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# Invisible Rulers: The ‘Latent Power Structure’ in Two Spanish Governments (2004 and 2012)

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## Abstract

Beyond the observation of official positions and incorporating the ‘Latent Power Structure’ (LPS), this article offers a broadened view of the organization of democratic governments. We define the LPS as a set of former officials, parliamentary and party members, and business directors who are closely related to government members, since they have recruited one or more of them for certain positions in the past. Applied to a Social Network Analysis of two Spanish governments, the LPS reveals a more concentrated structure of power with a far greater range of resources. The LPS analysis shows that governments rely on certain influential organizations in the social structure, to a greater extent than might initially be believed. This finding indicates the existence of government structures that represent a greater risk to democratic representation, and provides evidence for understanding how the state and other critical institutions are related in the social structure.

**Keywords:** government; elites; power groups; social networks; cohesion

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This article aims to analyse the power foundations of two Spanish governments from an innovative perspective. Studies of political power have often been restricted to the observation and analysis of a set of formal, institutional and evident positions. For example, Robert Putnam (1976) considers that the government's main institutions offer a useful map of power relationships and, therefore, that leaders in the highest posts of the government are politically the most powerful. Though the approaches of Putnam and others have been deeply insightful for some types of research, they may not have given enough importance to the fact that the current members of the executive are strongly bound to other individuals who do not belong to the present government structure but who exert an important influence on its members; at the same time, their role implies a higher concentration of power.

Since traditional analyses of power have left this latent dimension unexplained, we have developed the idea of 'invisible rulers' that constitute a Latent Power Structure (LPS): former government officials and leaders of business, political, parliamentary and bureaucratic groups who in the past have recruited members of the current government and now occupy leading mediating positions between the executive and important social organizations, such as big business, regional governments and international institutions. This influence of invisible rulers on governments is based on two main factors: (1) since they recruited current government members for the organizations they were leading in the past, they maintain significant links with the present executive components; and (2) from a dualistic perspective, the fact that the members of the LPS are currently working for other institutions implies a connection between the government agency and the groups to which they currently belong.

A certain amount of research has been dedicated to ex-ministers' movements and their circulation towards private and public institutions – including regional governments – after leaving office (Blondel 1985; Real-Dato and Jérez-Mir 2009; Rodríguez-Teruel 2010; Rose 1987; Suleiman and Mendras 1995). Less attention has been paid to the influence that these ex-officials continue to exert on governments at the same end of the political spectrum and, consequently, how certain members of the executive become connected with the new institutional destinations of these ex-ministers and how these new organizations acquire privileged contacts with public agencies. For this purpose, the study of the LPS unveils an important set of connections that an executive establishes with organizations, which run deeper than a first look at official data might suggest.

This research is divided into the following sections: first, a theoretical framework related to the main characteristics of power elites and schools of thought; second, a methodology section that presents, on the one hand, the government networks that we will analyse, and on the other, a formal and mathematical definition of the LPS; third, a Social Network Analysis (SNA) of two government networks and the changes resulting when the LPS is considered; and fourth, a discussion with the main conclusions and proposals.

### **Democratic rule as a process of social reproduction**

Mostly opposed to Marxist social diagnosis, the so-called 'elite theories' have reflected on the ways in which the administration and distribution of power is inevitably established

in modern societies (Bottomore 1993). In this regard, 'Machiavellian' intellectuals, such as Robert Michels (1915), Vilfredo Pareto (1917) and Gaetano Mosca (1939), claim that 'real' democracy consists of an unavoidable, persistent but necessary exercise of domination by minorities in power. This domination is based on two main structural conditions: first, a high degree of cohesion within these minorities, which allows them to organize better than the mass or crowd (Mosca 1939); and second, the fact that minority members possess specific characteristics and social resources that make them 'superior' to the people they rule (Mosca 1939). These features, which we might name 'resources of power', are not necessarily natural qualities and are subject to change over time. This makes the exercise of 'legal domination' (Weber 1922) a dynamic equilibrium in which the 'political' or 'ruling class' is constantly renewed. Pareto (1917) terms this phenomenon of continuous change the 'circulation of elites', meaning a process of renewal of the ruling class by which the new elements reinforce and refresh the elite's superiority and power.

Charles Wright Mills (1956) defined the American power elite as the intersection of three different types of 'higher circles': political, business and military committees, representing a network where the most relevant national decisions were made. Mills not only identified the powerful people but suggested that the imbrications of these three institutional circles, on the one hand, and the cohesive network that directly related their individual leaders, on the other, constituted a structural condition for understanding the power configuration. According to Mills, and in William Domhoff's (1969) framework, elite circulation consists of a set of movements from one top institution to the others, occurring inside the above-mentioned cohesive and deeply class-conscious community (Mills 1956). We can consider Mills's analysis and explanation as the proposition of a 'blocked or inbreeding' process of circulation, whereby an elite subsystem ensures a constant supply of resources of power.

Mills's main assumptions and conclusions were challenged by a group of authors known as the pluralists (Dahl 1961; Polsby 1980), who claimed that, rather than a unified and dominant ruling elite, a society contained different types of relevant leaderships or influence groups. These leaders were specialized in certain economic or political domains and, therefore, they limited their participation and political involvement to a narrow range of issues. The pluralists' studies highlighted the existence of partial, non-overlapping and non-accumulative leaderships, a lesser influence of the business world, as well as a key role of politicians, who coordinate and aggregate different demands to produce the best outcomes for citizens. In an attempt to test and find a balance between elitist and pluralist hypotheses, Gwen Moore (1979) conceived the power structure as a network of links between the leaders of different institutional backgrounds. This network has a cohesive core, formed by individuals who have participated in similar institutions. The core, mostly integrated by politicians and big business executives, can influence national policy, and it is also bound to a number of different and specialized power groups.

