What goes up must come down?
The Impact of Political decentralization on the emergence of Regional Autonomy Movements

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Abstract

Explanations of regional autonomy mobilization have produced inconsistent and contradictory findings on the effects of political decentralization and devolution of power on incentives to demands autonomy, and the popular appeal of these demands. At one end of the spectrum, findings show that the decentralization of political power will provide regional politicians with the institutional power to pressure the state for more concessions and may even destabilize the state leading at time to the emergence of strong and violent secessionist movements. Others argue that the empowerment of regional elites reinforce their loyalty to the state and diminishes the likelihood of autonomy mobilization. The lack of scholarly consensus hinders the efforts of policy-makers in shaping appropriate institutional responses to demands raised by supporters of autonomy and self-determination. In this paper, I systematically test the theoretical propositions pertaining to the effects of political decentralization using an agent-based simulation methodology (ABM). I evaluate the simulation results using statistical data on regional autonomy movements in 113 regions in nine European states. Careful evaluation of the effects of regional and minority accommodation strategies suggests that the risks of transferring power and responsibility to lower local or regional levels of government may be overstated. Entrusting regional elites with more responsibilities seems to be the best way to reconcile/mitigate/regulate regional demands for autonomy.

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Introduction

Regional Autonomy Movements are on the rise everywhere, even in Europe -- the very birthplace of the homogenized "nation-state". Political movements that demand autonomy on behalf of regions or groups attracted public attention as early as the 1960's, when "unexpected" waves of regional mobilization began to emerge across Europe.[1] More recently, the diffusion of regional politics in Western Europe has been viewed partly as a reaction to-- or a consequence of--European integration (Lynch 1996; Keating 1998), a process that supposedly introduces incentives for the organization of sub-state level politics in order to attain, for example, the allocation of structural funds of regional development and access to representation in *European Parliament* and the *Committee of the Regions* (COR) (Keating, Loughlin, and Deschouwer 2003).

A regional autonomy movement (RAM) is a political organization seeking primarily to express regional affinities and promote goals and interest associated with territorial units below the state level.[2] The universe of regional autonomy movements is quite diverse: it is composed of ad-hoc advocacy groups, popular fronts, and electoral blocs that are formed to promote different interests, and adopt different strategies for attaining these goals. However, autonomy movements are similar in that they share the motivation to alter the institutional configuration of the state. These movements attempt to alter the structure of relations between the state and one or a group of sub-state regions by negotiating for the transfer of more responsibilities and decision

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[1] For example, Flemish and Walloons in Brussels; ETA in the Basque country and FLNC in Corsica; rise in support for nationalist parties in Wales and Scotland

[2] The definition is purposefully agnostic of particular goals and policy preferences of any one (or group of) regional autonomy movements. It subsumes organizations seeking, for example: secession and outright independence; territorial readjustments; protection of cultural uniqueness; and promotion of regional economic interests.

making power from the center to the region.

Establishing the specific mechanism(s) underling the emergence of regional autonomy movements has always been a difficult task.[3] Despite a long tradition of research that accounts for different aspects of regional autonomy mobilization,[4] in very different places[5], and with the use of range of methodological techniques,[6] scholars are still riddled with unresolved, yet nevertheless fundamental, research puzzles and goals, such as: unraveling the antecedents that explain why regional autonomy movements appear in some regions and not in others; Exploring nuances in the impact of cultural, economic, and political mechanisms on the emergence and strength of regional mobilization; and studying the consequences of political decentralization and regional empowerment.

Lack of consensus in answering these (and other) questions hinders the efforts of policy-makers in shaping appropriate institutional responses to demands raised by supporters of autonomy and self-determination. Policy makers are concerned with the potential consequences of political decentralization and the devolution of power. More particularly, decision makers fear that regional empowerment create incentives to autonomy mobilization that may spin out of control, lead to massive support for secession, and even encourage separatist violence – forcing the central government to invest significant and increasingly ineffective resources in order to regain stability. From the state's point of view, regaining stability -- either through violent

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[3] A large and non-exhaustive list of explanations of mobilization includes: economic, cultural, and political conditions, topography, world region, demographic patterns, globalization, inter-group antipathy, types of identities in conflict, political entrepreneurship, and outside intervention by irredentist or culturally related powers.

[4] For example: regional politicians' demands (van Houten 2000), characteristics of ethno-regional parties (De Winter and Türsan 1998),political ideologies of regional movements (Neumann 1996, Lynch 1996), and the support they receive (Gordin 2001; Hearl, Budge, Pearson 1996; Sorens 2003).

[5] advanced and less developed states (Tiryakian and Rogowski 1985; Horowitz 1985); stable democracies (Neumann 1995; Keating 1998); during periods of transition in the Balkans, Central Asia, Africa, the Middle East, and the former Soviet Union (Laitin 1991; Roeder 1991; Gerr 1993; Hale 2000).

[6] Historical accounts of one case study (Hechter 1975); diachronic comparisons of a small number of cases (Lynch 1996; Neumann 1996); and synchronic comparisons of large batches of statistical information across cases (Fearon and van Houten 2002; Sorens 2003).

repression, costly peaceful concessions, or by accepting the secession of a region -- all lead to its potential disempowerment (and delegitimacy), in both political and economic realms. This reasoning can explain why so many governments in Europe, as well as in other parts of the world, are reluctant to adopt intensive policies of decentralization and hesitate to entrust local elites and politicians with power and responsibilities, that may--alledgedly--introduce incentives to demand (more) autonomy - on behalf of ethnic, linguistic, or national minorities, and even in regions with no autonomist tradition.

In this paper I unpack and address some of these concerns. First, I attempt a reconciliation between opposite expectations on the impact of political decentralization on regional mobilization. I suggest that these disagreements may be an indication of a more fundamental and non-linear associations between the political empowerment of regions and groups and the likelihood that these will demand autonomy I argue that low levels of decentralization may encourage regional actors to demand autonomy, that medium levels of decentralization may infuriate regional mobilization, but the extensive devolution of power affect a decline in regional autonomy activity. Second, I conduct a formal and dynamic thought experiments using a specialized agent based simulation environment, to test the theoretical propositions on the impact of decentralization. Lastly, I evaluate the simulation results using data on regional autonomy movements in nine European states.

Political decentralization and regional autonomy mobilization:

Explanations of autonomy mobilization usually include some reference to the cultural history and economic conditions that can drive autonomy demands. Research consistently shows, for example, that there is a positive relationship between a region's cultural differentiation from the rest of the state and the emergence of regional autonomy movements (De Winter and Türsan

1998; Rokkan and Stein 1983). More recently it has been argued that such cultural common denominators are not necessary to justify the existence and activities of regional autonomy movements (Fearon and van Houten 2002; van Houten 2000). Nevertheless, it is widely believed that autonomy demands are somewhat more likely to appear when political values are attached to a common language, history, ethnicity, and/or religion that renders a regional population distinctive from the rest of the inhabitants of the state.

Another strong consensus in the literature clusters around the realization that economic incentives constitute a fundamental explanation for the emergence of regional autonomy movements. To be sure, for many years scholars have strongly disagreed on this matter. One position held that economically poor and less developed regions (Sardinia in Italy, Corsica in France, and Galicia in Spain) have stronger incentives to demand autonomy and self-determination (e.g Hechter 1975).[7] Demands for autonomy emerge in these regions--among other methods--as a way to pressure national governments to guarantee a continuous flow of subsidies and other economic transfers from the center. Others vigorously disagree with this position, claiming that the strength of the economy is the condition that would be more likely to increase the emergence of regional autonomy mobilization (e.g. Gourevitch 1979).[8] Demands in favor of autonomy and separation, it was argued, are part of a struggle to advance regional influence and share of representation at the center over the development and resource extraction of the region's extensive economic infrastructure. This position has gained more support and is rarely challenged anymore these days (van Houten 2002, Sorens 2003).

The impact of *Political Decentralization* on the emergence of regional autonomy movements has garnered increasing interest and strong disagreements in the last twenty years or

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[7] Deutsch (1958), Rokkan and Urwin (1983), Horowitz (1985), Ragin (1979), and Nielsen (1980) make similar arguments. .

[8] Druker (1980), Nairn (1977), Fenwick (1981), Giordano (2000), and Harvie (1994) make similar arguments.

so. Contributions to the literature widely disagree on the relationship between the degree of institutional and political decentralization (e.g. devolution and transfer of power, self-governance, representation etc.) and the emergence of regional autonomy movements.

One tenet of the literature holds that political decentralization contributes to the emergence of regional autonomy movements (Rogowski 1985, Roeder1991, Treisman 1997, Hale 2000). The argument suggests that the devolution of power and the creation of regional self-governing institutions present local politicians with opportunities to further decentralize and expand the authority granted to the regional institutions. Autonomy movements are one of many mechanisms used to put pressure on the central government to agree to widen the jurisdiction of regional institutions.

