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Contesting Propositions
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Political Research Quarterly published online 24 June 2009
DOI: 10.1177/1065912909338462

The online version of this article can be found at:
http://prq.sagepub.com/content/early/2009/06/24/1065912909338462
Does Political Decentralization Exacerbate or Ameliorate Ethno-political Mobilization?

A Test of Contesting Propositions

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This article presents the results of an experiment that attempted the reconciliation of opposite expectations regarding the effectiveness of political decentralization on ethno-political mobilization. An agent-based model was run thousands of times to explore the effect of decentralization. The experiments suggest that the impact is nonlinear: weak and medium levels of decentralization increase the likelihood of ethno-political mobilization, while strong decentralization decreases it. The explanation derives from how minority control of political institutions affects the dynamic of minority identity ascription and the realization of the goal or the frustration of ethnic members seeking more complete political dominance of the regional ideational space.

Keywords: political decentralization; ethno-political mobilization; agent-based modeling

In August 2000, then French interior minister and leading leftist politician Jean-Pierre Chèvenement abruptly resigned from the government in protest over a proposed agreement extending limited legislative capacities to the regional Corsican assembly beginning in 2004. While Socialist Prime Minister Lionel Jospin, a close personal friend of Chèvenement, raised the Corsican issue as an attempt to end more than two decades of separatist violence on the island, Chèvenement, among others, argued that accommodating the Corsicans would only stimulate additional demands from Corsicans as well as other regional groups in France, such as the Alsatians, Bretons, and Basques (all of whom have active ethno-regionalist parties), thereby threatening the future of the republic itself. In the end, Jean-Pierre Raffarin was elected and replaced Jospin in 2003; while the extension of limited autonomy to Corsica was subsequently withdrawn, the Raffarin government proposed to merge the two départements of Corsica into a single administrative entity for the whole region. Then incoming interior minister Nicolas Sarkozy remarked on July 5 of that year, as an apparent justification of the measure, “Sardinia, just nine kilometers away, has enjoyed autonomy since 1948 and has no independence seekers” (Deutschewelle 2003). However, Corsicans narrowly rejected the proposal in a referendum the following day.

The issue of how best to address ethno-political demands is hardly unique to France: ethno-political movements seem to be on the rise everywhere. Political organizations primarily seeking to shape and promote the economic, cultural, and political agendas associated with a substate region and its residents (typically an ethnic or some other kind of minority) have left their mark since the Second World War on the political and social life of advanced and less-developed states (Horowitz 1985; Tiryakian and Rogowski 1985), stable democracies (e.g., Keating 1998; Newman 1996), and states undergoing transition virtually anywhere across the globe: in the Balkans, Central Asia, Africa, the Middle East, and the former Soviet

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Authors’ Note: The authors are thankful for the useful comments of the anonymous reviewers who read the article as well as comments from Ian Lustick, Roy Eidelson, Ben Eidelson, Lilach Nir, Ifat Maoz, Maurits van der Veen, Rudra Sil, David Rousseau, and Amal Ahmed. Support for this project was provided by the Solomon Asch Center for the Study of Ethnopolitical Conflicts (formerly at the University of Pennsylvania) and the Israeli Science Foundation.
Union (Gurr 1993; Hale 2000; Laitin 1991; Laitin and Fearon 2003; Roeder 1991). Long-standing demands, typically when followed by the emergence of movements engaged in violent resistance, represent simmering crises requiring state responses. As the French example demonstrates, many central governments are concerned that political decentralization, the devolution of power to regions in which the minority population resides, may encourage local elites and politicians to raise demands to set the autonomy bar higher. On the other hand, it is also plausible that regional empowerment may satisfy ethno-political movements, relieving pressure on the state.

The debate and disagreement among French policy makers reflect to some extent concerns about possible trajectories of ethno-political mobilization and above all the fear that such mobilization would spiral out of control, leading to violence and ending with secession. The central government, under such circumstances, would then be forced to invest significant and potentially increasingly ineffective resources to regain stability. From the state’s point of view, options for restoring stability, either through violent repression, costly peaceful concessions, or acceptance of the partition of the state and secession, all lead to potential political and/or economic disempowerment (and delegitimization; see Brancati 2006 and Lustick, Miodownik, and Eidelson 2004 for reviews of these positions).

Unfortunately for policy makers, the large and growing literature on ethno-political mobilization devotes significant attention to the circumstances driving people to raise demands, to assert their rights for self-determination, and to adopt various—sometimes more and other times less peaceful—strategies to attain their goals, yet it fails to provide a clear evaluation of the effectiveness of political arrangements intended to accommodate differing agendas. The absence of scholarly consensus undermines attempts to develop appropriate responses to the demands of ethno-political and self-determination movements. This perhaps is surprising given the wealth of quantitative and qualitative analyses evaluating ethno-political mobilization, although issues regarding the relatively small number of cases, data collection and coding issues, and meaningful comparability of cases across the globe, while not unique to studies of ethno-political mobilization, may explain the failure to reach consensus within the field.

In this article, we develop an agent-based model, based on but not exclusive to the postindustrial heterogeneous democracies of Western Europe, that serves as a rigorous experimental tool for exploring and testing expectations drawn from competing theories about the impact of political decentralization on ethno-political mobilization to gain further insight into these dynamics. In particular, we seek to problematize the impact of decentralization on the dynamics of identity ascription and ethno-political mobilization that occur at times between putative members of an ethnic group. Our analysis shows that in general, the impact of decentralization on ethno-political mobilization has a nonlinear effect: moderate levels of decentralization encourage ethno-political mobilization, while higher levels decrease it.

**Political Decentralization and Ethno-political Mobilization**

The universe of ethno-political movements—the goals they seek to attain and the strategies they adopt for that purpose—is quite diverse. It includes political organizations seeking secession and outright independence (e.g., Corsicans in France, Basques in Spain), territorial readjustments or the uniting of a regional population with its homeland (e.g., Germans in Alto Adige in Italy, Catholics in Northern Ireland), protection of cultural uniqueness and the allocation of political rights based on such communal affiliations (e.g., Danes in Schleswig-Holstein in Germany, Swedes in Åland in Finland), and political leverage to shield and promote regional economic interests (e.g., Northern Italy, Scotland). Regardless of the particular goals they strive to achieve, ethno-political movements share two significant elements: (1) the ambition to alter the structure of relations between the state and one or a group of substate regions (De Winter 1998) by negotiating (peacefully or not) for the transfer of more responsibilities and decision-making power from the center to the area in which the group resides and (2) the strategy of mobilizing public support by (re)evoking and enlisting, among other methods, local identities as part of their struggle to demarcate a political space (Miodownik and Cartrite 2006). In other words, ethno-political movements seek and hope to gain public support for their goals by appealing to and nurturing group identification and erecting and politicizing boundaries between a group residing within a demarcated political space and the rest of the state.