As some scholars have concluded (Williams and Savage 2008), the study of elites has been rather abandoned for several decades, a time in which globalization, financial capital and technological changes (as well as the structure of big business and central bankers' behaviour) have been profoundly altered. Because of these developments a reconceptualization of what we call 'elites' is required. During this temporary retreat,

political science and SNA have merged into an important source for understanding political phenomena (Lazer 2011; Ward et al. 2011).

The political network approach has applied SNA to a large number of conflicts and situations, such as decision-making in communities (Haas 1989; Laumann and Pappi 1976), the effects of connections within the political system (Hoffmann-Lange 1989; Laumann and Knoke 1987; Padgett and Ansell 1993; Rhodes and Marsh 1992), legislative and co-sponsorship networks (Fowler 2006; Porter et al. 2005; Skvoretz and Burkett 1994) and corruption networks (Nielsen 2003; Wachs et al. 2019).

### ***Hypotheses***

In accordance with our theoretical framework, we propose the following hypotheses for our research. The first is the *Latent Power Structure Hypothesis*: when the ‘invisible rulers’ are included, the main structural characteristics of the resulting government network are significantly altered. This resulting network reveals the existence of relational power resources within a government that are undetectable without including the LPS. Our second hypothesis is the *Chain of Opportunities Hypothesis* (White 1970): when a government is formed, departing officials leave vacancies in the executive that are occupied by former or new leaders. These promoted leaders are associates of those ex-officials who, as a result, remain connected to the government. These movements reflect a process of circulation of elites that favours internal elite members and can be considered as a blocked or inbred renovation mechanism.

### **Methodology: from invisible rulers to the Latent Power Structure (LPS)**

In this section we present the data, sources and empirical materials to which we apply our hypotheses according to the existing elite theories. We seek to analyse the relational structure of two Spanish governments: the one formed in 2004 by the progressive Partido Socialista Obrero Español (PSOE, Spanish Socialist Workers’ Party) and the one constituted in 2012 by the conservative Partido Popular (PP, Popular Party). In these cases, the party that won the elections after eight years in opposition formed the executive – the PSOE was in opposition from 1996 to 2004 and the PP from 2004 to the end of 2011.

Spain is an example of a stable democracy in which two parties (PSOE and PP) have featured as the main political and governmental actors, constituting successive single-party executives until 2019, when the Socialist Party and the left-wing party Podemos formed the first government coalition in recent democratic history. The PSOE held office from 1982 to 1996 and from 2004 to 2012; for its part, the PP ruled from 1996 to 2004 and from 2012 to 2018, when the PSOE returned to power. We are, therefore, studying two different governments that represent the major political options in Spain. This choice gives us a chance to analyse the similarities and differences between the two, and to explore how the structural and positional characteristics of a government tend to vary when the ideology of the party changes.

For the study of these two governments, we adopt an expanded definition of the executive, covering ministers, secretaries of state and deputy secretaries, according to the definition of the qualified bodies of governmental collaboration located between political and administrative arenas (Baena 1993). Then, for both governments we have chosen the most relevant high-ranking officials of the aforementioned governments: the prime minister, vice-presidents, ministers, secretaries of state and deputy secretaries, making a total of 69 individuals for the PSOE government in 2004 and 70 for the PP government in 2012.

### ***How is it going to be done? Official versus expanded networks***

We first study the formal or institutional network structure of each government, and then introduce the LPS into each executive network to analyse the differences between the two types of network: official and expanded networks.

For this purpose, we first perform an SNA of the structure formed by the most important members of each government (president, ministers and deputy ministers), considering the links established between them by shared affiliations to organizations in five power institutions or dimensions prior to their recruitment: (1) former governments; (2) parliamentary groups; (3) partisan structures; (4) enterprise boards; and (5) bureaucratic bodies. These five dimensions were chosen to cover the most relevant institutions in a democratic society, according to earlier studies of elites in Spain (Baena 1999; Baena and Pizarro 1985). In order to build our relational data set, we consulted official sites and public documents, such as the Official Bulletin of the State (BOE), the Official Bulletins of each Spanish autonomous community, and the website of the Congress of the Deputies, as well as the official websites for the diverse and numerous regional chambers in Spain.

In this way, we are able to show the ‘zero degree’ of a government formation process (i.e. the structure of a government at the very beginning of a political term), described as a reticular structure that shows, on the one hand, the pre-existing political and professional ties within the executive, and, on the other, the types of organizations from which each government official was recruited.

Since we obtain the links between government members for each of the five relational dimensions (i.e. former governments, parliaments, political parties, company boards and bureaucratic bodies), we aggregate them into a single network that thus comprises all the types of relationships between the government officials. Although we realize that each of these five dimensions may have its own particularities, and that certain features may be obscured in this process, separate analyses of the five dimensions and of different combinations of them have shown that the study and observation of this resulting network offer the most complete, realistic and coherent approach to the analysis of the configuration of power in the present case; in particular, as we will see further, it provides a crystal-clear idea of the distribution of relational power and social factions within the government (especially, political, business and regional factions).

Thus, given the set  $V$  of government members at time  $t$  and organization  $O$  at time  $n$  included in one of the five dimensions, we define the official network:

$$G_{\text{off}} = (V, R_{\text{off}}) / \{i, j\} \in V \wedge R_{\text{off}}(i, j) \forall \{i, j\} \in O_n / t > n$$

Next, we proceed to build the expanded network. To do so, we incorporate the ‘invisible rulers’ into each official network, and we analyse them using standard SNA tools. For this purpose, in the next subsection we introduce the idea of the LPS, first with its theoretically specific background, and second, with a formal definition.