Another influential group of scholars have advanced a diametrically opposed position arguing that political decentralization diminishes the likelihood of regional autonomy mobilization. Political institutions that facilitate the expression of local grievances and are capable of articulating immediate responses are more likely to decrease the motivations of regional autonomy entrepreneurs by increasing the likelihood of loyalty to the state (Hirschman 1970). Proponents of this position advocate that carefully designed institutions guaranteeing 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 regional autonomy movements.[9]

This debate, however, may be less contradictory than it appears. The relationship

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[9] Among the most prominent political institutions and electoral arrangements believed to undercut incentives to demand autonomy are proportional representation (Lijphart 1994, Sartori 1997), consociation and power sharing (Carment and James 2000; Lijphart 1994; McGarry and Oleary 1993; O'Leary 2001), and federative arrangements (Brass 1991; Elazar 1987; Hechter 2000; Riker 1964).

between the degree of institutional centralization and the emergence of regional autonomy

movements may depend on the initial level of decentralization. In other words, weak

decentralization, i.e. weak self-governing institutions, affects autonomy mobilization in one way,

while strong decentralization of power affects autonomy movements in a different way. It may

be reasonable to expect at least two patterns. First, that the broadening of the political influence

of regions without or with low self-governance would drive regional elites to demand more

autonomy. On the other hand, that the augmentation of self-governance in places with

significant political influence may reduce the likelihood of regional autonomy mobilization, or at

least diminish the likelihood that mobilization will aggravate contention between the region and

the center and lead to secession (Lustick, Miodownik, Eidelson 2004). It follows, in other

words, that the relationship between political decentralization and regional autonomy

mobilization may be non-linear.[10] "Talkenism" on the one hand, may just not be enough

accommodate all regional needs and wants, and may aggravate regional contentions. Even, more

significant empowerment, may not be enough to undercut the motivations of local elites to

demand autonomy, and may even invite other regional players to seek the satisfaction of local

agendas and interest. Lastly, motivations to demand autonomy and quest for self-determination

outside the state, may decline by devolving significant power to the region - allowing the self-

promotion of interest and goals, and by guaranteeing a significant regional impact on the

decision making process. Formally, then, one can expect that:

> The probability of regional autonomy mobilization rises with low levels of
> decentralization and declines with high levels of decentralization. Regional
> autonomy movements will be most likely to emerge in regions with medium levels
> of decentralization.

The previous discussion reconciled the disagreements between the two tenets of the

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[10] Kohli 1997, Hechter and Okamoto 2001, and Hechter 2000 present arguments along similar lines.

literature. As stated, I expect a non-linear association between political decentralization and the emergence of regional autonomy movements. These debates reflect, to some extent, assumptions on the reasons regional elites may engage in autonomy mobilization, and concerns about the trajectory of such mobilization, and above all the fear that it would spiral out of control leading to violence, and ending with secession. On the one hand, those who assume that decentralization may increase the likelihood of confrontation and secession may be more reluctant to take steps in that direction and would tend to emphasize the destabilizing aspects of decentralization. Others, however, may be more likely to expect that the devolution of power to regions and regionally concentrated groups will allow the state to better deal with regional demands, and hence support decentralization. In the next pages I shall describe and use agent-based simulation to evaluate these propositions. But before moving forward I must defend the necessity of using *agent-based* computer simulations to evaluate theoretical propositions. This is what I turn to next.

The case for agent-based simulation

Agent-based modeling is a computer-assisted methodology that allows researchers to design, analyze, and investigate artificial worlds inhabited by agents that interact with each other following pre-specified simple rules.[11] Rules that are derived from well-theorized and empirically established social mechanisms (Lustick 2000). This methodology is a particularly powerful way to develop, evaluate and test theories and to enrich understandings of complex social processes (Axelrod 1997; Macy and Willer 2002). Careful design and operationalizations 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"(Axelrod 1997) that are very difficult to conduct in the real world.

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[11] For general introductions see: Epstein and Axtel (1996), Axelrod (1997), Cederman (1997, 2001) Lustick (2000).

Examples of work that have already taken advantage of this methodology to study phenomena related to autonomy movements include work on mobilization (Bhavnani and Backer 2000; Epstein, Steinbruner, and Parker 2002; Lustick and Miodownik 2002; Lustick et al. 2004; Srbljinovic, Penzar, Rodik, Kruno 2003), identity diffusion (Axelrod 1997; Hoffmann 2003; Lustick 2000; van der Veen 2002; Rousseau and van der Veen 2005), the emergence of ethnocentrism (Axelrod and Hammond 2003), and the endogenization of borders and emergence of ethnic conflict (Cederman 1997, 2002).

It is imperative to remember, however, that I am <u>not</u> suggesting that computer models either can or should replace the study of events as they unfold in the real world. Nor am I arguing that simulations are capable of offering point predictions on the likelihood that an event will take place in the real world. Instead, I contend that prudently conceived simulation environments provide researchers with an experimental laboratory to conduct complicated thought experiments, produce distributions of multiple possible historical outcomes, to test the plausibility of causal mechanisms, and induce from simulations additional theoretical hunches for further consideration and exploration.

The agent-based model that I introduce in the next section does not presume, therefore, to represent any empirical reality and is incapable of predicting the future of any specific state. Instead, I use this method to systematically evaluate competing explanations for the impact of decentralization on the emergence of regional autonomy movements.

A simulation of a multi-regional and cultural state

For this project, I use Ps-I, an agent-based simulation platform originally developed by Ian S. Lustick and Vladimir Dergachev (Lustick 2002). The characteristics of the simulation

environments used in this paper have been already described in details elsewhere.[12] Lustick and his colleagues describe a simulation environment called BEITA they devised to represent a collections of elements held to be central by relevant theories, in countries that are relatively predisposed to the emergence of regional autonomy movements.

The experiments I conducted in this paper use both BEITA, and "BEITA clones." By "clones" I refer to simulation environments produced randomly with a script. These landscapes can be regarded as versions of BEITA as each represents similar patterns of power relations and identity distributions. "Clones" differ from BEITA (and each other) around the edge in their precise spatial configuration and the exact proportion of identity distributions. "BEITA clones" in other words introduce more noise and will be used to test the robustness of experiments conducted with BEITA. Before I continue let me briefly review the main characteristics of the simulation environments.

(a) The simulation environment: Several features render the simulation environment appropriate for conducting thought experiments to evaluate propositions on the emergence of regional autonomy movements. For example, BEITA and its "clones" feature a dominant--but not unitary--regime authority structure, radiating from a secure institutional core. The institutions of the regime within the borders include a variety of relatively decentralized structures with overlapping loyalties in areas of identitarian—or cultural--diversity. The simulation also includes one area of the country in which the regime appears as a rigid, unresponsive, and alien set of institutions, in contrast to a regionally predominant identity group deprived of any substantial authority structure or equal representation of its own.

The simulation grid is designed as a square shaped landscape or grid composed 4356

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[12] See Lustick et al.(2004: 213-217), and Miodownik (2005: 51-76)

agents/cells[13], divided into four quadrants or regions of equal size (Northwest, Northeast,

Southwest, and Southeast), and a border modeled as a ring comprised of 260 fixed and

unchangeable cells (see Figure 1.A).

Figure 1:A simulation of a multi-regional and multi-cultural state

A. The Grid

B. National Authority Structure

C. Regional Authority Structure

D. Simulation Environment

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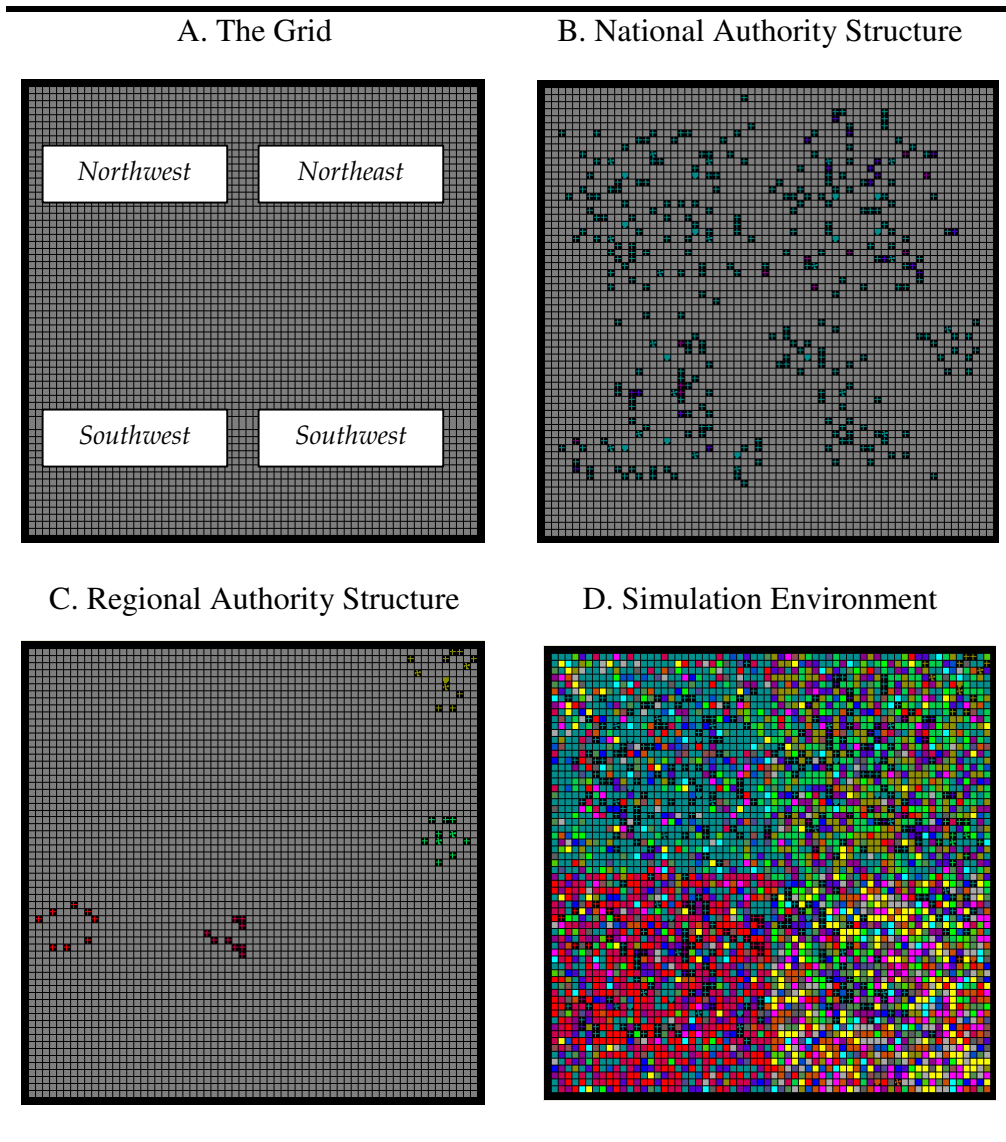
[13] An *agent* is the fundamental unit of the simulation. A spatial position characterized by specific combinations of traits, preferences, and rules of behavior.