State responses to ethno-political mobilization cover a strikingly broad range, even among such ostensibly similar states as the advanced democracies
of Western Europe. The Belgian state, initially configured on the Jacobin unitary model, came under growing pressures in the 1950s and 1960s to establish formal institutions reflecting the increasingly salient linguistic divide; the failure of these reforms to satisfy, in particular, widening Flemish demands resulted in the de facto and, with the establishment of the new constitution in 1992, de jure institutionalization of a highly decentralized federalism. Finland, established in 1919 with a considerable Swedish-speaking minority, established local self-rule for the Åland Islands with considerably fewer accommodations extended to Swedish speakers on the mainland. Denmark established constitutional measures that allowed for the creation and independence of the Kingdom of Iceland in 1919 and extended home rule to Faroe and Greenland following World War II. The United Kingdom experimented with varying degrees of devolution, particularly for Northern Ireland, with Scotland now having its own parliament and Wales a dedicated executive. Democratization in Spain established, in the 1977 constitution, a two-track process for the devolution of competencies to the seventeen “autonomous communities”: one for the three “historical nationalities” (the autonomous Basque, Catalan, and Galician communities, and another for the remaining regions); legislation limiting the range of powers the communities may claim were determined to be unconstitutional, and, as a result, the Spanish state continues to asymmetrically devolve powers to the various communities. And in France, where resistance to any institutional recognition of ethnic minorities has been a feature of the political culture since well prior to the French Revolution, limited reforms allowing for education in local languages and some (often crosscutting) institutional frameworks have been undertaken. Thus, the range of ethnic groups (including their levels of political activism and demands) interacts with a range of states with varying political cultures and strategies (and tolerance) for institutional accommodation of ethnic minorities, even in what may be understood as a cluster of relatively similar states.

Ethno-political mobilization requires the satisfaction of two conditions, although the literature tends not to frame the analysis in this manner (for a comparable analysis regarding the emergence of Christian Democratic parties, see Kalyvas 1996). First, the social cleavage separating the minority group from the majority must be salient and accepted by putative members of the former as dividing the polity into separate groups. For minority groups, particularly in contexts in which the state actively or passively promotes the homogenization of the population, the continued salience of a social cleavage may itself represent an ongoing challenge. While the most obvious examples involve attempts to preserve or revive local languages, the reification of a minority identity cannot be taken as unproblematic, and in fact, the preservation of a local identity may represent one of the more prominent goals of ethno-political movements, particularly in the early stages of ethno-political activism (Cartrite 2003). Studies that focus on divergent linguistic, historic, ethnic, and/or religious backgrounds may be understood as examinations of the factors that contribute to or inhibit the ongoing reification of a social cleavage (De Winter 1998; Rokkan and Urwin 1983). Other studies focus on the impact of economic grievance (e.g., Hechter 1975; Nielson 1980; Ragin 1979) or the availability of economic resources (e.g., Giordano 2000; Gourevitch 1979; Harvie 1994) as significant factors related, at least in part, to the reification and maintenance of minority distinctiveness. However, it is equally clear that there are likely no specific types of social cleavage that are either necessary or sufficient to drive ethno-political mobilization (Fearon and van Houten 2002; van Houten 2000).

The second necessary condition for ethno-political mobilization requires that members of the minority group accept the linkage between the existence of the social cleavage and the right to some degree of political accommodation derived from that group’s distinctiveness; secondary analyses of this dimension involve the varying levels of support for a range of accommodations, from limited governmental support in reifying the minority identity to the formation of an independent polity exclusive to the minority group, among members of the minority group. In this respect, specialized political institutions represent both a perceived right by some in the group and a mechanism for ethnic entrepreneurs to maintain or even strengthen the satisfaction of these two criteria. Some scholars have traced the development of political rights of minority groups broadly (e.g., Jackson Preece 1998; Alcock 2000), but the emergence at the supranational level of normative arguments and institutions for the protection of minority identities likely represents at most a facilitating condition for the successful linkage between group distinctiveness and political rights in the minds of individual members of a minority group.

However, contributions to the literature strongly disagree on the relationship between political decentralization (e.g., devolution and transfer of power,
limited self-governance, and federalization) and the emergence, and more importantly the appeasement, of ethno-political contention. One position holds that political decentralization is related to the emergence and exacerbation of mobilization (e.g., Bunce 1999; Hale 2000; Kymlicka 1998; Rogowski 1985; Treisman 1997). Devolution of power and the creation of regional self-governing institutions are seen from this point of view as generating opportunities that local politicians use to demand the expansion of the authority already granted to the regional institutions. In that context, ethno-political movements mobilize public support and pressure the central government to agree to widen the jurisdiction of regional institutions.

Other scholars argue, however, that political decentralization diminishes the likelihood of mobilization (e.g., Gurr 2000; Kaufman 1996; Lijphart 1994; Stepan 1999; Tshebelski 1990). Holders of this position conclude that political institutions, which facilitate the expression of local grievances and are capable of articulating immediate responses to collective needs, decrease the motivations of regional and ethnic entrepreneurs to raise the contention bar by increasing the likelihood of loyalty to the state (Hirschman 1970). Proponents of this position advocate carefully designed institutions guaranteeing that (1) significant political representation, (2) participation in policy and decision making, and (3) the transfer of power and responsibilities to elected regional assemblies and executives will appease regional grievances and consequently reduce the likelihood of and support for ethno-political movements (e.g., Brass 1991; Lijphart 1977; McGarry and O’Leary 1993; Sartori 1997).