### ***The Latent Power Structure (LPS): theoretical background***

The LPS, as an original concept, is derived and drawn from earlier theoretical reflections about power elites. For example, Mills (1956) explained that what he called the ‘political directory’ (i.e. the politicians’ social circle) was surrounded by business and military circles and that an accurate analysis of the power elite would thus have to consider the existence of these connections. Pareto (1917) distinguished between a ‘government elite’ and a ‘non-government elite’, meaning that, though both were powerful and influential, only one of them was officially in power. For his part, Tom Bottomore (1993) has argued that ‘those who appear to have power in the formal system of government are in fact subject to the power of other individuals or groups outside this system’.

Studying Mexico, Jorge Gil Mendieta and Samuel Schmidt (2005) have considered the importance of the influence of ex-presidents for determining the election of a certain candidate for president and thus guaranteeing the hegemonic continuity of the party that governed the country for 70 consecutive years (1929–2000). This type of underlying influence that contributes to explaining official power has been researched by Franziska Keller (2016) in the context of the Chinese communist political elite and its ‘patronage networks’. In several analyses, Keller argues that co-worker ties and shared past professional experiences are most likely to structure informal politics among contemporary Chinese elites. Like other scholars (Shih et al. 2012), Keller also argues that this network approach analyses current Chinese officials as being embedded in a web of relationships created by previous interactions with the other elites, who may or may have not retired from the Chinese Communist Party (Keller 2016).

### ***The Latent Power Structure (LPS): definition and formalization***

The LPS is based on the idea that relationships can persist over time beyond the context in which they originated. Thus, the LPS is defined by the set of ties that members of a government have with other people with whom they have been involved in a previous government or in other institutions – such as the national parliament, the political party, former governments or company boards – and who belong not to the current government but to important organizations inside the social structure.

More precisely, these past links are defined as a recruitment relationship  $R_o$  between an actor  $i$  and an actor  $j$ , such that  $i$  was the direct supervisor of  $j$  in one or several organizations  $O$  (a parliament, a ministry, a government, a firm etc.). Thus, the LPS is a network  $G_{LPS} = (V, R_{LPS})$  defined by the  $R_{LPS}$  relationship between an actor  $i$  who does not belong to the current government  $G$  and an actor  $j$  who does belong to the current government  $G$ . More formally:

$$G_{LPS} = (V, R_{LPS}) / \{i, j\} \in V \wedge R_{LPS}(i, j) \vee R_o(i, j) / i \notin G \wedge j \in G$$

### ***Relationship criteria***

However, since a recruitment relationship implies trust and affinity between the supervisor and the recruit, we have established two criteria of which at least one has to be fulfilled in order to consider that the recruitment relationship  $R_o$  gives rise to a relationship  $R_{LPS}$ .

The first is a qualitative criterion, according to which the length of the relationship  $R_o$  must be more than four years ( $R_o > 4$  years)<sup>1</sup>. The second is a quantitative criterion, according to which actor  $i$  is included in the LPS if he or she has been a supervisor (in one or several organizations) of at least two members  $j$  and  $k$  of the current government  $G$ , regardless of the duration of  $R_o$ . Thus:

$$R_{LPS}(i, j) \leftrightarrow R_{LPS}(i, k) \vee R_o(i, j) \wedge R_o(i, k) / i \notin G \wedge \{j, k\} \in G$$

Let's take an example. Suppose that  $j$  is a government minister who worked for eight years as a secretary of state (i.e. a deputy minister) in a previous government ministry, and that he or she was recruited twice by  $i$  for two periods of four years each. Given this relation, we consider that  $i$  is a relevant contact of  $j$  and, though  $i$  is now heading a financial enterprise, he or she could influence  $j$ 's current governmental behaviour. Therefore,  $i$  integrates the LPS and is thus considered an invisible ruler. Similarly, if  $i$  previously recruited  $j$  and  $k$ , both members of the same government, regardless of the time of recruitment, we consider that  $i$  can influence this government through these two actors, and therefore he or she is in the LPS. Most of the LPS members are former ministers or ex-prime ministers who have retired, are in charge of European or worldwide institutions, or sit on the boards of directors of private firms. But there are also others who have never been appointed as ministers and who have always belonged to the business sector, exerting a 'pure' business influence on the government structure.

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<sup>1</sup> Four years is the normal duration of a term of office for a government in Spain. Thus, recruitment for more than four years implies the renewal of the relationship between a particular agent and a political group.



Visible elites (official government members)	Invisible elites (LPS members within the expanded government)
Prime Ministers or government presidents - presidentes del gobierno español.	Advisors and consultants of big private firms -asesores y consejeros de grandes empresas.
Ministers -ministros o titulares de los ministerios del gobierno de España.	Ex-presidents of the Spanish government or ex-prime ministers -ex presidentes del gobierno de España.
State Secretaries -secretarios de Estado del gobierno de España.	Ex-ministers -exministros del gobierno de España.
Deputy secretaries -subsecretarios ministeriales.	Presidents of Autonomous Governments of Spain - presidentes de Comunidades Autónomas españolas.
	Ex-party leaders (PP and PSOE) -exdirigentes del Partido Político (PP y PSOE).
	Ex-presidents of the parliamentary group in the Spanish Congress of Deputies -ex presidentes del grupo parlamentario en el Congreso de los Diputados.

**Table 1.** Visible and invisible elites. Positions, ranks and roles of the members of the official and expanded governments, in English and Spanish.

### **Social Network Analysis (SNA) of government structures**

In this section we summarize the results of the SNA that we have applied to the PP and PSOE governments' networks and highlight the changes that occur when the LPS is included, as well as the differential effect when this latent structure is applied to each government.