Agents in the simulation are drawn out of five *agent-classes*[14]: *Basic, Influential2, Influential3, Influential4,* and *border-cell*. Each of the agent-classes, excluding the border-cell, is composed of active[15] and mutable[16] agents with a sight radius[17] of one. Border-cells are immutable and inactive; in other words, these agents do not interact with others, and are visually identified by their black color. Agent-classes differ by the level of influence of their agents. *Basic* agents have a level of influence[18] of 1, and are not marked by a special graphic icon. *Influential2s, Influential3s, Influential4s* have levels of influence of 2, 3, and 4 respectively, and are visually identifiable as cells marked with crosses, twisted-crosses and circles. Lastly, *border-cells* have an influence of 0 and appear on the grid as black cells.

Unlike the polity that is demarcated by a "physical" border, the four quadrants of the landscape are differentiated by patterns of overlapping and shared political identities represented in the agents' identity repertoire[19]. The upper left, or "northwest" (NW), quadrant represents the core—or institutional center--of the state. A national authority structure radiates out from this quadrant into the other regions in the polity (See Figure 1.B). The authority structure is comprised of agents drawn from the three influential agent-classes. Most of the agents in the Regime Authority Structure (RAS) at time=zero are activated on identity number 5, representing the current incumbent identity. Other agents are activated on identities, 4 and 13, "political opposition" to the incumbent that are an integral part of the national identities' repertoire. The

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[14] A specific cluster of characteristics that conceptualize distinct groups of agents. Defined in terms of activity/inactivity, mutability/immutability, influence, and sigh radius.

[15] *Active* agents share information with others regarding their preferences, and other characteristics. *Inactive* agents do not share information with others.

[16] *Mutable* agents collect information on the preferences and characteristics of the agents with whom they interact. *Immutable* agents do not collect any information.

[17] The local space each *mutable* agent surveys to collect information on the preferences and characteristics of others (also referred to as the size of the agent's *neighborhood).*

[18] The relative importance that others attribute to the messages that they receive from members of a specific agent-class.

[19] A specific identity combination of each individual agent. An agent is *activated* on one of the identities in its repertoire and *subscribed* to the rest.

authority structure is most dense in the core of the polity (northeast), and more thinly spread, although still quite substantial, in other parts of the state. The strongest levels of regime authority are represented by including in the center of the RAS, a few *influential4*s, whose identity repertoires are comprised exclusively of the three national identities. Medium levels of authority are simulated with *Influential3s* whose slightly larger identity repertoire include regionally prevalent, in addition to the national, identities. Lowest levels of regime authority are represented with *Influential2* whose repertoire include to regionally prevalent and very local identities along with the three national identities. More details on the distributions of agent-classes and identities in the simulation environments are available in Appendix 1.

Two regions, northeast and southwest, simulate relationships of multi-cultural states based on principles of multicultural liberalism and/or federalism. The tolerant and accepting relationship between the national state and the regions is represented in two ways; by the representation of regionally prominent identities in the mid- and low-levels of the RAS in those regions, and by the fact that the most prevalent regional identities in these areas enjoy a small separate regional authority structure (SRAS) (See. Figure 1.C).

Not all the regions of this state enjoy an equally tolerant and cooperative relationship with the polity's core. Indeed, it is not uncommon to find states in the real world that implement differential standards towards groups and regions within the same country. In some cases, a state may empower some groups and regions while refusing to acknowledge and accommodate others.[20] The southeastern quadrant simulates as such region – a place that is only poorly integrated within the state. One of the features in this region is the presence of the dominant

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[20] For example, think about the differential treatment of the French government toward Corsica as opposed to many other regions in the country (particularly in the south). Another example is Spain, in that its constitution recognizes the historical rights of some regions regarded as "historic nationalities" (Basque, Catalonia, and Galicia) but not the rights of their "co-nationals" in other regions of Spain or the a-priori rights of other regions in Spain to be regarded as a "historic nationality" as well (e.g. Andalucia).

regional identity, 10, in the repertoires of a majority of the agents in the region. The estranged

relations between the state and this region are represented in three ways. First, it is reflected in

the low activation rate of identity 10 in the region at time zero. Second, it is represented by the

complete absence of identity 10 from the repertoires of the agents in the regional branches of the

state authority structure. Third, it is reflected in the presence of a small but highly influential

fringe of regional political entrepreneurs activated at time zero on identity 10. The southeast

features another regional identity (16), representing a historically distinct and somewhat

antagonistic identity vis-à-vis the regionally dominant identity. As is typical in many countries,

this identity represents a regional ally favored by the regime against a regionally dominant

identity.[21]   The close affiliation between the favored identity and the state is reflected in the

inclusion of the three national identities (5, 4 and 13) in the repertoire of all the agents activated

on identity 16.

Neither BEITA nor any of its "clones" is a universal template for simulating ALL the

issues that may be involved in explaining the entire range of types of autonomist activities.

Instead, it should be regarded as a specialized tool, useful for exploring the extent to which the

emergence of autonomy movements is affected by variation in specific characteristics of the

state.

(b) _Rules guiding interaction of agents_: Every other time step[22] each agent "decides"

whether to maintain or change one of the activated or subscribed identities in its repertoire.

Underlining this approach is a notion that identities--held either individually by people or

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[21] What I have in mind here are groups and identities like the Druze in Israel, non-Sunni Arabs in French ruled Syria, as well as immigrant groups to Wales and Scotland in the 19th century – regional groups that are favored by the state and use at times to enhance its influence in the regions.

[22] The chronometric meaning of a time step can differ from simulation to simulation depending on the study. The most important think to remember, for the purpose of the current section, is that time steps are fixed time units during which agents interact.

collectively by groups or states--are not fixed but rather are potentially open for evaluation and can change or solidify over time.[23] The simple algorithmic rules used in the simulation are not designed as an operational definition of any one theory of social psychology, nor of constructivist identity theory for that matter.[24] These rules, however, are consistent with the theories in social psychology and related fields that attempt to explicitly define and to describe condition affecting identity formation and change -- partly as a response to external information regarding the general attractiveness of an identity or its suitability to a specific social context.

Accordingly, agents in the simulation update their behavior by monitoring identity cues[25] and aligning their activated identities with the identity most prominently activated in their neighborhoods. On an updating time step every mutable agent computes identity weights for each of the identities in its repertoire and the activated identities of its neighbors, taking into account cues for these identities and the influence levels of all the agents in the neighborhood. The identity weight of each identity (*i*) in a neighborhood of agents [A][26] is the sum of the influence level of all the agents activated on *i (activated*[A] = *i)* in that neighborhood of agents (*Influence*[A]) plus the *identity cue* assigned to *i*.

$$\textit{Identity weight}_i = \sum_{\substack{\textit{activated}[A] = i \\ A \in \textit{neighborhood}}} \textit{Influence}[A] + \textit{identity cue}_i$$

Each agent compares the weights of the identities in its repertoire and the *activated*

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[23] The process of identity formation and change and its effects on the behavior of individuals and groups has been extensively studied in the field of social psychology and described in theories on conformity, social identity and self-categorization (Asch 1956; Tajfel and Turner 1986; Turner, Hogg, Oakes, Reicher, and Wetherell 1987; Turner and Reynolds 2001). Similar processes, it has been suggested, affect changes in state identities over time (e.g. Wendt 1992).

[24] For conceptual debates surrounding constructivism and using agent-based modeling in developing constructivist identity theory see Lustick (2000), Lustick et al. (2004) and Rousseau and van der Veen (2005).

[25] Parametric information on utility associated with each of the identities available in the simulation.

[26] The symbol ∈ indicates that that A is part of the neighborhood.

identities of its neighbors and identifies candidate identities that, under certain conditions, could be *discarded, rotated, swapped-out,* or *acquired* or *stay the same.* Table 1 contains a summary of the rules guiding agents' interactions and identity updates.

Table 1: Summary of rules of interaction and identity update

IF…	***THEN…***
• The activated identity is as attractive (or more attractive) than any other identity in the agent's repertoire or its neighborhood…	• The agent remains activated on the same identity.
• An identity in the agent's repertoire is significantly more attractive than the activated identity (i.e. the difference between the identity weights is larger than or equals the *rotation* threshold)…	• The agent *activates* the more attractive identity (i.e. *rotate* candidate), keeping the previously activated identity in its repertoire.
• An identity in the agent's neighborhood is significantly more attractive than any non-activated identity in the repertoire (i.e. the difference between the identity weights is larger than or equals the *substitution* threshold)…	• The agent replaces the more attractive identity (i.e. *acquire* candidate), with the least attractive identity it is subscribed to (i.e. *swap-out* candidate).
• An identity in the agent's neighborhood (absent from its repertoire) is significantly more attractive than the activated identity (i.e. the difference between the identity weights equals or is larger than the *substitution and activation* threshold)...	• The agent adopts and activates the more attractive identity (i.e. *acquire* candidate), replacing it with the least attractive identity in its repertoire (i.e. *discard* candidate).