The empirical record of the relationship between decentralization and ethno-political mobilization is “remarkably murky” (Hechter and Okamoto 2001). First, inferences regarding the impact of decentralization may vary by the regional focus of the researchers or the methodological technique they adopt. Students of the former Soviet Union, for example, tend to find a strong association between decentralization and different aspects of mobilization including secession (e.g., Bunce 1999; Roeder 1991; Snyder 2000; Treisman 1997). Others, using large-N cross-national statistical analyses, tend to assert that decentralization decreases ethno-political mobilization (Gurr 2000; Hechter 2000). Such “empirical disagreements” may be associated at least in part with the conventional practice of focusing on the national level even when the political phenomenon unfolds below the level of the state (Snyder 2001). Indeed, some scholars suggest that the substate level is the most appropriate level for gathering data and studying phenomena such as ethno-political contention and other types of civil violence, although data collection at that level may be highly problematic (van Houten 2000; Buhaug and Rod 2006).

Yet even recent studies using meticulously conceived substate-level data sets fail to generate a consensus on the impact of decentralization on the origins and trajectories of ethno-political mobilization. Brancati (2006), for example, stated that political decentralization is likely to decrease antiregime mobilization and intercommunal conflict, but she also concluded that decentralization encourages support for ethno-regional parties, thereby indirectly exacerbating ethnic conflict and secessionism. Similarly, van Houten (2000) found regional assertiveness to be higher when regional parties control a higher share of the overall regional vote. Jolly (2005) found (counter to his initial intuition and Brancati’s 2006 empirical findings) that both the likelihood that a regional party will enter electoral competition and the extent of support it receives increase at lower levels of decentralization up to a certain threshold and decline at high levels of self-governance. Last, both van Houten and Sorens (2005) found no significant association between political decentralization (i.e., the territorial arrangement of the state or regional self-governance) and either regional assertiveness or the support for secessionist parties.

We propose that the explanation for this lack of convergence regarding the impact of devolving political power on ethno-political mobilization likely stems from two general oversights in the literature. The first, alluded to above, lies in the failure to appreciate the varying influence of factors, such as devolution, on ethno-political mobilization when affecting the two necessary conditions within a heterogeneous population. While we agree with the broader literature that identity formation precedes or coincides with ethno-political mobilization for any individual, putative members of the group may vary in terms of their acceptance of these two conditions both over time and across the population. Although there is a clear tendency to attribute to whole groups the political positions or tactics of a few (e.g., Basques are separatists or terrorists), this shortcut often belies significant disagreement among the putative members of a group regarding the existence and sociopolitical significance of particular cultural or ethnic differences. In fact, much of the groundwork for ethno-political mobilization, particularly in contexts in which the state seeks to downplay cultural distinctions.
as politically irrelevant, requires active efforts to persuade individuals that, indeed, differences between the minority and the majority do exist and that, in fact, these differences delineate a group boundary. Thus, part of the difficulty faced by the literature results from the assumption that the group is a single entity, assuming away the potentially significant differential impacts of causal factors when mediated through a population that may be in disagreement about either the existence of a social cleavage or the political importance of such a cleavage.

The second potential oversight that might account for the continued disagreement in the literature can also be located below the group level. As a social phenomenon, ethno-political mobilization likely entails not merely the processing of (perhaps limited) information by atomized heterogeneous individuals but may also be a function of the information sharing that occurs between these heterogeneous individuals. Because the information-sharing patterns (i.e., who is sharing information with whom) likely cannot be fully specified for any reasonably sized group, the literature implicitly assumes a simple processing of information that at best merely represents the modal impact of those factors in a group; however, this assumption may at best identify only the modal outcome, with some configurations capable of generating unexpected outcomes based on how information flows through the group. To fully account for the impact of decentralization on ethno-political mobilization, we must therefore take into account the flow of information about the ethnic identity through the putative population and how decentralization may shift, disrupt, or exacerbate that flow.

Thus, we contend that at least part of the explanation of ethno-political mobilization must take into account that the politicization of ethnic minority identity requires individuals to both accept the cultural cleavage(s) as indicative of group distinctiveness and link that distinctiveness to political activism. The meeting of these two conditions requires that individuals interact with others to evaluate the salience of the group identity as well as determine the relative local predominance (or lack thereof) of that identity. Individuals embracing a particular identity but frustrated by the encounter with other identities (particularly those associated with the hegemonic state) may become politically active to realize some relief from this subordinate status. While this position does not exclude the importance of cultural and economic factors, it does suggest that even when those variables are held constant, there may be significant (and difficult-to-measure) variation in the onset of ethno-political mobilization. And as we contend, the degree of control of political institutions by members of the minority group has a demonstrable impact on both ethnic identity ascription in a putative population and its potential politicization.

A Simulation of a Multiregional and Multicultural State

To take seriously the implications of decentralization on ethno-political mobilization in light of their potential impacts on the flow of information and ethnic identity ascription and politicization between putative members of the group, we deploy a dynamic agent-based model, a computer-assisted methodology enabling researchers to design, experiment with, and investigate artificial worlds inhabited by agents that interact with each other following simple prespecified rules derived from well-theorized and empirically established social mechanisms. Indeed, we offer that given the difficulties of collecting empirical data from putative members of any ethnic group, the deployment of computer simulation represents the best approach to exploring the potential significance of intragroup heterogeneity. A growing body of literature has already taken advantage of this methodology to study phenomena related to ethno-politics, including mobilization (e.g., Bhavnani and Backer 2000; Epstein, Steinbruner, and Parker 2001; Lustick and Miodownik 2002), identity diffusion (e.g., Lustick 2000; Rousseau and van der Veen 2005), and ethnocentrism, ethnic conflict, and secessionism (e.g., Hammond and Axelrod 2006; Cederman 2002; Lustick, Miodownik, and Eidelson 2004; Bhavnani and Miodownik 2009). This methodology is a particularly powerful way to experimentally develop, evaluate, and test theories and to enrich understandings of complex social processes in that it allows for literally thousands of cases to be established from which one can draw meaningful conclusions. Careful design and operational definition of artificial worlds permit scholars to use such “research laboratories” to evaluate relative contributions of alternative theoretical explanations. This way, one can undertake complicated and complex “thought experiments” that are very difficult to conduct in the real world (for general introductions, see Axelrod 1997; Cederman 2001; Epstein and Axtel 1996; Lustick 2000; Macy and Willer 2002).
To conduct the exercises, we developed an agent-based model designed with PS-I (Lustick 2002). The model shares some similarities with other simulations developed to explore related social phenomena, including the clustering and consolidation of opinion (Latané and Nowak 1997), enduring political disagreement (Huckfeldt, Jonson, and Sprague 2004), cultural dissemination (Axelrod 1997), and the emergence of collective and shared identities (Lustick 2000; Rousseau and van der Veen 2005). The most important dimension that sets apart this simulation from its aforementioned predecessors is that it is explicitly designed as a nonabstract space, one that resembles, to some extent, a real-world political construct. The model takes the form of an “ensemble”: a replicable simulation of a specific kind of problem (Lustick and Miodownik 2009). The building blocks of this type of model are not simply algorithmic mechanisms, although they may be included in the model; rather, they are used to operationalize theoretical positions with enough empirical corroboration to attract interest. The rules guiding agents’ interactions are based explicitly on empirically corroborated theories in ways that are consistent with their premises. Thus, while our model does not presume to be an accurate representation of any specific empirical context and, therefore, is not designed to and is incapable of predicting the future of any actual state, it does create multiple analytic opportunities to explore the range of possible and likely variation in trajectories that may be more or less conducive to ethno-political mobilization, facilitating the probabilistic estimate of the impact of decentralization on such phenomena. In many respects, this project represents an exercise in generative (Epstein 2008) theory building, as we seek to operationalize subgroup dynamics in an attempt to address at least some of the contradictory findings in the extant literature.