According to our hypotheses, this section shows us, first, whether the structural characteristics of the government networks – namely, social factions, connectivity and cohesion – are significantly altered when the LPS is considered (the Latent Power Structure Hypothesis); and, second, if the LPS helps us to explain a certain pattern of circulation or social reproduction of elites related to the idea of the ‘chain of opportunities’ (the Chain of Opportunities Hypothesis).

#### ***The most important structural features of government networks: factions, connectivity and cohesion***

*Figures 1–4* display the relational structure of the PP and PSOE governments, first, in their official and manifest appearance and, second, when the LPS is included. According to the methodological approach outlined above, these figures show the accumulation of links and contacts in the past among the members of each of the governments, and, when the LPS is included, some more individuals who were not finally recruited but who were strongly linked to them before the government was constituted.

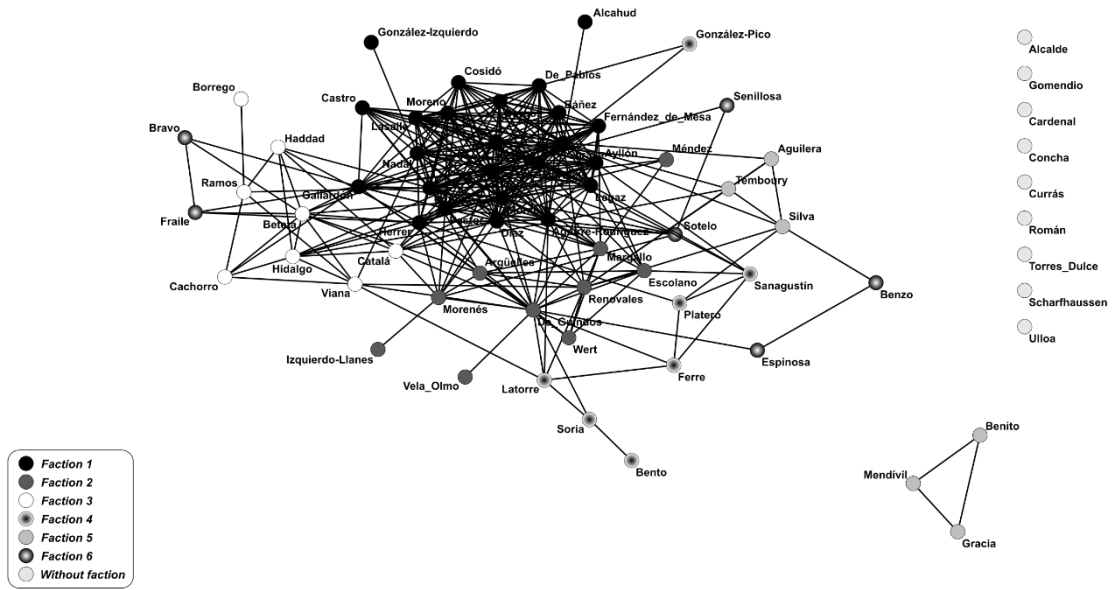


Figure 1. PP official government network.

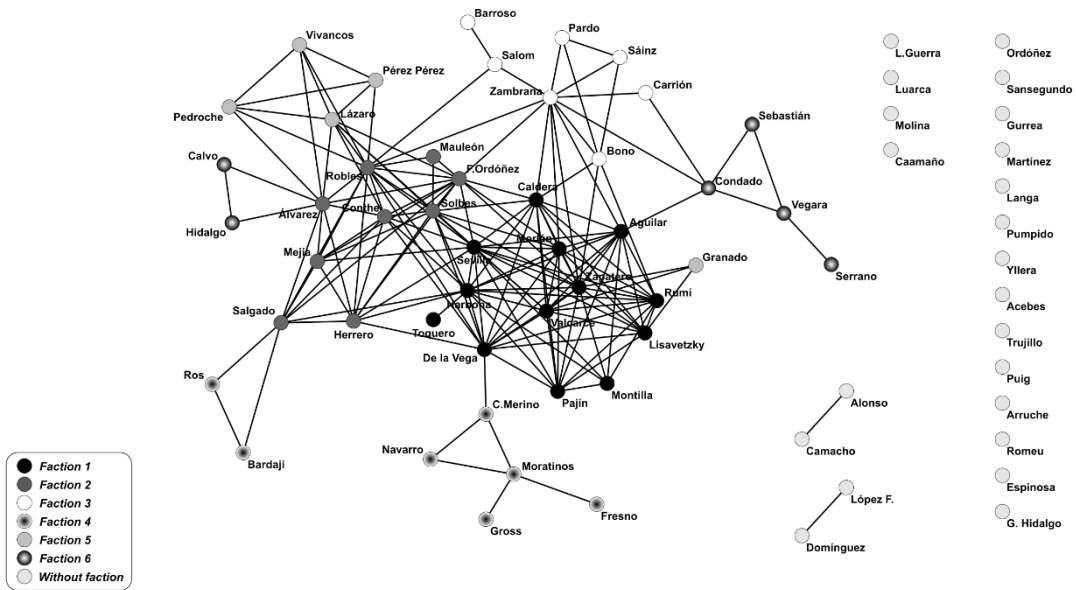


Figure 2. PSOE official government network.