(c) The outcome variable-Regional Autonomy Movement: The emergence of a regional autonomy movement in these simulations is represented by the transformation of some agents into *border cells* - small spatial zones of separation comprised of *mutable* and *inactive* agents. The presence of border-cells in the simulation changes the flow of information in the landscape. For example, because border-cells are not included in the relative identity weight calculations of an agent's neighborhood, their presence in an agent's neighborhood decreases the likelihood that the agent would switch its activated identity. The transformation of border cells represents, therefore, the behavior of a RAM in the real world; it affects the salience of regional issues by

separating communicative spaces that represent realms of regional and non-regional influence, identification and interests.

The specific rules governing the emergence of border cells were designed to conform to basic and consensual understandings of regional mobilization as they appear in the scholarly literature. Although there is very little consensus on the necessary and sufficient conditions for RAMs (i.e., economic incentives, cultural differences, and political institutions), most theoretical framework of the emergence regional autonomy movements contain a common set of fundamental assumptions. These assumptions generally require the satisfaction of three conditions: alienation, nontrivial size, and tension with other sources of identification.[27]

The first of these conditions assumes that regional autonomy movements will not appear without a deep polarization in society and the alienation of one or more identities from the central political realm. Therefore, RAMs are less likely to appear in the most integrated regions, and are more likely to appear if and when integration fails. The second condition (b) presumes that regional autonomy movements will not appear without the subordination of small, but not negligible, identities and regional interests. Hence, RAMs can only emerge on behalf of an identity with a substantial activated presence in the state. The third condition supposes that regional autonomy movements will appear only in regions that are subject to social and political tensions that serve to politicize certain identities or interests. In other words, autonomy demands

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[27] These conditions resonate with others mentioned as necessary to the appearance of other forms of social boundaries. Tilly (1998 p. 10), for example, suggests that mechanisms of *exploitation* and *opportunity hoarding* drive the appearance of social boundaries. According to this account, the appearance of boundaries is driven by the alienation and exclusion of regions and populations from enjoying their share in the goods provided by the state (i.e. what I called *polarization*). However, Tilly stresses, boundaries emerge not only externally, i.e. as a result of a group being bounded by the center, but also 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 (i.e. what I refer to as *subordination*). 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) (i.e. what I refer to as *disharmony* and tension).

are more likely if people, for example, experience strong and antagonistic relations with others which may increase the political saliency of their identity. Figure 2 presents a typical snapshot of a run with a regional autonomy movement in the southeast after 208 time steps.

Figure 2: A landscape with a regional autonomy movement in the southeast [a]

Northwest   *Northeast*

Southwest   *Southeast*
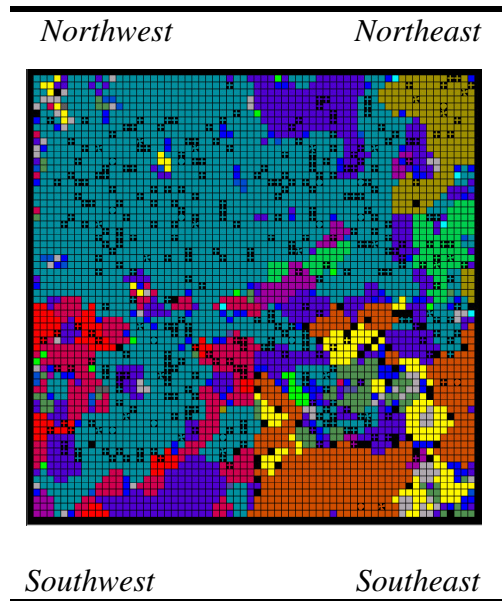
[a] Snapshot taken at t=208

(b) The Independent variable-Political decentralization: Earlier I suggested that two of the quadrants of the landscape (NE and SW), were designed to represent areas which regionally prevalent groups can articulate and promote local interest by affecting a relatively responsive state bureaucracy, and/or developing their own regional political institutions. In the southeast – in the region with the potential for RAM – the state administration is insensitive to regional identities and interests, and the have no institutional opportunities that facilitate the independent articulation and promotion of regional agendas. Political decentralization or the devolution of power in this region is modeled by increasing opportunities for the *representation* of regional interests, goals and identities within the existing state authority structure in the region. The experimental manipulation models representation of interests and identities associated with the

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southeastern region by adding the dominant regional identity (10) to the repertoires of agents in the regional branch of the bureaucracy and activating that identity.[28]

Experimental design and Results

(a) *Experimental design*: The operational definition of decentralization was used as the basis of an extensive experimental design. The experiments permit looking at the effects of decentralization on the emergence of regional mobilization across different levels of *representation*, and in comparison to the consequences of mobilization in places with no political decentralization (the baseline). A single iteration of experimental condition represents, of course, just one of many possible trajectories. By running replications of each experimental condition it is possible to test the robustness of the outcomes and use conventional statistical procedures to compare outcomes across levels of the manipulation.   Keeping these goals in mind, the experiments were repeated twice. The first set of experiments was conducted using the snapshot BEITA as a baseline. The second set of experiments follows a very similar protocol, but rather using BEITA, it uses "BEITA clones" – snapshot with similar characteristics but slightly different spatial configuration and proportions of identity distributions.

Let me describe the first experiment in some details, and then provide a few brief details about the second one. The first step in the experiment is to order PS-I to load BEITA and to produce 200 mirror images of the snapshot. To allow for variation in the "futures" or "trajectories", PS-I draws and assigns a random seed unique to each of the 200 versions. The seed determines the evolution of different stream of perturbations, or *identity cues*, for each version of BEITA.[29] Once all the snapshots were created, PS-I is told to load the first of the 200

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[28] Simulation experiments using alternative operational definitions of decentralization (e.g. Semi-autonomous institutions) produced very similar data patterns and are not presented here.

[29] The cues, recall, provide parametric information on the general attractiveness of any identity or interest in the field.

versions and run it for 208 time steps, starting with a rapid "scrambling"[30] of the identity cues during the first eight time steps. The scrambling of the cues adds an additional element of randomness affecting the distribution of identity cues and thus accounting for the kind of unpredictable "accidents" that may have a significant impact on the unfolding of historical events. The scrambling procedure, however, is more than just the perturbations of identity cues that provide unpredictable accidents. The scramble is a proxy for a long prior history of such accidents. The first run establishes one of the 200 "observations" that constitute the baseline (i.e. no decentralization). From there on, PS-I continues and begins to implement the experimental conditions. It loads the first unique version of BEITA again, seed 20% of the state's bureaucracy with regional *representation*, saves the snapshot and runs it 208 time steps into the future. PS-I then loads the saved snapshot, implements the second level of the manipulation (adds more *representation* – 20% of the original size of the bureaucracy, and overall 40% *representation*), saves the snapshot and runs it. The same procedure is repeated for each of the three remaining levels of *representation* (transforming 60%, 80%, and 100% of the bureaucracy), and then again for all five levels of *semi-autonomy institutions* (beginning by seeding the region with minority influence that equals 20% of the size of the bureaucracy).

The second set of experiments, I already suggested, repeats a rather similar protocol beginning by using a script to produce 500 "BEITA clones", assigning random seeds, and generating a baseline. In a somewhat different fashion, PS-I generates a new set of "clones" for each level of decentralization. This way it is possible to examine the robustness of results observed in the previous round. In addition, in order to test whether result are sensitive to the

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[30] Each run begins with eight initial time steps during which the likelihood of change of a cue associated with any given identity is very high (volatility=50% compared to 0.5% during the history itself). This has the effect of "scrambling" the identity cues and allows the history to being from a less artificial "calm" position.

arbitrary values of the *identity cues range* (-2,2) and *volatility*[31] (0.5%), PS-I was order to repeat

both sets of experiments using with a wider *range* (-3,3), and larger *volatility* (1%). Overall,

running through the entire experimental design (both experiments and the sensitivity

replications) generated 8400 observations (or "histories").

      *(b) Simulation Results***:** Let me turn now to the results of these simulation experiments. The

experiments reveal a strong association between the experimental manipulation and the agents'

transformation into border-cells. In other words, the results indeed re-affirm the expectation that

the devolution of political power to the region does affect the overall likelihood of regional

autonomy mobilization. Lastly, the simulations do corroborate the expectation of a non-linear

association between the level of political decentralization and the emergence of regional

autonomy movements.

      Figure 3 presents information on the emergence of regional autonomy movements by

level of the manipulation and across all sensitivity conditions. Each data point indicates the

percent of experimental iterations (per condition) during which at least 10 agents in the

southeastern region of the snapshot altered their *agent-class* to become border-cells.[32] To test

the significance (in statistical terms) of the patterns reveled in the data I employed two different

F tests: global means comparison, and one-way analysis of variance (ANOVA) post-hoc

comparisons. The global F test assesses whether group means on the outcome variable are

attributed to differences between groups (the five experimental conditions) rather then variations

within groups. In addition the F tests checks whether mean differences across experimental

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[31] Recall that the range restricts the magnitude of positive/negative incentives to activation. Volatility determines the likelihood that a change any identity cue will take place in the next time step.

