptive tactics and focus more strongly on Paris, and they will receive more attention, support, and perhaps even some concessions, than their counterparts in the province. Based on their own experiences, the radical French activists in Berne and the petitioning Swiss in the provinces have reason to be dissatisfied with their performance so far and will consider adapting their tactics. At the same time, they receive information about the more favorable responses that have been obtained by the more moderate French activists in the Swiss cantons, and the more radical Swiss activists who mobilize in Paris. What do they do in this easy choice situation? They adapt their strategies in the direction of the more successful fellow activists. The more moderate French activists in the Swiss cantons never get favorable information about the outcomes of the alternative strategies of their more radical fellows in Berne, so they decide to stick to their own strategic repertoire, or, if anything, to move further away from the unattractive Berne alternative. Similarly, the moderate Swiss activists in Paris have since the swap not heard anything through the media about their fellow activists who landed in the provinces, but what they hear through their own movement networks does not sound as if a better alternative to their own strategies has been discovered there. If one iterates this process further over time, the displaced French will become as Swiss as the Swiss, and the displaced Swiss will have become fully adapted to the French way of doing politics.

All very well, one might say, but what is the use of having a different account of the same outcome? *Vis-à-vis* the structural model, the reason is completeness: a theory that specifies by which mechanisms A leads to B is better than one that just says that, somehow, A leads to B. *Vis-à-vis* the rational-choice model, there are two reasons that are strongly related: plausibility and parsimony. The rational-choice model must make strong assumptions about the sophistication of agents' calculation capacities, their possession of sufficient amounts of information, and their possession of paranormal powers that allow them to accurately predict others' reactions in advance of an interactive sequence. Certainly, modern variants of rational-choice theory can, and do, qualify each of these requirements, but to the extent that they do, they lose their capacity to explain. The evolutionary model requires only the most basic assumptions that do not exceed what can be realistically expected when humans make decisions in situations of limited time, limited information, and interactive uncertainty. All that is required is a varied input of strategies that may initially be entirely random and the capacity after each round of interaction to evaluate a set of alternatives on the basis of equally limited, prestructured information about these (and not the many other conceivable) alternatives.

HOW EVOLUTIONARY MECHANISMS CAN EXPLAIN DEVIANT OUTCOMES OF OPPORTUNITY STRUCTURES

At the beginning of this article, I noted that while opportunity-structure accounts have received considerable empirical support, there are also quite a few cases in which opportunity structures seemed to have little effect and others where the same opportunity variables had different effects. Can a shift to the evolutionary perspective help to make sense of these findings? I think it can. Let us begin with a first conclusion that one can draw from the Swiss-French thought experiment. Actually, it was not entirely correct to say that the evolutionary explanation arrives at the same outcome as structural and rational-choice accounts. At closer inspection there are two important differences, and both are related to the role of time. First, while in the structural and rational-choice accounts, the Swissification of French activists and the Frenchification of Swiss activists occur very rapidly, these two processes require time, and perhaps considerable time, in the evolutionary perspective. The implication is that POS explanations will be more accurate the longer a particular structural feature of the political environment has been in place. This could be the reason why POS approaches have generally come up with more consistent results in cross-national comparative analyses of stable, established democracies than in dynamic analyses over time, especially in the context of volatile and transitional political situations. Another implication is that in dynamic analyses, there may be a considerable time lag between a structural change in the political environment (e.g., a change in government incumbency) and a corresponding change in patterns of movement activity. More importantly still, the time that strategic adaptation requires can explain why short-term "windows of opportunity" that we may observe as outsiders can be missed; namely if they close again before any activist group has iteratively discovered their existence.

Second, history makes an important difference because the swapped French and Swiss activists did not just randomly start experimenting with strategies in their new environment, but they started out doing what they were used to do in their country of origin. The strategies activists initially experimented with were generally minor variations on their inherited repertoires, and it was only by the accumulation of small steps away from their former repertoires that the French and Swiss activists ultimately arrived at each other's initial repertoires.⁶ This, too, has implications for the relations between political opportunity structures and movement repertoires. The French activists' repertoire at any given time will be partly explained by the new Swiss context, and partly by the remaining French traits that they inherited from the past. In other words, if there is a radical change in POS, it will not only require time before activism has adapted to the new context, but for quite some time activism will still display characteristics that were acquired under the old regime and that thus deviate from what seems to an outside observer appropriate given the present POS. An implication is also that it will be easier for some movements or movement organizations to adapt to a changed political environment than for others, depending on how much the inherited repertoire of an organization must change in order to adapt to the new situation. The differential speed of adaptation among movements and organizations reshuffles the competitive balance among them, and as a result, seemingly positive changes in POS may nevertheless cause slower adapters to decline or even disappear. Examples are the deaths and membership losses of many traditional women's and nature conservation organizations since the 1960s, despite the seemingly favorable context of increased attention for women's and environmental issues.