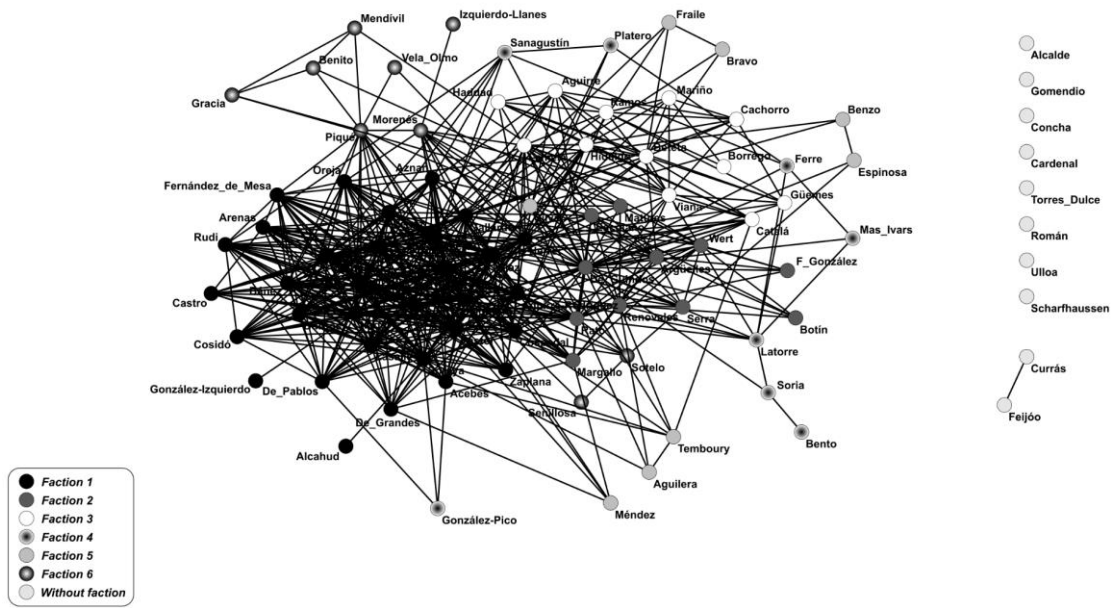


Figure 3. PP expanded government network (with the LPS).

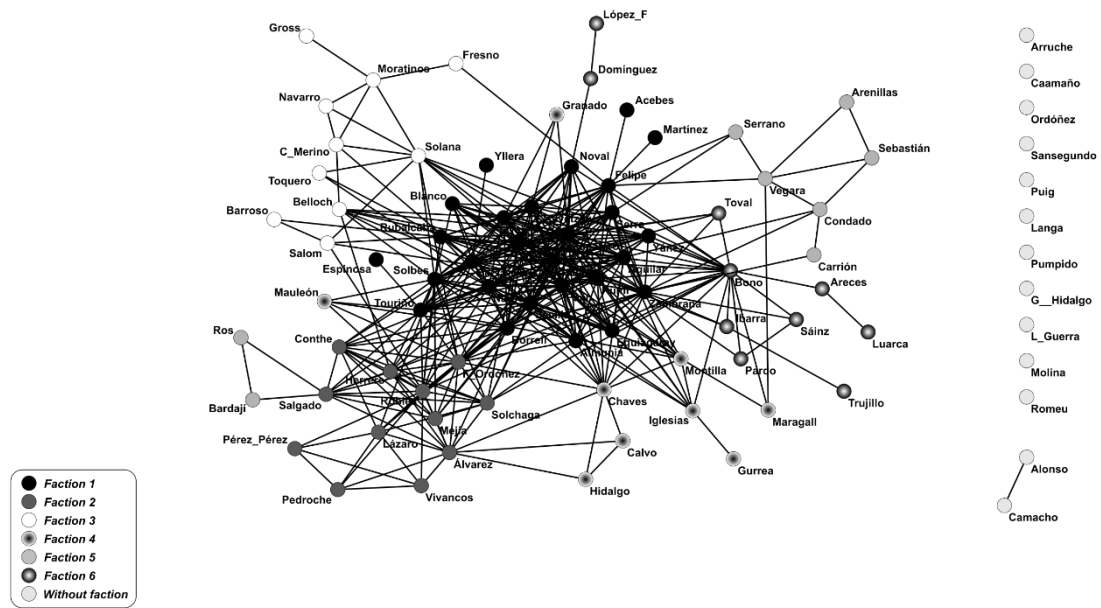


Figure 4. PSOE expanded government network (with the LPS).

### *Analysis of factions: specific areas within the power network*

These figures also show diverse areas, in a different grayscale pattern, obtained from the application of the Ucinet ‘Factions’ algorithm (Borgatti et al. 2002) to the relational data. This algorithm highlights subsets of nodes that register a higher number of links with each other than other subsets within the same network. We use a fixed parameter of factions (viz. 6) to compare the structure in each executive.

Regarding official networks, in both cases (PP and PSOE) factions show different areas within a government whose members share similar relational characteristics and professional and political origins: for example, the fact of being a highly qualified bureaucrat, such as a tax inspector, and having coincided in high posts of the Finance Ministry in the past; or the fact of having belonged to the PP and the party’s parliamentary group. Having been co-workers in an institution such as a ministry, the Spanish Congress or a company board (or more than one of them over a period of time) becomes a crucial factor for enabling certain individuals to establish a cohesive web of relationships, as Keller (2016) ascertained when studying the Chinese political elite and its ‘factionalism’. To see how the LPS affects the structure of the two governments, and to identify the differences between them, we summarize the results of what the analyses of factions show us in each case.

*The political faction: the inner power circle.* In both cases (PP and PSOE governments), we distinguish what we can term a ‘political faction’. In the PP case (*Figure 1*, Faction 1), it is composed of members who have coincided in the party, in the Spanish parliament or in earlier conservative governments; in the PSOE case (*Figure 2*, Faction 1), the political subset comprises only political and parliamentary actors, due to the fact that the new leaders after the renewal of the party in 2000 lacked government experience in previous socialist executives. In both cases, these members constitute a political group that usually has a leading role within a government.