[32] In order to avoid the kind of type two errors (attributing significance to a phenomenon when in reality it is not), a minimal number of 10 border-cells had to appear before coding a history as one with RAM (representing 2 standard deviations below the mean number of border agents that appeared in 200 iterations of BEITA baseline). This threshold seems reasonable given than fewer than 10 border cells appeared only in about 5% of the histories produced in all the experimental conditions reported in this study.

groups vary in a linear and non-linear trend. The ANOVA test, in contrast, pairs all possible combinations of two experimental conditions, and tests whether means of the outcome variable are significantly different across the two groups.

Figure 3: The Impact of Political Decentralization on the emergence of RAM (Percent of runs with border-cells)
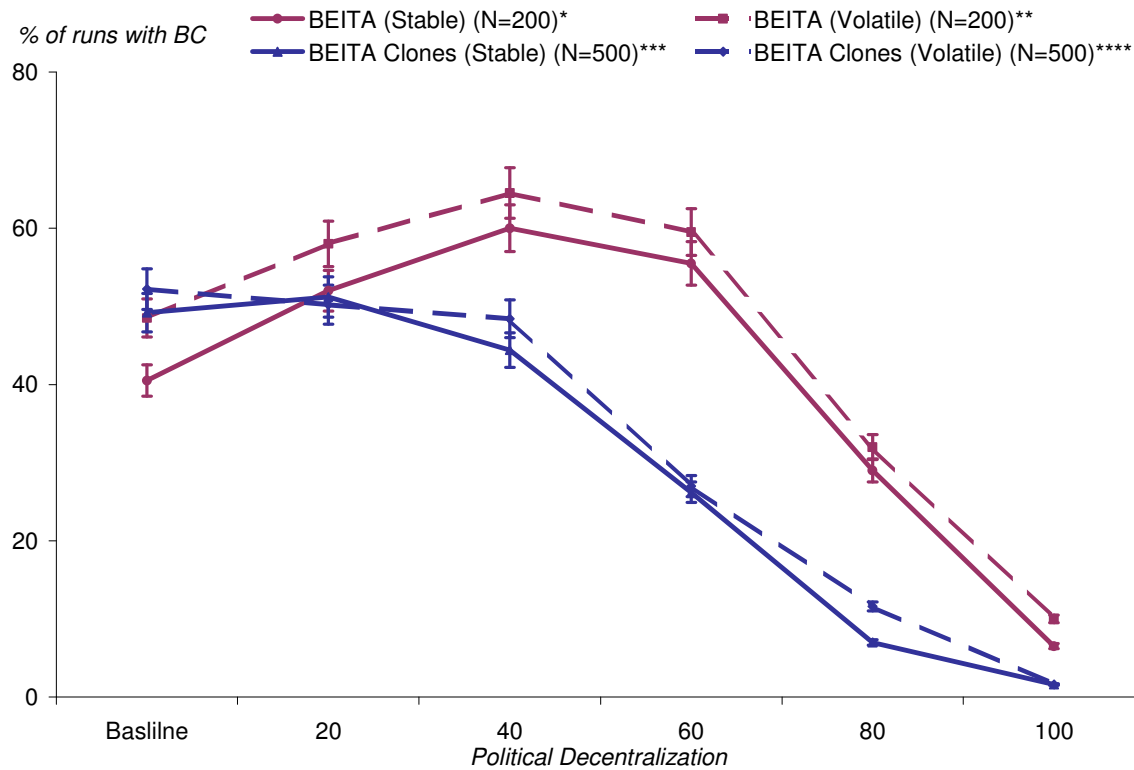
* $F_{Combined} = 38.9$ ($F_{Linear}= 81.3$, $F_{Non-Linear} = 28.3$),   ** $F_{Combined} = 40.7$ ($F_{Linear}= 101.9$, $F_{Non-Linear} = 25.4$)
$F_{Combined}= 139.3$ ($F_{Linear}= 633.3$, $F_{Non-Linear} = 15.8$), * $F_{Combined} = 133.5$ ($F_{Linear}= 611.7$, $F_{Non-Linear} = 13.6$)

Let me review several of the patterns in Figure 3. For the sake of simplicity I am going restrict the discussion of result pertaining to iterations using version of BEITA. When appropriate, I will refer to some of the other robustness and sensitivity conditions in order to clarify or complement these results.

The first thing to notice is the different effect of the manipulation in low versus high

levels of the experimental conditions. Low levels of political decentralization maintain similar levels and even increase the percent of histories in which regional autonomy movements appear. Border-cells appear in 40.5% of the iterations of the baseline, in 52% of the runs under the first experimental condition (20 political decentralization), and in as many as 60% of the runs with 40% political decentralization. A similar pattern (although with larger likelihood of RAM) appears even if one applies a more volatile set of parametric conditions.

Results of iterations using the BEITA "clones" raise some concerns regarding the robustness of this pattern. Figure 3, clearly shows that the percent of histories with RAMs even when decentralization reached 40% did not differ significantly than the baseline. This may suggest that the pattern described earlier is driven more by the particular configuration of BEITA, and need not be seen as an indication of a more general pattern. Regardless of this variation, it is important to notice that results from both BEITA and BEITA "clones" suggest that regions with low levels of political decentralization are more conducive to regional autonomy movements than places with stronger levels of decentralization.

Indeed, strong levels of political decentralization affect a decline in the percent of histories with regional autonomy movements. Border-cells appear in 55.5% of the iterations of BEITA with 60% of political decentralization, in 25% of the runs with 80% decentralization, and only in 6,5% of the histories when the manipulation reaches its strongest levels. In addition, figure 3 suggests similar patterns under all robustness and sensitivity conditions. Notice, however, that BEITA "clones" register a statistically significant decline in the percent of runs with border-cells as the experimental condition rises from 40 to 60. The likelihood of RAMs in the BEITA landscapes, on the other hand, declines as the manipulation is set on 60% decentralization, but a statistically significant shift in the appearance of RAM appears only when

the manipulations reaches 80%. Nevertheless, this robustness and the other sensitivity tests produce very similar patterns of decline in the likelihood of RAMs at the higher level of experimental conditions, suggesting that this trend is not driven by the particular design of BEITA.

In conclusion, these simulations offer mixed support for the hypothesis presented earlier. The simulations were unable to neatly reproduce the expectation that the likelihood of RAMs would rise in weakly decentralized states, peak in moderate regions with moderate levels of decentralization, and decline in strongly decentralized states. This expectation was corroborated in iterations using BEITA, but not in experimental runs using BEITA "clones". This suggests that the pattern revealed in BEITA may be driven by the particular spatial configuration of the landscape. Nevertheless, results do reinforce the overall expectation of a non-linear association between the level political decentralization and the appearance of RAM. The simulations suggest, as anticipated, that the likelihood of regional autonomy movements is driven (at least partly) by the relative strength of political institutions and degree of centralization. Insubstantial decentralization maintains the same outcome and may in some places (e.g. BEITA) even increase the probability of regional autonomy mobilization. Substantial decentralization, on the other hand, diminishes the motivations for demanding autonomy.

Model Evaluation

It is common and natural for questions to be raised about the "empirical validity" of computer simulation models. Indeed, as there are limits to other approaches, there are also limits to agent-based modeling simulation. For example, one challenge appears in developing techniques to avoid "building" the simulation results in the design of the experimental landscapes. What is important, however, is whether the assumptions built into the virtual world

are so radically different from conditions in the "real world" to the extent that inferences about the latter from the former cannot be justified. There is no intrinsic difference between the use by agent-based modelers of an explicitly constructed virtual world as the proxy of a real-world and the use by researchers employing other traditional techniques of the implicitly virtual worlds that arise from their assumptions and coding rules as the backgrounds against which their hypotheses are tested (or "validated").[33] Keeping this in mind, I believe that agent-based modelers, and the simulation methodology, have much to gain by evaluating inferences made against "real world" observations in the form of large N dataset, amalgamations of case-studies or a combination of both.

To evaluate the simulation described in this paper, I build upon the extensive tradition of the study of nationalism, regionalism and ethno-regionalism in Europe, and on the reliability and accessibility of statistical information produced by these efforts. The data set I compiled includes complete statistical information on 113 regions in nine European states: Germany, Belgium, France, Italy, Spain, United Kingdom, Netherlands, Portugal and Greece. The unit of observation - a region - is the administrative, geographical, and politically meaningful level located at the level immediately beneath the state.[34] This level of analysis is the most appropriate for studies such as this one designed to evaluate the effects of regional variations on the emergence (or absence) of regional autonomy movements.[35]   These states together represent a continuum of Europe's geographical (south –north), historical-cultural (language, religion), and economic divides. Furthermore, each of these states exhibits similar domestic cross-regional

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[33] See also Lustick et al (2004) pp 211-212, and 224-225.

[34] Regio's/Régions (Belgium) Régions (France) Länder (Germany) Development regions (Greece) Regioni (Italy) Provinces (Netherlands) Commissaoes de coordenaço (Portugal) Comunidades autonomas (Spain) Standard regions (United Kingdom)

[35] For an overview of several advantages and trade-offs in conducting comparative studies using sub-state rather than state level observation see Snyder (2001).

cleavages between poor and affluent regions, regions with strong local cultures and regions with no unique cultural characteristics. Lastly, the states included in the data set vary by the institutional mechanisms of administrative centralization between the political center and the more peripheral regions: constitutionally federal countries (Belgium and Germany), states with varying levels and types of regional decentralization (Spain, Italy, France and the Netherlands), unitary centralist states with special decentralized arrangements for some regions (United Kingdom and Portugal), and unitary states with no decentralized regional privileges (Greece). Lastly, the regions in the data set exhibit significant variation on the dependent variable.