Model Description

The literature exploring the relationship between decentralization and ethno-political mobilization has generated contradictory expectations: decentralization will exacerbate ethno-political mobilization, and decentralization will ameliorate ethno-political mobilization. We contend that part of this divergence is a function of the inability of these studies to take into account the possibility that political activism is, at best, only partially a linear outcome of resources, interest aggregation, and/or institutional control. Rather, we hypothesize that part, and indeed much, of the effect is a function of many individual interactions under those conditions, as ideas and interests articulate through a population, and that some of the variation in the impact of decentralization on ethno-political mobilization is attributable to the unknown, and indeed unknowable, distribution of heterogeneous individuals in the population.

Our purpose, therefore, in developing our agent-based model (Ethniland) is to attempt to generate the divergent outcomes in the literature as a function of varying both the distribution of individuals in the population and the degree of decentralization to evaluate the apparent divergent expectations of the empirical literature. We simulate a number of populations for each level of decentralization to establish the propensity, for any given level of decentralization, for ethno-political mobilization; this allows us to operationalize our assumption that ethno-political mobilization is a probabilistic result at any level of decentralization as a result of the a priori unknowable configuration of the population. We then compare the probability for the occurrence (but not magnitude) of ethno-political mobilization across multiple levels of decentralization to generate a more robust understanding of the impact of levels of decentralization.

Our model, in many respects, resembles an ethnically heterogeneous democratic society in which ideas and interests are allowed to flow through the population without external constraint. We allow for the occurrence of socially influential agents independent of the state apparatus in addition to bureaucrats with official sanction of their position. We include universal information for all agents that in some sense represents governmental and media influences as additional information for agents in the model. And we allow for the control of the state to be responsive to local interests rather than fixed by the political center. While there may be comparable dynamics found in nondemocratic plural societies, the model here is perhaps most readily understood in those terms, perhaps best exemplified by multiethnic Western European states.

Ethniland represents a powerful model to explore the impact of decentralization on ethno-political mobilization. Furthermore, careful experimental design allows us to explore a range of highly detailed stylized cases in a more rigorous way than even very careful small-N studies allow. Finally, computer simulation experimental design allows for experimental replication by later researchers. As a result, a thoroughly detailed description of the model and
experimental design involve a degree of technical specificity that many readers may find cumbersome. With this in mind, we leave most of the finer technical points to the technical appendix, which itself is detailed enough to facilitate experimental replication. Here we address the basic workings of the model and the overall experimental design with an eye toward readability and brevity, providing, we hope, enough details for the reader to follow the subsequent analysis of the experimental results.

**Basic Agents in Ethniland**

Recall that our hypothesis regarding the divergent findings of the decentralization literature is that such studies fail to take into account the impact that information sharing can have in a group and that remarkably similar conditions potentially can generate quite distinct outcomes purely as a function of who is talking to whom. Our expectation is that the control of political institutions affects the salience of ethnic identification and, therefore, the potential for mobilization and the probability for the politicization of identities. To test such a supposition, our model requires that we have (1) agents with multiple identities and opinions, such that they can change their position; (2) the capability of agents to receive external information about those identities, which then informs their behavior, as well as transmit information regarding their identification to other agents, in a process that iterates over time; (3) the capability of agents to politicize their identities; and (4) the operationalization of political institutions in the landscape with the capacity to have those institutions represent different ethnic identities or interests. However—and this cannot be stressed too strongly—the model we develop must not produce institutional co-option, ethnic identification, or political mobilization as a simple output of particular inputs; rather, we need a model in which identification and politicization of identities are possible, but not inevitable. Absent this critical element, we would simply have a computerized stylization of preexisting linear expectations.

Ethniland is operationalized as a square lattice grid consisting of 65 × 65 (4,225) agents enclosed within a boundary and divided into four quadrants (northwest, northeast, southwest, southeast). In the Ethniland landscape there are twenty identities, some of which are given to agents as ethnic identities tied to a specific quadrant of the landscape; the other identities in the landscape represent placeholders to allow for the emergence of nonethnic political issues in the landscape rather than having ethnic identity represent the only basis for identification and information sharing. The most commonly occurring agent type in the landscape (“basic”) will have, on average, five of the twenty identities as part of its personal repertoire, one of which will be active and available as information to other agents. With the exception of the ethnic identities, which are seeded in their particular geographic quadrants, identities are initially randomly distributed to all basic agents in the landscape.

To allow for the ebb and flow of identities in the landscape and, therefore, the possibility that some identities may become more or less prominent and salient as well as the potential for political alienation and politicization of identities, agents make simple decisions regarding their identities, seeking, ceteris paribus, to internalize those identities deemed most popular and to publicly evidence the single most popular identity. To make this determination, an agent will determine a weight for each identity based on two sources of information: its Moore neighborhood (itself and its eight adjacent neighbors, unless the agent is on the edge of the landscape) and global bias information—information about the relative attractiveness of each identity, which is the same for all agents.