This political faction grows in both cases when the LPS is considered, thus contributing to balancing the number of nodes in the political subset for both governments. This is mainly due to the input of a group of ex-ministers who had held management posts in former governments of the same party. In the case of the PP government, in 2012 these ex-ministers included in the LPS occupied leading positions in big firms, most of them on the Spanish stock index (the Ibex-35). Unlike the PP government, in 2004 the PSOE LPS members did not occupy many positions in private firms and tended instead to have been recruited by European or worldwide institutions such as the European Union or NATO.

*Technocratic factions: the bureaucratic character of the revolving door in Spain.* In both cases, the political factions are surrounded by other ones with different characteristics. In most cases, the members of these factions have bureaucratic qualifications and business experience, and thus constitute revolving-door technocrats; they are more abundant in the conservative network. The PP case records several factions (2, 3 and 5 of *Figure 1*) of individuals who participated in former PP governments (1996–2004) and who, after quitting office (and from 2004 to 2011) worked as executives in private firms, most of them trading on the Ibex-35 stock index. These faction members have elite bureaucratic

qualifications: state lawyers and state economists (factions 2 and 5), tax inspectors (faction 4) and diplomats (faction 5) – that is, the most sought-after and specialized state advisers in the Spanish public administration.

After the LPS is considered, the PP government network includes the presidents of the two biggest Spanish banks (Banco Santander and BBVA), thus reflecting the increase in financial influence after the inclusion of the latent actors. In the case of the PSOE government, we find several factions (*Figure 2*, factions 2, 4, 5 and 6) with fewer actors who possess bureaucratic qualifications (state economists and tax inspectors, factions 2 and 5; diplomats, faction 4; university professors and state civil administrators, faction 6). These actors worked for former socialist executives (1982–1996), and, especially those in faction 6, have experience in private firms, mostly banks. The consideration of the LPS barely modifies the structure of this faction since most LPS members are included in the central political faction.

*Regional factions: two different states of the autonomies.* Regional power has been highlighted as a special feature in decentralized governments in Europe (Botella et al. 2011), where Spain constitutes a notable example. The data also confirm this assertion. In the PP official network, we can distinguish two regional factions (*Figure 1*, factions 3 and 6). Both are related to the autonomous and local administrations of Madrid: the larger one (3) is formed by leaders who come from the Community of Madrid government, where the PP obtained one of its biggest absolute majorities in 2011; the smaller one (6) is formed by leaders recruited from Madrid Town Hall, where the PP also obtained an absolute majority in 2011. The Community of Madrid faction increases in size (from 8 to 12 members) with the inclusion of the LPS, which shows an even stronger influence of regional power.

There are several factions in the PSOE government network, but they are smaller (*Figure 2*, factions 3 and 6). They comprise actors who come from important positions of leadership in the autonomous governments of Andalusia and Castile-la Mancha. These regions were governed by the Socialist Party by absolute majority when the 2004 government was formed. The introduction of the LPS brings into the network some regional presidents who were ruling in 2004, some of whose political partners were recruited by the 2004 government. Both PP and PSOE governments recruited important leaders from the communities where they had a certain political superiority at the moment of the government constitution: for example, the PP government pays more attention to Madrid, while the PSOE is more centred on traditionally socialist-voting regions such as Andalusia, Castile-la Mancha, Asturias and Extremadura.

#### *Descriptive properties of networks: cohesion and connectivity*

The above analyses have shown us how the main social factions of both governments are altered by the introduction of the LPS. In this part, we assess whether the LPS also affects the governments' structural characteristics.

Network	#Nodes	#Edges	Average Degree	Diameter	Size Main Component (%)	Closeness Centralization (Main Component)
PP Official	70	343	9.800	5	82 %	0.336
PP Expanded	90	617	13.711	5	88 %	0.346
PSOE Official	69	172	4.985	7	68 %	0.317
PSOE Expanded	89	409	9.191	6	85 %	0.337

**Table 2.** Descriptive statistics of the official and expanded networks.

Some descriptive measures of the four networks – the PP and PSOE government networks, with and without the LPS – are provided in *Table 2*. The two kinds of network (i.e. official and expanded) are quite similar regarding the number of actors (nodes), and in both cases the LPS includes 20 actors. The data show that the number of edges (i.e. the number of ties between the nodes) is higher for the PP’s official and expanded networks. The number of edges and the average degree in the PP official network are almost double those of the PSOE government network, while this difference is attenuated when the LPS is introduced.

The average degree (i.e. the mean of directly linked actors), the diameter (i.e. the longest of the shortest distances between each two nodes in the network) and the size of the main component (i.e. the percentage of nodes in the largest connected component – that is, the biggest subgraph where all nodes are directly or indirectly connected) provide relevant information about the connectedness of the networks. These three indicators show that the LPS increases connectivity in both cases, and that PP networks are better connected than PSOE networks in every situation.

We also study closeness centralization, which measures the degree of inequality of closeness (i.e. how close an actor is to the others in a network), comparing the actual network to a star-model network of the same size. Values close to 0 indicate that the degree of inequality is low, and values close to 1 indicate that there are some actors who are much closer to each other than others. This indicator shows that the four networks are similar in terms of concentration of closeness, meaning that actors of each network differ relatively little in terms of how close they are to each other. In the kind of relationship considered here, this relative similarity in closeness can be understood as ideological proximity between the actors and even similarities in their individual capacity to influence.