(a) Dependent variables: regional autonomy movements: Typically studies of regional mobilization, use ethnoregional political parties as the preferred proxy measure for the presence (and relative strength) of the regional autonomy movement (De Winter and Türan 1998; Fearon and van Houten 2002; Lane, McKay, and Newton 1997; Muller Ferdinand 1998; Rose and Urwin 1975). A regionalist party is a party that presents candidates for national elections in at least one region or in a subset of the regions of the state but never in all of them. Keeping in mind that any list of parties is sensitive to a-priori definition and any definition is "arbitrary 'around the edge' and open to dispute" (Fearon and van Houten 2002 p.14 fn 21), I construct two dependent variables: *AUTOMOV*, and *AUTOSTR*.

AUTOMOV assigns the value 1 to all the regions with an active political party or parties that have presented candidate(s) for at least two national elections between 1990-2003. The list include only parties that presented their own list of candidates or that contested elections in a coalition with other regional parties, but not as part of a coalition with national parties.[36] Regional autonomy movements represented by parties that adhere to the first rule alone are

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[36] This excludes for example the *Christian Socialist Union* (CSU) in Bavaria that contest national elections jointly with *Christian Democratic Union* (CDU), *and* includes coalitions of regional parties contesting in one regions like *Bloque Nacionalista Galego* (BNG)

typically weak and do not attract much support. The list includes parties in 43 regions spread across seven of the nine countries surveyed (all but Greece and the Netherlands).[37]   This operational definition identifies mobilization in places that are typically excluded from most comparative analysis of RAMs it includes weak regional autonomy movements in France, the Portuguese Atlantic Islands, Bavaria, and several regions in Spain and Italy, as well as regions such as Corsica and Alsace and the Balearic Islands in which regional parties have mobilized a significant share of the regional electorate - typically more than 3% - but have failed to gain seats in the national parliament.

The second dependent variable *AUTOSTR* assigns the value 1 only to regions with relatively strong regional autonomy movements. In these places, at least one of the regional parties managed to attract sufficient support to send at least one representative to the national parliament. The 22 regions coded 1 include some of the most "famous" (and studied) cases of regional autonomy mobilization. For example: the Flemish and the Walloon region in Belgium; Catalonia, Basque country, and Galicia in Spain; regions of Northern Italy; Scotland, Wales and Northern Island in the UK. This operational definition identifies parties in regions that have been relatively less visible such as Aragon in Spain, in which two political parties--*Partido Aragones Regionalista* (PAR), and the *Chunta Aragonesista* (CHA)--have managed to attract the necessary levels of support to elect representatives to the national parliament (PAR in 1989 and 1993, CHA in 2000)[38]

(b) Independent variable: political decentralization: The variable *DECENTER* codes the extent to which regions exercise independent and decentralized political authority and take part in national or European decision-making. The coding scheme follows closely in the footsteps of

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[37] See appendix 2 for the complete list of regions and parties in regions.
[38] CHA also won a seat in the national parliament in the 2004 elections.

Hooghe and Marks (1996) and Marks, Haesly, and Mbaye (2003). Inspired by the work of

Daniel Elazar (1987), the authors developed a scale that captures several dimensions of a process

of political decentralization with a special emphasis on regional self-governance and power

sharing.[39] All the 113 regions in this data set had a score of 1 or higher. Overall, regions in

federal systems naturally tend to score higher on the self-governance scale, however, this

relationship is not a perfect one. German regions enjoy the highest levels of self-governance

while the Flemish and Walloon regions of Belgium enjoy level of self-governance similar to

those reserved to the Spanish "historical nationalities" and some other regions with special

arrangements in Italy. On the other side of the spectrum, I find the lowest levels of self-

governance in Greece, the English regions, and the continental Portuguese regions.

   (c) Controls: To control for alternative cultural and economic explanations for

mobilization, I code for language and religious differences, historical background, and economic

indicators.

   Language. Differences between the region's historic language and the state's official

language is one of the most commonly used proxies for cultural differences. [40]

The variable *LANGUAGE* counts the number of common "steps" the regional historic and the

state official languages share in their linguistic "address" (Laitin 2000: 148-149).[41] The higher

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[39] Lane and Ersson (1999), Andrés Rodríguez-Pose (1998), Sorens (2003) operationalize this concept somewhat differently. Coding the regions in the dataset using the rules offered by each of these operational definitions suggests that the weakest correlation between any pair was 0.88. In fact, the statistical analysis suggest that using either one of these proxies (with the exclusion of Lane and Ersson the proxy used by van Houten (2000)) yields outcomes indicating to a strong (and non-linear) association between the level of political decentralization and the likelihood of regional autonomy mobilization.

[40] Typically, studies use estimate of the number of people that speak a regional language, estimates that may conflate the explanation (language) with what one wishes to explain (regionalist and autonomist demands), since the number of people with regional language proficiency may be in fact one of the outcomes of the processes of mobilization (see van Houten 2000; Fearon and van Houten 2002; Laitin 2000).

[41] Laitin proposed using linguists' classifications of languages into "language families" (Grimes 1996) and code how *different* the languages are by counting The "address" of *Standard German*, the official language of Germany, for example, read from right-to-left, chronologically, and from most to least general, is: *[Indo-European/Germanic/West/High German/German/Middle German/East Middle German/Standard German]*. The

the number of "steps" the languages have in common, the more similar the two are. In order to construct this variable I used the most recent edition of *Ethnologue* (Grimes 2002). I assigned the value 10 to regions with a historic language identical to the state's official language. I rescaled the variable dividing each value by 10. This produced a scale ranging between 0.1 in regions without a difference language than the official language of the state and 1 in regions with strong language differences (see also Laitin (2000) and Fearon and van Houten (2002)).

Religion. A second operational definition of cultural differences evokes religious differences between the center and the region. Regions were coded 1 if a plurality of the regional population shares a denominational affiliation different than the most prevalent religious group in the state capital's region. Although substantively religious difference may have an effect regional mobilization (e.g. Northern Ireland), I do not expect this variable to return significant results given the small number of regions in the dataset (8) that exhibit variation in religion.

History. To control for the effect of differences based on divergent historical trajectories, I assign the value 1 to regions with a prior history of independence, as well as to places that were the capital region of an independent state at any time since 1648, the year of the treaty of Westphalia, that signify the inauguration of the modern state system (see also Sorens 2003). Regions are coded 1 even if they experienced very short periods of independent self-rule that was never recognized by the state's center.[42] On the other hand, regions were not coded as

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address of *Austro-Bavarian*, the historic language of Bavaria, is: *[Indo-European/Germanic/ West/ High German/German/Upper German/Bavarian-Austrian/Bavarian]*. Standard German and Bavarian have 5 "steps" in common hence the Bavarian language gets the value 5.

[42] Overall, eight of the regions in the dataset receive the value 1, denoting historic independence: Bavaria maintained its independence until it joined Bismark's Germany in 1871. Veneto kept its independence until the Napoleonic wars (1797). Campania was the capital region of the Kingdom of the two Sicilies in the late 18 and early 19 century. Piedmont was the capital region of the Kingdom of Sardinia until the Risorgimento and the reunification of Italy (1861). Scotland kept its separate parliament and crown until 1707. Corsica enjoyed a few short years of virtual

independent even if the current administrative boundaries include historic provinces that have experienced political independence (mainly in France, Italy, and Germany) while the regions as a whole did not.

Regional GDP per capita (RGPPC) is the indicator I use to control for the impact of economic incentives on the emergence of regional autonomy movements. Data on regional GDP in purchasing power parities (PPP) is readily available in the REGIO dataset (2003). The regional values for the years 1990 to 2001 were first normalized for each year (by considering the national average as 100), and then averaged over the entire range of years.[43] (1991-2000).

The size of regional economy (RSHARE), i.e. the contribution of the region to the national economy, is the second economic indicator I include in this analysis. Using this measure of the economy, I control for the possibility that not the strength of the economy but rather the overall regional contribution to the national economy provides strong (economic) incentives to demand autonomy. I compute the percentage of regional share of the total national GDP and average it for all available years. To smoothen the strongly skewed distribution, I transform this variable using a natural log (LNSHARE). The key statistical information of the dependent and independent variables are summarized in table 2.

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independence in the middle of the 18 century. Catalonia and the Basque country enjoyed a short-lived independence in 1931.

[43] Data is not available yet for all the years in which I observe the dependent variable (1990-2003), and on East German prior to 1991. Different methods of data imputation as well as selection of indicators for one of the years in the entire range (1995) (van Houten 2000) does not change fundamentally the nature of the coefficients in the statistical models.

Table 2: Descriptive statistics of the variables (N=113)

Variable	Mean	S.D.	Median	Min	Max
AUTOMOV - *autonomy movement (n=43)*	0.38	0.49	0	0	1
AUTOSTR – *Strong movement (n=22)*	0.20	0.40	0	0	1
LANGUAGE – *Language differences*	0.20	0.18	0.1	0.1	1
HISTORY - *History of independence*	0.07	0	0.26	0	1
RELIGION - *Religious differences*	0.07	0	0.26	0	1
RGDPC - *Relative regional GDP per capita*	93.12	19.83	90.26	53.07	175.14
RSHARE - *Regional share of national GDP*	6.24	7.43	3.65	0.26	57.87
LNSHARE - *Natural log of RSHARE*	1.39	0.94	1.29	-1.33	4.06
DECENTER - *Political Decentralization*	4.65	2.54	4	1	10
DECENTER^2 - *Decentralization Squared*	28.09	27.17	16	1	100

(d) Analysis: In the analysis, I use logistic regression to generate estimations for two dummy dependent variables.[44] Table 3 shows results of four statistical models. The first two (models 1a and 2a) estimate the relationship between the outcome variable (AUTOMOV and AUTOSTR respectively) and all the independent explanatory variables discussed above. Models 1b and 2b present more accurate coefficient estimates obtained after repeating the analysis only with variables that appeared statistically significant in the first round. To test for non-linear effects of decentralization, I include in the analyses the square term of the variable *DECENT*.