To allow for the disproportionate influence of political institutions, agents in the landscape have an influence level that represents their relative impact in the identity weight determination of each agent. Basic agents have an influence level of 1, so an agent making an identity weight calculation will simply count how many basic agents in its neighborhood are activated on each of the twenty identities; thus, for example, an agent activated on identity i and having only two basic agent neighbors also activated on i will calculate an identity weight for i of 3. To this calculation will then be added the global bias value; extending this example, if i has a bias value of −1, the final weight would be 2. Each agent makes this determination for each identity on every time step in the simulation.

**Agent Behavior**

After determining the identity weights, agents have the ability to adapt in light of this information. Perfectly adaptable agents would be able to change all identities as determined by the identity weights, generating a landscape that would quickly homogenize and not reflect the social phenomena we seek to simulate. Therefore, and drawing on social psychological and constructivist identity theories, each
agent has a threshold that must be exceeded before change occurs. Underpinning the behavioral rules is the notion that identities held either individually by people or collectively by groups or states are not fixed but rather are potentially open for evaluation and change or may solidify over time.

Agents in Ethniland can (1) rotate their identity, deactivating on their current identity and activating on a different identity (a “rotate” candidate) already within their repertoire; (2) substitute an identity currently in their repertoire with a preferable one not in their repertoire (while remaining activated on their current identity); (3) substitute and rotate an identity, which involves discarding the identity with the lowest weight in the repertoire and obtaining a new identity and activating on that identity; or (4) keep their repertoire and activation the same.

Rotation, or the swapping of one internalized identity for the public display of another, represents a relatively painless process, requiring merely that an agent shift its public persona as the situation warrants. Substitution represents a more difficult prospect, as an agent has to discard a held identity to acquire its replacement. And rotation and substitution represents the most difficult adaptive move an agent can make. The introduction of these thresholds, which inhibit but do not preclude agent adaptation, has the effect of allowing for the ongoing ebb and flow of identities in the landscape, although quite expectedly, clusters of homogeneity can appear.

**Political Institutions and Political Entrepreneurs**

To approximate ethno-political mobilization broadly and the impact of decentralization in particular, we modify some basic agents to represent political entrepreneurs and the state bureaucracy; however, basic agents represent more than 90 percent of all agents in the landscape. These specialized agents include regime bureaucrats, which are more influential than basic agents (with influence levels ranging from 2 to 4) and whose repertoires include identities associated with the state and the northwest region; decentralized bureaucrats, which are similar in most respects to regime bureaucrats except that they contain within their repertoires the identity associated with the region in which they are located (exclusive to the northeast and southwest regions); and regional entrepreneurs, which have an influence similar to regime bureaucrats and decentralized bureaucrats but are not associated with the regime and contain the southeast regional identity, the only region where they are located. Given the higher influence levels of the specialized agents, these both tend to be slightly more resistant to change (given that they weight themselves more heavily than do basic agents) and tend to act as local anchors of whatever identity they are activated on as a result of their larger influence. However, as with basic agents, these specialized agents are allowed to adapt to the information they receive, and their influence is never so large as to determine the identity of the local neighborhood.

**Decentralization**

The goal of this experiment is to evaluate the impact of decentralization on, specifically, ethno-political mobilization. In Ethniland, decentralization is operationalized by increasing opportunities for semiautonomous self-governance by the regionally dominant group. Specifically, self-governance is simulated by transforming a proportion of the regional regime bureaucracy into a decentralized bureaucracy by adding the regionally dominant identity in the southeast region into the repertoire of some of the agents in the bureaucracy and activating it. Given the small number of regime bureaucrats in the landscape and given that such agents retain the state and northwest identities in their repertoires, this represents in our view a very modest experimental manipulation.

**Politization of Identity**

Finally, to operationalize ethno-political mobilization in Ethniland, we enable the possibility of an agent transforming into a political boundary; that is, an agent can become a border cell, unchanging, ignored by its neighbors, and representing an institutionalized boundary between agents differentiated along identity lines.

The mechanisms that drive the ethnic politicization of identities (i.e., the emergence of political boundaries) are modeled as similar to those that result in the appearance of other forms of social boundaries: alienation, nontrivial size, and antagonistic relations with others. In general, the production of boundaries may be the result of processes that take place at the state, group, and/or individual level. Tilly (1998, 10), in his account of the production of inequality, suggested that two mechanisms, “exploitation” and “opportunity hoarding,” drive the appearance of social boundaries. According to this account, the emergence of boundaries is a function of the alienation and exclusion of regions and populations from enjoying their share in the goods provided by the
state. However, Tilly stressed, not only do boundaries emerge externally (i.e., as a result of a group’s being bounded by the center), but they are produced by internal processes. In particular, boundaries are driven by a sustainable ability to support and enhance networks of activities among the members of the bounded group. From an individual perspective, the emergence of boundaries is related to psychological processes of self-identification and categorization that crystallize in the entrenchments of institutionalized expressions of in-group and out-group affiliations (Lamont and Molnár 2002).

The operationalization of these conditions follows closely the one offered by Lustick, Miodownik, and Eidelson (2004) in a study of the effects of power sharing and repression on the magnitude of secessionist mobilization and secessionism. Unlike this above-mentioned study, here we seek to expand the analysis and devote more explicit attention to the relationship between the institutional representation of minorities and the unfolding of mobilization and the emergence of demands for further accommodation, regardless of the substance of these demands, rather than focusing on the effects that repression or accommodation may have on the likelihood that a secessionist region/movement will break away from the state. In other words, while the earlier study was interested in the effects of repression and accommodation on the trajectory of a secessionist movement once such a movement emerged, here we are exploring the likelihood that patterns of institutional accommodation may encourage or inhibit the emergence of such movements.

Functionally, an agent politicizes its identity (i.e., transforms into a boundary) when it finds its activated identity to be subordinate (not the most widely subscribed, dominant, identity in the landscape), salient (at least 10 percent of all agents are activated on the identity), and oppositional (no more than 20 percent of agents activated on the identity also have the dominant identity in their repertoires). For any given time step in which an agent meets these conditions, there is a varying 0.1 to 0.3 likelihood that it will become a border agent and, as a result, no longer adapt; nor is the agent considered by its neighbors in the identity weight calculation.

**Conclusion**

In a model like the one described above, with most identities randomly seeded and identity activation randomized, we expect to see an initial patchwork of many identities across the landscape. Quite quickly, however, identity clusters appear as a result of the reinforcement of local information and subsequent agent adaptation. Change will persist in the model in response to changes in the identity biases, but the impact of changing biases typically has only a limited impact once pockets of homogeneity have emerged. We expect that the experimental treatment will alter the flow of information regarding different identities, given the initial activation of some nonbasic agents on the minority identity. But which identities come to predominate, where the clusters of homogenization occur, and if and where the politicization of identities emerges cannot be determined (easily) a priori, even once the initial landscape is set, given the large number of agents and the calculations they undertake.