*Alternative baseline: is cohesion an automatic result of the inclusion of the LPS?*

Certainly, the inclusion of new actors and links in the networks, such as the LPS, can involve structural changes, such as higher connectivity and stronger cohesion. In order to check that the inclusion of the LPS implies an increase in cohesion beyond what could be

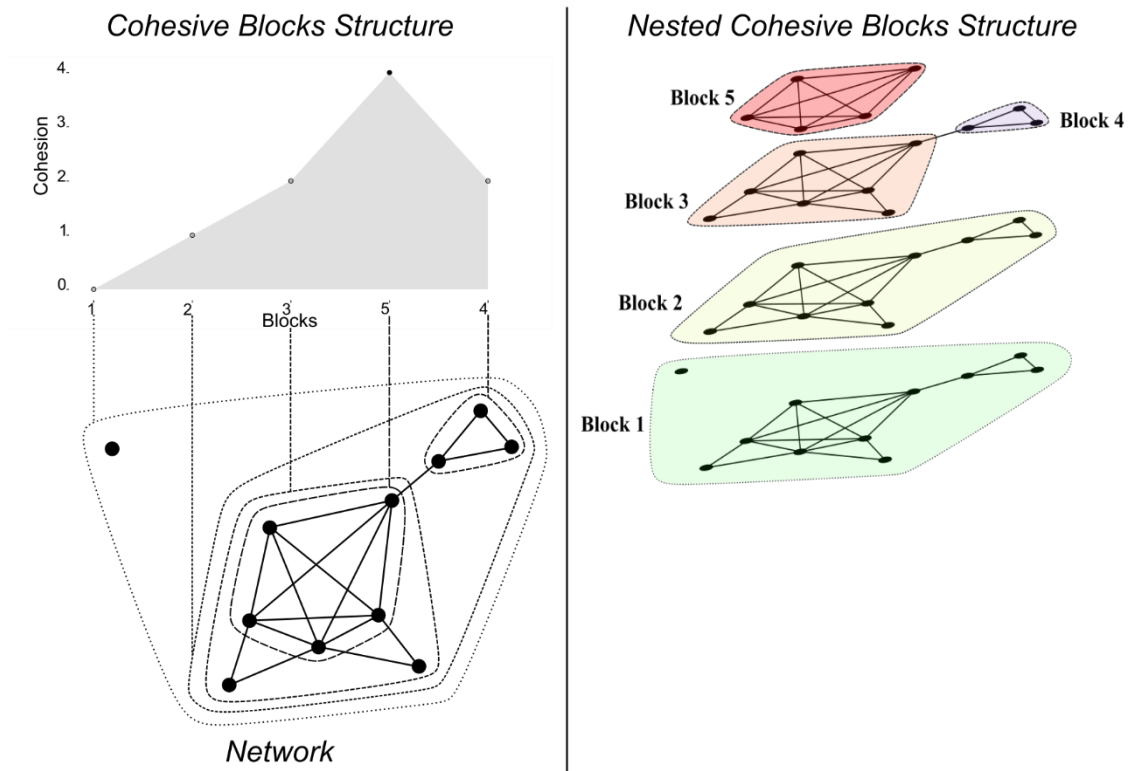
attributed to the mere inclusion of nodes and links, we performed random simulations in the form of Erdős–Rényi models in order to compare their structural properties with those of the observed networks.

The idea behind this standard methodology (Accominotti et al. 2021; Finez and Comet 2011; Newman et al. 2001; Nier et al. 2007; Wasserman and Faust 1994) is that links are generated by social forces, which imply certain structural properties in networks that would not appear without those social forces behind them. To perform random simulations, which provide us with a benchmark network (or ‘null model’) for comparison, we randomly combined the links between the official network of each party and the members of its LPS, preserving the degree distribution as in the expanded network observed<sup>2</sup> – that is, if one LPS member is connected to 13 members of the official network, in the simulated networks there will be the same number of links too; and if an actor in the official network is connected to 7 members of the LPS, in the simulation there will also be an actor with this degree. Specifically, we performed 100 random network simulations for each party, which we analysed with the observed networks, studying their main components of size, closeness centralization and cohesive blocks (Moody and White 2003).

The cohesive blocks analysis provides the hierarchical nested structure of the subgraphs of the network based on their cohesion, measured by the number of links to be removed from the subgraph in order to disconnect part of it. *Figure 5* uses a toy model to explain the cohesive blocks analysis.

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<sup>2</sup> Formally, this random model is based on a simple U/L distribution with specified in-degree and outdegree (Wasserman and Faust 1994).



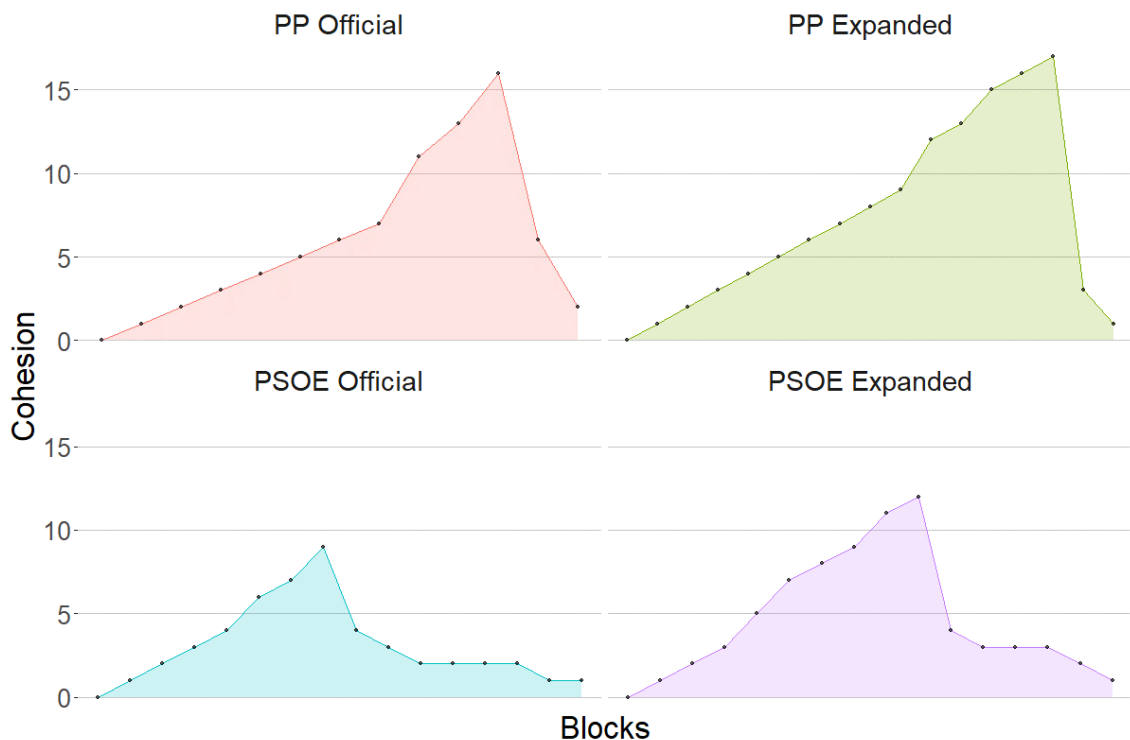
**Figure 5.** Cohesive blocks analysis example.