A third important—social-spatial rather than historic—consequence of an evolutionary look at the relation between structure and action is that adaptation is always local. In the evolutionary model, activists make choices among strategic alternatives that are locally visible to them and they iteratively climb local gradients of opportunity. Such local "adaptive peaks" may turn out to be dead-end streets for two reasons. First, if two organizations engage in climbing different opportunity hills of which neither can see the peak (i.e., they make different strategic decisions at a crossroad, but neither can know whether ultimately its chosen

strategic path will turn out to be the better choice), the one organization may be out-competed by the other, if the latter's hill turns out to lead higher up than that of its competitor. Second, if a favorable change in POS occurs that opens up opportunities that were not available or visible before, an organization may find itself trapped in a situation in which it is impossible to seize that opportunity. The move from a formerly adaptive peak under an old regime towards a new and higher adaptive peak will be impossible if it requires an organization to travel through a deep valley. For instance, many traditional women's and nature conservation groups did consider, and some even tried to capitalize on the new opportunities opened up by the new women's and ecology movements. But if this implies that you first lose too many old members, allies, and resources before you can start to capture new members, allies, and resources, then the journey is unlikely to succeed.

So far we have considered only situations in which movement groups depend on, but do not themselves affect their environment. This obviously is an oversimplification, even though much of the behavior of institutional actors is governed by relatively stable rules (e.g., the different institutional makeup of the French and Swiss political systems) that can be treated as exogenous variables for most purposes. The asymmetry of interdependencies—resource-poor, weakly institutionalized movements usually depend much more on authorities and other more established actors than vice versa—is a second reason why we can use the unidirectional image as a first and sometimes fairly adequate approximation. Nevertheless, if we want to refine our analysis, we must acknowledge that the repertoires of allies, countermovements, authorities, news media, and even public opinion all evolve according to the same mechanisms as do movement repertoires and movement activity would be senseless if it would not at least some of the time have an impact on the evolution of the repertoires of actors in the environment. Introducing such coevolution into the equation complicates things enormously and makes it in some situations very difficult to predict anything at all, or even to exclude any outcome (see Koopmans 2004b). This is a topic that requires much more theoretical reflection, as well as empirical studies that gather detailed information not only on movement actions, but on all potentially relevant actions by all relevant actors in the movement's environment.⁷ Coevolutionary dynamics and their contingent outcomes will probably be responsible for many of the deviations from the predictions of the traditional POS model that have been identified in the literature.

CONCLUSION: HOW TO STUDY EVOLUTIONARY DYNAMICS?

Useful theories should offer more than plausible accounts. They should also provide guidance for empirical research and be testable in confrontations with empirical data. Unfortunately, evolutionary theories—both biological and sociocultural—do not have a very strong record on this count. Neo-Darwinian evolutionary biologists are exceptionally good at developing ingenious evolutionary explanations in terms of selection and adaptation for just about any trait they come across (e.g., Dawkins 1986; Dennett 1995). More recently, evolutionary psychologists (e.g., Barkow, Cosmides, and Tooby 1992; Pinker 1997) have embarked on a similar course, explaining many present-day cultural phenomena as results of adaptations of the human mind to the Stone-Age environmental challenges that faced our hunter-gatherer ancestors. Many of these accounts remain post-hoc just-so stories that are not supported by data, and for which it is sometimes not even conceivable that data that might speak to their accuracy will ever be found. For example, we can speculate a lot about the lives and brains of the earliest humans, but apart from skulls, bones, and a few primitive stone tools we are not likely to find anything that might decide for or against one or the other of evolutionary psychology's adaptive hypotheses.

In this respect, evolutionary psychology shares the empirical problem of all theories based in genetic evolution, which already caused Darwin much worry. Genetic evolution proceeds very slow and most of the things that evolutionary biologists and psychologists would want to explain happened millions of years ago. As a result, there is only very spotty evidence to test evolutionary explanations in the fossil record. There is certainly sufficient evidence for the fact that evolution—in the sense of the gradual development of present-day species from ancestral species—has occurred, but there is only limited evidence for *how*, by which mechanisms it has occurred. To show that evolution did occur in nature and to provide a theory that plausibly accounts for it is no mean feat, but to say that cultures evolved would be stating the obvious. We know already, and nobody denies that our present cultures have descended by gradual modification from preceding cultures. Cultural evolutionary theory is only worth anything if it can empirically demonstrate that it has identified the correct mechanisms by which this modification has happened.