**Experimental Design**

The Ethniland model represents an attempt to generate robust findings regarding the impact of decentralization on the likelihood of the emergence of secessionist sentiment. One option would have been to develop a single Ethniland landscape in which we subsequently varied the level of decentralization while holding all else consistent, maximizing experimental control; in addition, we could have attempted to operationalize the institutionalization of a specific political context, testing the effects of decentralization on a specific case. In many respects, this approach would be consistent with other examples of the deployment of agent-based models as experiments. However, given our understanding of the overlooked impact of intragroup communication, when combined with the unknown (and indeed unknowable) composition of any group prior to a particular political event (such as the appearance of secessionist sentiment), we determined that relying on any one baseline landscape for the experiment represented real risk (and would undermine our ability to test theories developed from a broad range of cases). Indeed, there is an unknowable likelihood, given how complicated the model is, that any one landscape may unintentionally generate unusual results through the interplay of nonbasic agent locations, randomized initial repertoire sizes and compositions, bias changes, and other dynamic elements.

However, the design space of possible landscapes, given these numerous elements and the number of variations on each one, is far too large to be explored comprehensively; the randomization of nonbasic agent locations in the landscape alone represents many thousands of possible configurations. In an
attempt to generate findings applicable across a range of contexts, avoid the potential skewing of results due to an unknown peculiar landscape configuration, and to robustly sample the range of experimental outcomes resulting from varying levels of decentralization, we opt for an atypical approach in agent-based modeling experimentation: we sample the design space of Ethniland submodels.

To create this effect, a number of model elements are randomized to generate a wide array of landscapes and simulate a discrete range of experimental conditions. Nonbasic agent locations and all initial identity seedings are randomly determined for each landscape, as are the repertoire sizes for each agent. The likelihood of bias change for any time step is set, as is the duration of the specific model to be run. And of course, the exact level of decentralization (our experimental condition) is set for each model, seeding the landscape accordingly. For purposes of this experiment, 10,000 versions of Ethniland were executed and represent the data set used in the analysis below.

It must be emphasized that the experimental treatment we introduce represents only a slight change across the groups of submodels, although as will be seen below, this subtle variation has significant impacts. On average, bureaucrats in the southeast quadrant represent about 6 percent of all agents in the region (see table S1 in the online appendix); the experimental treatment varies the proportion of these agents with the regional identity in their repertoires and is activated at the initiation of a run. Despite this relatively low level of experimental treatment, the activation of bureaucrats on the minority identity does indeed have a significant impact on the politicization of the regional identity.

**Model Results**

**Demonstration Runs**

The three demonstration runs depicted in figure 1 were run under the same initial configuration: they exhibit the same proportion of agents initially activated on the regional minority identity (10); the same number of agents that are part of the state’s bureaucracy; and the same identity biases. The three runs differ only in the number of state bureaucrats in the southeast region initially activated on the minority/regional identity (i.e., in the amount of decentralization or self-governing power endowed to the southeastern region). The first, “No Decentralization,” presents a baseline run in which all the state bureaucrats in the region were activated initially on the identity associated with the national incumbent (turquoise). The second, “Weak Decentralization,” depicts a run that begins with about 30 percent of the bureaucracy activated on the minority identity. The third, “Strong Decentralization,” shows results from a run that begins with 90 percent of the state bureaucrats in the southeast region actively demonstrating the minority regional identity.

Notice the impact of decentralization on the emergence of boundaries (border cells), our measure for ethno-political activity in the region, and on the diffusion of support for regional identity 10. The first time steps in these runs represent an incubation period; note that this period is characterized by some diffusion of identification with the regional minority identity (identity 10). Still, there are some obvious differences between the three scenarios. The No Decentralization landscape exhibits a modest level of regional identification in comparison with the two other levels of decentralization, probably due to the widespread impact of the incumbent-dominated bureaucracy. The ability to use regional institutions to mobilize support for the minority group causes a more extensive diffusion of minority identification in the Weak Decentralization scenario that almost immediately becomes quite confrontational and gives rise to ethno-political boundaries. The early stages of the run in the Strong Decentralization scenario are characterized by a massive identification with the regional
identity. However, notice that although a larger share of the bureaucracy actively mobilizes support for the region, such identification is not followed by the emergence of separatist elements.

By the end of the experimental run ($t = 500$), we can see three distinct outcomes. The No Decentralization run ends with a significant number of supporters of the regional identity. In the Weak Decentralization scenario, support for the regional identity is quite substantial as well. Ethno-political boundaries separate small enclaves of more stubborn isolationism as well as areas with more social tension, but by and large, the region seems well integrated within the state. Last, the Strong Decentralization run results in a widespread identification with the regional identity without the emergence of ethno-political contention (i.e., no boundary agents). Put differently, the massive regional identification depicted in the third scenario does not seem problematic insomuch as the identification with the state and the integration of the region with it are concerned.

**Statistical Analysis**

The statistical analysis of the experiment evaluates the impact of decentralization on the occurrence of politicization of a regional identity, in other words, on the emergence of ethno-political boundaries. We do not explore the relationship between decentralization and the intensity of contention (the number of border cells), as the extant literature suggests that there may be other variables at work than those we have operationalized; furthermore, to evaluate the ebb and flow of support for ethno-political mobilization, we would need to add to the model the possibility of border agents’ rejoining the political landscape and of ethno-political mobilization itself, as a dynamic, to spread through the landscape, significantly complicating the model. We statistically test the experimental results using two logistical models and a marginal effects analysis, demonstrating that the observed curvilinear relationship between decentralization and identity politicization is statistically robust.

Figure 2 plots the relationship between the level of decentralization (the percentage share of the state bureaucracy at $t = 0$ activated on the regional identity) and the percentage of runs in which boundaries appear. The relationship appears curvilinear. Weak decentralization (up to 20 percent) did not significantly affect the occurrence of ethno-political boundaries. However, stronger decentralization (20 to 40 percent) effected a sharp increase in the percentage of runs in which political boundaries appeared. In fact, the percentage of iterations with ethno-political boundaries was, on average, larger than the No Decentralization scenario even when 60 percent of the regional bureaucracy was set to represent regional identities and interest. Interesting to note, the likelihood of boundaries begins to fall below the No Decentralization condition as decentralization increases beyond 60 percent, $F$ test combined = 25.58, $p$ (linear) < .0001, $p$ (nonlinear) < .0001.