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[44] Several additional statistical procedures were used to estimate similar models (a) I used the two dummy variables to construct a 3 category RAM scale (no RAM to strong RAM), and generated estimations with both multinomial and ordered logit regressions; (b) I disaggregated the data over a longer period of time (1980-2004) and estimated a model using a binary time-series cross section analysis (Tucker 1999). The different analyses retuned coefficients which magnitude and direction were very much in line with those reported in table 3. In this paper I present results of the logistic regression that permit a more straightforward and intuitive interpretation of the coefficients.

Table 3: Logistic regression: variation in RAMs across 113 European regions

| | (AUTOMOV) [a] | | | | (AUTOSTR) [b] | | | |
	1(a)		1(b)		2(a)		2(b)	
LANGUAGE	6.33*	(2.47)	6.81*	(2.40)	2.51	(1.78)		
HISTORY	2.06	(1.73)			0.58	(1.26)		
RELIGION	0.68	(1.10)			2.62	(1.88)		
REGDPC	0.04*	(0.02)	0.03*	(0.02)	0.04[+]	(0.02)	0.04*	(0.02)
LNSHARE	0.38	(0.33)			1.23*	(0.46)	1.30*	(0.44)
DECENTER	4.24*	(1.00)	3.80*	(0.82)	7.23*	(2.18)	6.00*	(1.54)
DECENTER^2	-0.37*	(0.09)	-0.32*	(0.07)	-0.60*	(0.19)	-0.50*	(0.13)
CONSTANT	-15.85*	(4.49)	-14.19*	(3.00)	-27.12*	(7.11)	-23.40*	(5.40)
N	113		113		113		113	
-2 log likelihood	81.21		85.19		53.12		57.53	
χ^2	68.93		64.95		58.29		53.88	
Cox & Snell R^2	0.50		0.44		0.40		0.38	
% Correct	85.8		82.3		90.3		92.0	

*p<0.05, [a] 43 regions coded one for a regional party that contested national elections between 1990-2003, [b] 22 regions coded one for a regional party sent representatives to the national parliament.

A quick glance at table 3 shows that political decentralization explains significant parts of the cross regional variation amongst regions with regional parties contesting elections (*AUTOMOV* – model 1b), as well as the differences between places with strong regional parties (*AUTOSTR* – model 2b) and other regions included in the sample.[45] Furthermore, the directions of the coefficient (positive for *DECENTER* and negative for *DECENTER^2*) support the expectation of a non-linear (curvilinear) relationship between levels of political decentralization and the emergence of autonomy movements. The coefficient estimates of the *LANGUAGE* variable, on the other hand, were significant in the model 1b but not in model 2b suggesting that language differences is an important mechanism explaining why RAMs appear in some regions and not in others (*AUTOMOV*), but does not help explaining the emergence of strong regional

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[45] A separate analysis (not reported here) that includes country dummy variables suggests no significant cross-country differences.

autonomy movements in some regions (*AUTOSTR*). Concerning the economy, the analysis indicates similar and diverging patterns in each of the models. The strength of the regional economy (*RGDPC*) sort out regions with and without autonomy movements (model 1b), while both strength and size of the economy (*LNSHARE*) indicate which regions in the sample has strong regional autonomy movements (model 2b). Lastly, all the models are statistically acceptable, as indicated by the log likelihood and chi-square test. Furthermore, both models improve the "zero model," predicting in this case "no regional autonomy movements" for all the regions. Model 1(b) predicts 82.3% of the regions correctly and model 2(b) classified 92.0% of the regions into the appropriate category.

To illustrate the relationship between decentralization and regional mobilization let us turn our attention to table 4 that presents estimates of the likelihood of RAM calculated using the coefficients in model 1(b).[46]

Table 4: Estimated probabilities of RAMs (model 1b)

	Language Differences					
	None (0.1)		*Weak (0.2)*		*Strong (0.4)*	
	Relative GDP per capita					
Decentralization	*75*	*115*	*75*	*115*	*75*	*115*
3	6	18	11	30	33	62
6	51	77	67	87	88	96
9	5	14	9	25	28	57

Imagine, for example, a hypothetical region with a weak economy (*RGDPC*=75%), small language differences (*LANGUAGE*=0.2), and very restricted decision-making powers (*DECENTER*=3). According to table 4, there is an 11% chance of autonomy mobilization in this region. Table 4 indicates that regional autonomy mobilization is significantly more likely (67%)

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[46] I chose to illustrate these results with model 1b because it includes more regions and more variations in the strength of RAMs.

in an otherwise identical region with medium levels of self-governance (*DECENTER*=6). In other words, moderate devolutions of power increase the likelihood of mobilization. Lastly, the table suggests that the odds of autonomy mobilization drop to 9% in regions enjoying significant devolutions of power (*DECENTER*=8). The table indicates a similar pattern across all levels of language differences (None and Strong) and economically poor as well as rich regions.

(e) A "real world" illustration: To illustrate these results, let me consider, very briefly, the over-time impact of the process of decentralization in Belgium. The political system of Belgium in the 1950's and 1960's was characterized by an intense rise in mobilization based on demands put forward by Flemish as well as Walloon groups and organizations. Overall, both groups voiced demands for wider recognition and the allocation of cultural, political and economic privileges, based on group and regional affiliations. At the time, mobilization was characterized by anything other than conventional and peaceful means of voicing preference in a democracy, giving rise to violence, riots and confrontations with the state police.

The central government initially resisted, reacting to these pressures until it acknowledged in 1970 that the structure of the unitary state had become obsolete (Hooghe 2003). Beginning in the 1970s, however, Belgium began introducing several legislative reforms, which transferred increasingly more de facto powers to the Flemish and Walloon communities and regions. First, the 1970 constitution acknowledged the right of autonomy of groups sharing different territorial and cultural identities. The second reform took place in 1980, when Belgium was divided into Flemish and Walloon regions. The constitutional reforms pacified the more violent mobilizations, and contributed to a rise in the support regional parties, such as *Volksunie* and *Rassemblement Wallonie-France*, which consequently increased their power and political influence in both regional and national levels.

In the second half of the 1980s and early 1990s, Belgium has undergone two additional cycles of reforms. The constitutional reform of 1989 transferred more powers to the regions. Finally, in 1993 Belgium officially became a federal state. The federal constitution introduced many incentives for the organization of political parties (regardless of ideology and program) along regional lines. This, consequently, affected a decline in the appeal of autonomist parties that have lost their chief raison d'etre. Since 1993, therefore, there is a steady decline in support for most autonomist parties, and integration of parties into wider political coalitions, in which the autonomist and regionalist agenda is only secondary.[47]

The story of regional autonomy movements in Belgium is a good example of the anticipated effects of decentralization I presented in this paper. Figure 5 illustrates the hypothesized effect of political decentralization and the devolution of power (on the x-axis) on the emergence of RAMs. In addition, the figure can be use to think about the effects of devolution of power over time. In other words, the x-axis can also indicate the passage of time.

Figure 5: Impact of the decentralization/time by levels of other incentives

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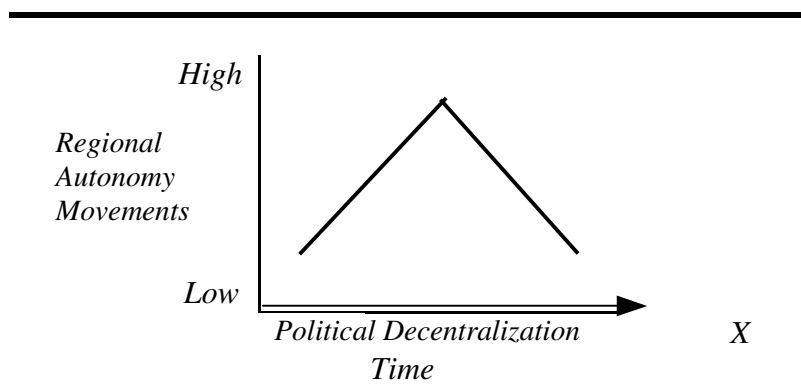
[47] *The Vlaams Blok (VB)* Party is an exception to the rule. I do not think, however, that this party undermines the general claim presented above. The rise in the power of VB is not motivated by the decentralization of the state per se. Rather, the VB has been successful in securing a wider support-base for its nationalistic and xenophobic agendas among those increasingly concerned with the influx of non-European immigrants into Belgium and the European Union.

The pattern plotted in Figure 5 can therefore illustrate not only the effect of decentralization on mobilization, but also specific *historical* trajectory of decentralization such as the Belgian case: (a) a rise in mobilization in the 50s and 60s. (b) Support for regional autonomy movements reaches a peak in the 70s and 80s following the first stages of regionalization. (c) A decline of RAMs in the late 80s and 1990s as Belgium becomes a federal state. A similar figure may be also useful to describe the over-time trajectory of regionalization in other countries such as Spain, Italy, France and Britain.