The upside of the story is that in studying cultural evolution we are in an extremely privileged position vis-à-vis those studying gene-based evolution. If a favorable mutation occurs in genetic evolution, it can only spread slowly from generation to generation before it ultimately may become a trait that is shared by the whole population of a species. Cultural innovations, by contrast, can immediately diffuse via media and social networks and can be adopted by everyone within their reach. Cultural evolution, therefore, is happening right before our eyes and at a speed that brings the analysis of the evolutionary mechanisms behind significant sociocultural changes within the reach of any social researcher. Since the empirical study of cultural evolution is so evidently possible, it is an intriguing question (to which I have no answer) why almost nobody has done it. Why is it that cultural evolutionists (e.g., Parsons 1977; Sanderson 1995; Lenski, Nolan, and Lenski 1995) have not seized this wonderful opportunity and have instead engaged in speculative stories about long-term, historic developments that are largely beyond empirical investigation, such as the transition from hunter-gatherer to agricultural societies or the rise and fall of ancient cultures?

As students of social movements, the category of social actors for whom social change is the *raison d'être*, we are in an even better position than other social scientists to take up the challenge of applying and testing evolutionary models. To do so will, however, require some adaptations to the way in which we habitually go about our empirical research. These adaptations are related to each of the three mechanisms of evolutionary change: variation, selection, and reproduction. To begin with, our present data tend to be as spotty as the biologist's fossil record. Like the fossil record, our data record the history of the winners of the evolutionary process—those protests, organizations, and movements that were large or otherwise remarkable, that were relatively successful, and that were relatively long-lived. Newspaper-based studies only include the protests that made it into the media, organizational studies often focus on a few well-known movement organizations, and more generally the attention in the field for particular movements waxes and wanes with the visibility and success of the movement in question. Thus we end up studying movements when and only when they have already been able to pass many important selection barriers. However, to understand why visible and successful protests, organizations, and movements have become visible and successful, we must see them as a small part of a broader range of variation that includes that majority of protests, organizations, and movements that never made it.

We must not only cast our nets much wider to include the whole range of variation of social movements, but we must also try to really measure the selective responses by actors in the environment, and their coevolution with the social movements we study. If we want to solve the structure-agency problem we can no longer be satisfied with correlating abstract structures with movement actions, but must show how these structures work concretely. Much lip-service is being paid to the need for relational and interactive approaches, but almost all of the empirical data gathering in both quantitative and qualitative movement research is still focused on only one side of a multifaceted picture: we still proceed as if we think that we can

understand movements and protest by gathering data only on movements and protest.

Finally, our methodological approaches must become more sensitive to the crucial role of information and its communication for the reproduction of innovations in cultural evolution. Every movement group learns and adapts its repertoire in part as a result of its own interactions with other actors. But much if not most of the change in movement repertoires occurs by way of the diffusion of identities, organizational forms, ideas, and tactics across movement groups. Such diffusion can occur along two basic channels: vertically by way of the coverage of broadcast media, and horizontally by way of social networks. Both are highly selective, and knowing how they are structured will help us to understand which movement innovations spread when, where, and to whom. As a fortunate byproduct of methodological studies of the validity of protest event data we now know quite a lot about how media selection of protest operates (e.g., Rucht, Koopmans, and Neidhardt 1999). However, we have only begun to take the next step, namely to investigate how patterns of media coverage affect the subsequent development of protest.⁸ Systematic analyses of the role of social networks are likewise only in their early stages (see Diani and McAdam 2003 for a promising start). Moreover, existing network studies have paid relatively little attention to their role as channels of communication and diffusion.

McAdam, Tarrow, and Tilly (2001: 22 ff.) have rightly emphasized that in order to make progress as a field, we must theoretically shift our attention from static boxes to dynamic arrows, from invariant causes to mechanisms, and from Newtonian physics to (they say: molecular, I'd say evolutionary) biology as an ideal type for the kind of explanations we are seeking. Empirically, they say, we must move from single actors to a relational approach that traces the interactions and connections among multiple actors. Admittedly still somewhat shaky at its foundations and rough at its edges, here is my answer to their call. By shifting to an evolutionary perspective, I believe we can achieve the goals that McAdam et al. have set for us and can solve the structure-agency problem that we have struggled with for so long.