We then tested this pattern using a logistic regression; the results are shown in table 1. Model 1 includes a dummy variable, Decentralized Cat, that is coded 0 for 5,000 landscapes set to iterate without decentralization and 1 for 5,000 with various levels of decentralization in the southeast region. Model 1 controls for other parameters included in the simulation: cultural differences, the extent of minority support at the beginning of each run, global biases available about the regional identity, the length of history (time), and the probability of ethno-political boundary appearance (Boundaries Probability). As indicated by the statistically significant coefficient of the decentralization dummy variable in model 1, experimental iterations with minority representation as part of the regional bureaucratic structure were more likely to result in the emergence of ethno-political boundaries or, in other words, in the articulation of the region as a distinct political space. According to
model 1, holding all other variables constant on their median value, decentralization contributes to a modest yet statistically (and substantively) significant increase of about 4 percent to the likelihood of ethno-political contention.

Model 2 repeats the logistic analysis on a smaller sample: the 5,000 iterations with some initial level of a decentralized bureaucracy. In model 2, we replace the decentralization dummy with a continuous variable (decentralization) measuring the percentage of decentralization of the regional (southeastern) branch of the state’s bureaucracy. To assess whether the non-linear pattern described in figure 3 holds in the multivariate setting, we added the squared term of decentralization to the regression. Model 2 provides some support for the expectation of a nonmonotonic relationship between decentralization and the emergence of ethno-political boundaries, indicating that the impact of decentralization varies by its level. Figure 3 plots the predicted probabilities computed with the coefficients from the logistic analysis (model 2), providing further insight into the impact of decentralization. Notice that the predictability of the results increases as we move higher up the ladder of decentralization. Weak to medium levels of decentralization contribute to the appearance of borders, but the pattern is quite “noisy.” Strong decentralization, on the other hand, clearly and more consistently suppresses the overall likelihood of boundary appearance.

To study this outcome further, we conducted a marginal effects analysis (illustrated in figure 4). Assume typical simulated regions that differ only by the level of bureaucratic decentralization at the beginning of the run: holding all other variables on their mean values, the probability of border emergence in a baseline region without decentralization (decentralization = 0 percent) equals 25 percent. The likelihood of the appearance of ethno-political boundaries rises to 34 percent at weak levels of decentralization (decentralization = 30 percent). Moving even higher on the decentralization scale lowers the probability of border emergence: 22 percent at moderately high levels of decentralization (decentralization = 60 percent) and to a likelihood of only 5 percent as decentralization reaches 90 percent. The analysis of

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**Table 1**

<table>
<thead>
<tr>
<th>Explanatory Variable</th>
<th>Model 1</th>
<th>Model 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>-3.24 (.25)**</td>
<td>-4.54 (.46)**</td>
</tr>
<tr>
<td>Decentralized dummy</td>
<td>0.22 (.07)*</td>
<td>—</td>
</tr>
<tr>
<td>Decentralization</td>
<td>—</td>
<td>0.03 (.01)**</td>
</tr>
<tr>
<td>Minority support</td>
<td>-0.09 (.02)**</td>
<td>0.10 (.04)*</td>
</tr>
<tr>
<td>Cultural differences</td>
<td>0.04 (.003)**</td>
<td>0.03 (.004)**</td>
</tr>
<tr>
<td>Global biases</td>
<td>0.01 (.00)**</td>
<td>0.01 (.000)**</td>
</tr>
<tr>
<td>Boundaries probability</td>
<td>-0.01 (.00)</td>
<td>-0.01 (.00)</td>
</tr>
<tr>
<td>Time</td>
<td>0.002 (.000)**</td>
<td>0.002 (.001)*</td>
</tr>
<tr>
<td>Decentralization ×</td>
<td>—</td>
<td>0.001 (.000)**</td>
</tr>
</tbody>
</table>

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Figure 3

Predicted Border Probability by Decentralization

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Figure 4

Model 2—Predicted Border Probability by Decentralization
marginal effects allows us to consider the possibility that political decentralization of power may have different effects across various conditions. For instance, compare the impact of decentralization under conditions of weak minority support, cultural differences, and global cues (the bottom line in figure 4) to its impact in iterations that began with a large number of agents supporting the regional identity, strong cultural differences between the agents in the southeast region and the rest of the state, and strong global indications supporting identification with the regional movement—in other words, all three conditions that increase support for mobilization (top line in figure 4). Decentralization of political power seems to have a stronger impact under the latter compared to the former experimental setting.

Explanation

The various statistical analyses conducted on the data generated by the computer simulation are clear: a significant, curvilinear relationship exists between the level of minority control of political institutions (decentralization) and the appearance of boundaries. Understanding how the level of decentralization produces this curvilinear relationship requires a focus on the micro-mechanisms at work in the model. In other words, explaining the causal linkage between decentralization and ethno-political contention requires a focus on agent decision making.

Recall that agents change identity activation and identity subscription in response to limited information weighing the relative local prevalence (activation) and global attractiveness of each identity (bias). An agent will change its activated identity when one in its repertoire has an identity weight greater than the current activated identity plus the rotation threshold, or an agent will discard one identity in its repertoire and subscribe to a new identity when the identity weight on the new identity exceeds the identity weight of the discarded identity plus the greater threshold for substitution. In this way, each agent adapts to a changing landscape by subscribing to and activating on those identities with the highest aggregate weight on any updating time step.

A basic agent becomes a border agent when four conditions are met. Its activated identity must be, first, one that is not the identity with the most activated agents in the landscape as a whole but, second, one with at least 10 percent of all agents activated on it; in other words, the identity must be subordinate but not trivial. Third, the agent must have at least three agents from whom it receives information activated on other identities. And finally, a probability of transformation to a border agent must be satisfied. Perfectly adaptive agents (agents without thresholds that must be satisfied before change occurs) will continue to change their activation or substitute identities in their repertoire until they reach some equilibrium with their local information network in which they are activated on the identity with the highest weight and have in their repertoire the other most heavily weighted identities, generating a landscape with identity clusters but relative homogeneity across repertoires. However, the introduction of thresholds will inhibit this homogenization to some degree, as agents may be activated on or subscribed to identities that, while not having the highest identity weight, nonetheless are not so suboptimal as to be discarded.