Concluding remarks:

The statistical analysis attest to the convergence of results obtained from simulations and statistical analyses, for the most part. Regional autonomy movements were likely to emerge in less decentralized regions (in more centralized states); medium levels of decentralization are associated with a high likelihood of mobilization; strong decentralization, in contrast, diminished autonomist mobilization. In short, mostly analogous patterns of findings in real-world data and simulations lend additional validation to the latter.

There was, however, a single minor departure to this rule. Whereas the regions' data strongly supported the hypothetical expectation (mid-level decentralization has the strongest effect on RAM appearance), the simulations did not. The simulations, recall, offer mixed support for this expectation – simulations of the BEITA environment supported a curvilinear trend, while the BEITA "clones" suggested a strong (but not increasing) likelihood of mobilization in lower levels of decentralization followed by a linear decline as levels of political decentralization increase.

How might one explain the unexpected pattern in simulation data? One possible explanation is that the threshold for the appearance of regional mobilization in the real world is

lower than the value set in the simulation. In other words, in the real world--unlike in simulations--even lower levels of decentralization can "produce" regional autonomy movements. Therefore, the simulation "captures" much better the right-hand side of the association (the decline in the likelihood of RAMs) rather than the left-hand side (the increase in RAMs) Whether lower levels of decentralization produce RAMs (lower levels than the ones specified in the model tested here) is a matter well suited for future research.

Another limitation arises from the exclusive use of European cases to evidence the simulation results. The concern, put differently, is two fold; first, whether the validation of simulation results using the European Regions data set is a strong enough test, and second, whether the results can be generalized beyond the scope of Europe.

I do not have a clear concluding answer for these concerns, at least not without increasing the number of cases to include non-European (and probably non democratic) cases. There are two reasons for evaluating the simulation results using European cases. First, the hypothesis tested in this paper was formulated after a close examination of the main disagreements among students of regional autonomy mobilization and related phenomena. Europe, with its ethnic diversity and history of nation-building, has served as the backdrop and empirical inspiration for many of these studies. It seems only appropriate, therefore, that the simulations devised to test these hypotheses would be evaluated on a data set that culled information across Europe. Second, a more practical concern has been the availability of data on which to evaluate the simulation results. Fortunately, sub-state (particularly regional-level) data from Europe is relatively accessible to the research community (unlike data from other parts of the world).

Whether the explanation proposed in this paper can be generalized to RAMs outside of Europe, however, remains an empirical question. Establishing the generalizability of the theoretical explanation put forward here beyond the European context requires extensive collection of additional data.

Overall, this paper was motivated by the absence of a clear and consistent theoretical foundation appropriate for future policy guidance and the lack of mechanisms for mitigating policymaker concerns regarding the rise of autonomist movements. The literature, I have argued, devotes significant attention to the circumstances driving regions, groups, and people to organize and demand autonomy, and disagree on the effectiveness of political arrangements intended to accommodate such demands. The lack of scholarly consensus hinders the efforts of policy-makers to respond to demands raised by supporters of autonomy and self-determination, since for every policy recommendation, there are studies showing that it would either work well or work terribly.

The research presented in this paper indicates that the risks of transferring power and responsibility to lower local or regional levels of government may be overstated. Entrusting regional elites with more responsibilities seems, under most circumstances, as 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 to promote the welfare of the polity as a whole.

APPENDIX 1: SUMMARY OF PATTERNS OF POLITICAL INFLUENCE AND IDENTIFICATION [a]

Region	Agent class	Repertoire	Influence	Av. Percent in region
Northwest	RAS	{[Regime]}	4	0.5%
	RAS	{[Regime], Other}	2, 3	8.5%
	RA	{[Regime], Other}	1	53.0%
	OA	{Regime, [Other]}	1	38.0%
Northeast	RAS	{[Regime]}	4	0.5%
	RAS	{[Regime], Regional, Other}	2, 3	5.0%
	RA	{[Regime], Regional, Other}	1	32.0%
	SRAS	{Regime, [Regional]}	4	0.5%
	SRAS	{Regime, [Regional], Other}	2, 3	2.0%
	RI	{Regime, [Regional], Other}	1	36.0%
	OA	{Regime, Regional, [Other]}	1	24.0%
Southwest	RAS	{[Regime], Regional}	4	0.5%
	RAS	{[Regime], Regional, Other}	2, 3	6.0%
	RA	{[Regime], Regional, Other}	1	27.5%
	SRAS	{Regime, [Regional]}	4	0
	SRAS	{Regime, [Regional], Other}	2, 3	1.5%
	RI	{Regime, [Regional], Other}	1	40.5%
	OA	{Regime, Regional, [Other]}	1	24.5%
Southeast	RAS	{[Regime]}	2,3,4	5.5%
	RA	{[Regime], 16, 10, Other}	1	11.0%
	RI – Regional Entrepreneurs	{[10], Other}	2,3,4	0.5%
	DRI	{Regime, [10], Other}	1	9.0%
	FRI	{Regime, [16], Other}	1	12.5%
	OA	{Regime, 10, 16 [Other]}	1	61.5%

[a] activations patterns at time=0. [ ] Active identity; { } identities in repertoire. RAS – regime authority structure; RA –regime affiliated agents; OA – other agents; SRAS – separated regional authority structure; DRI – dominant regional identity (10); FRI – favored regional identity (16); RI – regional identity.

APPENDIX 2: PARTIES INCLUDED IN THE ANALYSES (contested 2 national elections 1990-2003)

BELGIUM: *Flanders***:** Volksunie (); Nieuw Vlaamse Alliantie (http://www.vu.be/verkiezingen/); Spirit (http://www.meerspirit.be/) ; Vlaams Blok (http://www.vlaamsblok.be/); *Wallon region:* Front Democratique des Francophones (FDF) (http://www.fdf.be/fdf/index.htm); Rassemblement Wallonie-France (RWF) (http://www.ifrance.com/rwf/)

GERMANY: *Bavaria:* Bayernpartei (http://www.bayernpartei.de/

SPAIN: *Andalucia***:** Partido Andalucista (PA) (http://www.partidoandalucista.org/); *Asturias***:** Partiu Asturianista (http://www.geocities.com/capitolhill/4443/pas.html); Union Renovadora Asturiana (http://www.uras.org/uras.html); *Aragon***:** Chunta Aragonesista (CHA) (http://www.chunta.com/); Partido Aragones (PAR) (http://www.partidoaragones.es/); *Balearic Islands***:** PSN - Entesa Nacionalista (PSN-EN) (http://www.psm-entesa.org/inici.html); Unio Mallorquena (http://www.unio-mallorquina.com/); *Basque country, Navarre***:** Euzko Alderdi Jeltzalea (EAJ)/ Partido Nacionalista Vasco (PNV)(http://www.eaj-pnv.com/); Eusko Alkartasuna (EA) (http://www.euskoalkartasuna.org/); Herri Betestuna (EB) /Euskal Herritarrok (EH); *Canary Islands***:** Coalicion Canaria (CC) (http://www.coalicioncanaria.es/); *Castilia-Leon***:** Union del pueblo Leones (http://www.uniondelpuebloleones.com/); Tierra Comunera - Partido Nacionalista Castellano (TR-PNC) (http://www.tierracomunera.org/); *Catalonia***:** Convergència i Unió (CiU) (http://www.ciu.info/); Esquerra Republicana de Catalunya (ERC) (http://www.esquerra.org/); *La Rioja***:** Partido Riojano (PR) (http://www.partidoriojano.es/); *Galicia***:** Bloque Nacionalista Galego (BNG) (http://www.bng-galiza.org); *Valencia***:** loc Nacionalista Valencia (BNV) (http://www.bloc.ws/); Unio Valenciana (UV) (http://www.uniovalenciana.org/)

FRANCE: *Alsace***:** Elzassiche Volksunion/ Union de Peuple Alsacien (EVU/UPA) (http://www.fers-elsass.org/); Alsace d'Abord (http://www.alsacedabord.org/); *Aquitane***:** Eusko Alkartasuna; *Southern regions of France***:** Partit Occitan /Parti Occitan (Poc) (http://membres.lycos.fr/poc/); *Brittany***:** Union Democratique Bretonne (UDB) (http://www.udb-bzh.net/); *Corsica***:** Corse Nouvelle (http://corsenouvelle.free.fr); Patitu di Nazione Corsa (PNC) (http://www.psdaz-ichnos.com/); Manca Naziunale (http://www.manca-naziunale.org/); *Languedoc-Rousillon***:** Bloc Catala (http://www.bloc-catala.com/); *Rohn-Alpes***:** Ligue Savoisienne (http://www.ligue.savoie.com/); Mouvement Region Savoie (http://www.sav.org/)

ITALY: *Northern regions of Italy***:** Lega Nord (http://www.leganord.org/); *Sardinia***:** Partito Sardo d'Azione (PSd'A) http://www.psdaz-ichnos.com; *Trentino-Alto Adige***:** Sudtiroler Volkspartei (SVP) (http://www.svpartei.org/); *Val d'Aoest***:** Union Valdotaine (UV) (http://www.unionvaldotaine.org/)

PORTUGAL: *Acores, Madeira***:** Partido Democratico do Atlantico

UNITED KINGDOM: *Northern Island***:** Sinn Fein (http://sinnfein.ie/); Social Democratic and Labor Party (SDLP) (www.sdlp.ie); *Scotland***:** Scottish National Party (SNP) (http://www.snp.org.uk); *Wales***:** Plaid Cymru (Wales Party) http://www.plaidcymru.org/

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