NOTES

¹ These recent results confirm the anarchist Prince Peter Kropotkin's criticism of Spencer's views and his alternative "mutual aid" interpretation of Darwin's theories. However, Kropotkin made the opposite error of failing to acknowledge that sometimes a harsh competitive attitude may be the evolutionary winning strategy. Evolutionary theory simply allows no prior conclusion at all whether competitiveness is good or bad for survival.

² Biologists frequently make this claim that cultural evolution is "Lamarckian", after Jean-Baptiste Lamarck, the most eminent biologist before Darwin, who believed that directed variation emerged in response to "felt needs" of organisms—in a sense the biological equivalent of rational choice.

³ Moreover, if such knowledge were available to the scientific community, it would be part of existing knowledge, and we would again find the requirement of undirected variation around that knowledge base fulfilled.

⁴ There is no necessity that all variations will be subject to differential selection. Recent biological research has shown that many variations are selectively neutral and that large parts of the genome have no apparent function.

⁵ One can easily imagine this mix itself being subject to evolution by way of cultural selection. Social movement organizations with one mix of variability and reliability may do better in the long run than other organizations with a different mix.

⁶ This hypothetical example should not be read as if evolution always has to proceed very gradually. There is strong paleontological evidence that extinction events and the formation of new species are often concentrated in (geologically) short bursts of change that are preceded and followed by long periods of stasis. Stephen Jay Gould (2002) has referred to this as "punctuated equilibrium." In contentious politics, we find a similar pattern of long periods of relatively stable patterns of interaction interrupted by short and intense protest cycles and revolutions, in which many new tactics, ideas, and actors appear on the scene and old ones perish (Koopmans 2004b).

⁷ See Koopmans and Statham 1999b; Koopmans and Olzak 2004 for first attempts in this direction. Oliver and Myers (2003a; 2003b) have begun to tackle the same issue by way of simulations.

⁸ Typically, McAdam, Tarrow, and Tilly (2001) list dozens of mechanisms and processes that they see as relevant to explain contentious politics, but one looks in vain for index entries such as "mass media," "public sphere," or "communication."

REFERENCES

- Axelrod, Robert. 1984. *The Evolution of Cooperation*. New York: Basic Books.
- Barkow, Jerome H., Leda Cosmides, and John Tooby. 1992, eds. *The Adapted Mind: Evolutionary Psychology and the Generation of Culture*. New York: Oxford University Press.
- Bendor, Jonathan, and Piotr Swistak. 2001. "The Evolution of Norms." *American Journal of Sociology* 106: 1493-1545.
- Boyd, Robert, and Peter J. Richerson. 1985. *Culture and the Evolutionary Process*. Chicago: University of Chicago Press.
- Cavalli-Sforza, L.L. and M.W. Feldman. 1981. *Cultural Transmission and Evolution: A Quantitative Approach*. Princeton, NJ: Princeton University Press.
- Darwin, Charles. 1968 [1859]. *The Origin of Species by Means of Natural Selection*. London: Penguin.
- Dawkins, Richard. 1986. *The Blind Watchmaker*. London: Longmans.
- Dennett, Daniel C. 1995. *Darwin's Dangerous Idea. Evolution and the Meanings of Life*. London: Penguin.
- Diamond, Jared. 1997. *Guns, Germs, and Steel. The Fates of Human Societies*. New York: W.W. Norton.
- Diani, Mario, and Doug McAdam, eds. 2003. *Social Movements and Networks: Relational Approaches to Collective Action*. Oxford: Oxford University Press
- Ferree, Myra Marx, William A. Gamson, Jürgen Gerhards, and Dieter Rucht. 2002. *Shaping Abortion Discourse. Democracy and the Public Sphere in Germany and the United States*. Cambridge: Cambridge University Press.
- Gamson, William, and David A. Meyer 1996. "Framing Political Opportunity." Pp. 275-290 in *Comparative Perspectives on Social Movements: Political Opportunities, Mobilizing Structures, and Cultural Framings*, Doug McAdam, John D. McCarthy and Mayer N. Zald, eds. New York: Cambridge University Press.
- Goodwin, Jeff and James M. Jasper. 1999. "Caught in a Winding, Snarling Vine: The Structural Bias of Political Process Theory." *Sociological Forum* 14: 27-54.
- Gould, Stephen Jay. 2002. *The Structure of Evolutionary Theory*. Cambridge, MA: Harvard University Press.
- Harris, Marvin. 1977. *Cannibals and Kings. The Origins of Cultures*. New York: Random House.
- Koopmans, Ruud. 1990. "Bridging the Gap: The Missing Link between Political Opportunity Structure and Movement Action." Paper presented at the meeting of the International Sociological Association, Madrid.
- . 2003. "A Failed Revolution—But a Worthy Cause." *Mobilization* 8: 116-119.
- . 2004a. "Movements and Media: Selection Processes and Evolutionary Dynamics in the Public Sphere." *Theory and Society* 33: 367-391.
- . 2004b. "Protest in Time and Space: The Evolution of Waves of Contention." Pp. 19-46 in David A. Snow, Sarah A. Soule, and Hanspeter Kriesi, eds. *The Blackwell Companion to Social Movements*. Oxford: Blackwell.
- Koopmans, Ruud, and Susan Olzak. 2004. "Discursive Opportunities and the Evolution of Right-Wing Violence in Germany." *American Journal of Sociology* 110: 198-230.
- Koopmans, Ruud, and Paul Statham 1999a. "Ethnic and Civic Conceptions of Nationhood and the Differential Success of the Extreme Right in Germany and Italy." Pp. 225-251 in *How Social Movements Matter*, Marco Giugni, Doug McAdam and Charles Tilly, eds. Minneapolis: University of Minnesota Press.
- . 1999b. "Political Claims Analysis: Integrating Protest Event and Public Discourse Approaches." *Mobilization* 4: 203-222.
- Koopmans, Ruud, Paul Statham, Marco Giugni, and Florence Passy. Forthcoming. *Contested Citizenship. Immigration and Cultural Diversity in Europe*. Minneapolis: University of Minnesota Press.
- Kriesi, Hanspeter, Ruud Koopmans, Jan Willem Duyvendak, and Marco G. Giugni. 1995. *New Social Movements in Western Europe: A Comparative Analysis*. Minneapolis: University of Minnesota Press.
- Kuhn, Thomas S. 1962. *The Structure of Scientific Revolutions*. Chicago: University of Chicago Press.
- Lenski, Gerhard, Patrick Nolan, and Jean Lenski. 1995. *Human Societies. An Introduction to Macrosociology* 7th edition. New York: McGraw-Hill.
- Macy, Michael W. 1993. "Backward-Looking Social Control." *American Sociological Review* 58: 819-836.