Institutions (bureaucrats) serve as identity anchors in the model in that the specialized agents representing political institutions carry a higher influence than basic agents; thus, their activated identity will have a higher weight for all adjacent agents than is otherwise the case, causing those adjacent agents, all other things being equal, to tend to subscribe to and activate on the identity of the specialized agent. The experiment shows that when a large proportion of the specialized agents are activated on the subordinate identity, large islands of the identity form and merge, preventing the isolation of most agents. At low levels of decentralization, agents are more able to adapt to their environment given the paucity of these subordinate identity anchors. However, it appears to be the case that at moderate levels of decentralization, enough anchors exist to create and sustain numerous clusters of the subordinate identity yet not enough to facilitate the merging of those clusters into one large group. Put differently, there is more opportunity for an agent to feel isolated on a subordinate identity (have at least three of its neighbors be on a different identity) from which it cannot change than at either low or high levels of decentralization.

Recall that we argue two conditions must be met for ethno-political mobilization to occur: the social cleavage must be salient, and the linkage to political objectives must be seen as legitimate. The translation of the effect of decentralization in the model to real-world ethno-political mobilization is perhaps best understood in terms of how salient, or accepted, a particular social cleavage is. Low levels of decentralization allow for other cleavages to penetrate the putative ethnic group, facilitating the shifting of public discourse to other bases. High levels of decentralization...
raise and reinforce the salience of the social cleavage to such a degree that most putative members of a group identity themselves in those terms, so much so that encounters with other identities are limited. However, at moderate levels of decentralization, enough putative members of a group identify themselves with that group to preserve the identity within the larger social landscape, but the salience of that cleavage is not so high as to attract all putative members, increasing the likelihood of disagreement about the significance of the cleavage and possible isolation of individuals identifying themselves in terms of the minority identity. It is from these isolated individuals that ethno-political contention emerges.

Conclusion

This article was motivated by the absence of a clear and consistent theoretical foundation appropriate for future policy guidance and the lack of mechanisms for mitigating policy maker concerns regarding the rise of ethno-political contention. The literature, we argued, devotes significant attention to the circumstances driving regions, groups, and people to organize and demand political rights collectively but fails to reach a consensus on the political arrangements intended to accommodate such demands. For every policy recommendation, it seems, there are studies showing that it either would work well or would work terribly.

The article presents the results of a simulated experiment that attempted to address opposite expectations regarding the effectiveness of political decentralization in response to ethno-political mobilization. An agent-based model of a multiregional and multicultural state was run thousands of times to explore the impact of decentralization on the emergence of political boundaries. These experiments suggest that the impact of decentralization is not linear: weak and medium levels of decentralization increase the likelihood of boundary appearance, while strong decentralization decreases it. We argue that the explanation of this relationship lies below the group level and is a function of how minority control of political institutions affects the dynamic of minority identity ascription and the realization or frustration of seeking more complete dominance of the regional ideational space.

Clearly, politicized ethnic groups remain active, and many continue to press for decentralization to varying degrees: additional decentralization in Catalonia in 2007 and the upcoming Welsh referendum on the establishment of a parliament similar to that in Scotland are just two among many examples in Western Europe, with literally dozens of examples to be found around the globe. And national politicians of varying ideological stripes continue to debate the wisdom of decentralization. Both scholars and policy makers continue to confront an increasing range of cases, and advancing the understanding of the interrelationship between institutional design and ethno-political activism remains a vitally salient need.

The research presented in this article indicates that the risks of transferring power and responsibility to lower local or regional levels of government may be overstated, although half-hearted reforms may in fact produce the most extreme ethno-political mobilization not as a function of the realization of political demands (or lack thereof) but in the facilitation of increasing minority identity salience while simultaneously increasing the probability of identity confrontation and frustration. Entrusting regional elites with more responsibilities, under most circumstances, seems to be the best and more appropriate way to reconcile/mitigate/regulate regional demands for autonomy. Policy makers may find that accommodation, rather than suppression or control, of the diverse interests of regions and groups will protect the integrity of the state, the political institution entrusted with the responsibility of promoting the welfare of the polity as a whole.

Perhaps most importantly, this study highlights the need to move beyond linear models in understanding ethno-political mobilization broadly and the implications of any specific policy. Ethnic groups comprise heterogeneous individuals, and identification with a particular group is at least partially a function of intragroup information sharing, particularly in contexts wherein identity ascription is (partially) voluntary and where an alternative (i.e., national) identity is encouraged by the state. Given these dynamics, any particular policy must be aimed not at an inevitable outcome but at shifting the probabilities of particular results, given that the composition of any group and the impact of who is speaking to whom on the flow of information cannot be a priori fully specified. As a result, despite the best efforts of policy makers, sometimes the unlikely outcome will obtain. For scholars to take this seriously requires a reconceptualization of ethnic identity and ethno-political mobilization that takes into account processes below the level of the group and the implications of imperfect information on the findings of empirical research.
Notes

1. For a full description of the model and experimental algorithms, see the supplemental materials available in the online version of the article.

2. The appendix is available in the online version of this article at http://prq.sagepub.com/supplemental/.

3. Identity biases can change on any time step, although the probability is small (0.5 to 1.0 percent); this introduces limited dynamism to the model, allowing for ongoing change over time. Bias values fall in the range from –3 to 3; as a result, even at the extremes bias, values do not outweigh local neighborhood information.

4. Note that agents do not look inside the repertoires of other agents; they simply count activated identities.

5. In Ethniland, the values of the various rotation triggers were set to rotation trigger = 2, rotation and substitution = 7, and substitution = 5. These specific trigger values are typically used in the published literature with PS-I and can be justified by social psychological arguments.

6. The rules are not designed as an operational definition of any one theory of social psychology or of constructivist identity theory but are consistent with theories in social psychology and related fields that explicitly attempt to define and to describe conditions affecting the formation and change of attitudes, opinions, and identities (e.g., Asch 1956; Latané 1981; Tajfel and Turner 1986; Turner et al. 1987).

7. Note that the use of seeds for the various randomized elements enables us to re-create exact versions of a single landscape, including the random numbers generated for updating biases and determining secession during the model run.

References