- Macy, Michael W., and John Skvoretz. 1998. "The Evolution of Trust and Cooperation Between Strangers: A Computational Model." *American Sociological Review* 63: 638-660.
- McAdam, Doug, Sidney Tarrow, and Charles Tilly. 2001. *Dynamics of Contention*. Cambridge: Cambridge University Press.
- McNeill, William H. 1999. "How the Potato Changed the World's History." *Social Research* 66: 67-83.
- Meyer, David S. 2004. "Protest and Political Opportunities." *Annual Review of Sociology* 30: 125-145.
- Meyer, David S., and Debra C. Minkoff. 2004. "Conceptualizing Political Opportunity." *Social Forces* 82: 1457-1492.
- Oliver, Pamela E., and Daniel J. Myers. 2003a. "The Coevolution of Social Movements." *Mobilization* 8: 1-24.
- . 2003b. "Networks, Diffusion, and Cycles of Collective Action." Pp. 173-203 in *Social Movements and Networks: Relational Approaches to Collective Action*, Mario Diani and Doug McAdam, eds. Oxford: Oxford University Press.
- Parsons, Talcott. 1977. *The Evolution of Societies*. Englewood Cliffs, NJ: Prentice-Hall.
- Pinker, Steven. 1997. *How the Mind Works*. London: Penguin.
- Rucht, Dieter, Ruud Koopmans, and Friedhelm Neidhardt, eds. 1999. *Acts of Dissent. New Developments in the Study of Protest*. Lanham, MD: Rowman and Littlefield.
- Sanderson, Stephen K. 1995. *Social Transformations: A General Theory of Historical Development*. Oxford: Blackwell.
- Simon, Herbert A. 1982. *Models of Bounded Rationality*. Cambridge, MA: MIT Press.
- Tarrow, Sidney. 1989. *Democracy and Disorder. Protest and Politics in Italy 1965-1975*. Oxford: Clarendon Press.
- . 1994. *Power in Movement. Social Movements, Collective Action and Politics*. New York: Cambridge University Press.
- Tilly, Charles, 1995. *Popular Contention in Great Britain, 1758-1834*. Cambridge, MA: Harvard University Press.
- Zolberg, Aristide R. 1972. "Moments of Madness." *Politics and Society*. 2: 183-207.