*Figure 5* shows the network of this toy model represented in the bottom left, and dotted lines surround the subgraphs according to their level of cohesion. The figure in the top left is one of the outputs provided by the cohesive blocks analysis and represents the ‘topography’ of the network according to the nested structure of the blocks. The figure on the right represents this nested structure in several layers according to the blocks’ cohesion. Thus, the entire graph is a block (Block 1) with cohesion 0 since one node is not connected to the others. Block 2 has a cohesion level of 1 because the removal of one line (specifically, the line between Blocks 3 and 4) disconnects part of the subgraph. Blocks 3 and 4 have the same level of cohesion (i.e. 2) and we can identify Block 4 as a cohesive block at the ‘local’ level since it has no blocks nested over it. Finally, Block 5 is a subgraph of Block 3 (so Block 3 is the ‘parent block’ of Block 5), which has a cohesion of 4 and is the most cohesive subgraph of the network.

Thus, the cohesive blocks analysis provides useful information for understanding the cohesive structure of the networks. *Figure 6* shows the output of this analysis applied to our four observed networks – PP and PSOE governments with and without the LPS.



## Cohesive Blocks Structure Observed Networks



**Figure 6.** Cohesive blocks analysis of the official and expanded networks (PP and PSOE).

The cohesive blocks structure of the PP networks reveals a very hierarchical system characterized by a high cohesive subgroup and minor cohesive subgroups at the ‘local’ level (the two dots at the left of the ‘peaks’ in both plots). In this case, the LPS reinforces the cohesion of certain subgroups, generating a more hierarchical structure dominated by a more cohesive subgroup than in the official network. This subset of actors is composed of political actors who were involved in the party, in the parliament group or in former PP government structures; many of them are ministers in the 2012 government.

In the case of the PSOE, its networks have a less hierarchical structure, dominated by a high cohesive subgroup, but with the presence of several cohesive subgroups at the ‘local’ level (to the left of the ‘peaks’). In this case, the LPS also reinforces the cohesion of some subgroups and additionally reduces the number of cohesive subgroups at the ‘local’ level, so it provides a more hierarchical structure than those of the official network. Here, the most cohesive group is again formed by members of parliament and the political party, but, thanks to the inclusion of the LPS, it also incorporates two members of the bureaucratic faction (state economists with governmental experience) and a regional leader.

While cohesive blocks analysis provides a rich description of the cohesive structure of networks, in order to compare the observed and simulated networks we concentrate on two measures: the number of blocks and the maximum level of cohesion (the ‘peak’ in

the charts). This information, along with the size of the main component and the closeness centralization, is summarized in *Table 3* for both the observed and simulated networks.

Network	Size Main Component (%)	Closeness Centralization (Main Component)	#Cohesive Blocks	Maximum Cohesion
PP Official	82 %	0.336	13	16
PP Expanded	88 %	0.346	17	17
PP randomly simulated (n=100)	92% - 97% - 100% (Min - Mean - Max)	0.226 - 0.301 - 0.355 (Min - Mean - Max)	12 - 14 - 16 (Min - Mean - Max)	16 - 16 - 16 (Min - Mean - Max)
PSOE Official	68 %	0.317	16	9
PSOE Expanded	85 %	0.337	16	12
PSOE randomly simulated (n=100)	85% - 91% - 96% (Min - Mean - Max)	0.211 - 0.297 - 0.367 (Min - Mean - Max)	9 - 11 - 14 (Min - Mean - Max)	9 - 9 - 10 (Min - Mean - Max)

**Table 3.** Official, expanded and randomly simulated government networks.

These results provide us with interesting information regarding the impact of the inclusion of the LPS on the structure of the government. The size of the main component is a useful measure of connectivity, and the comparison between the expanded network and random simulations shows in both cases that the LPS contributes to the connectivity of the official network but not to a maximum level (given that random simulations provide larger main components), concentrating links mainly on actors who are already part of the main component in the official network. In this way, the closeness centralization of expanded networks evidences greater inequalities in the distribution of closeness (i.e. some actors are closer to the rest of the network than others) than most of the simulated networks; this highlights the role of the LPS in reinforcing subsets of actors (interconnected or not) closer to the rest of the network.

Regarding the results of the cohesive blocks analysis, remember that the LPS reinforced the cohesion and thus generated a more cohesive subgroup than the one in the official network. This effect is non-existent in the simulated PP networks and very weak in the simulated PSOE networks, suggesting that the LPS plays the role of strengthening the highly cohesive groups of the official networks. This has two implications. On the one hand, it shows how the LPS members recruited actors that form the core subgroups in the current government, suggesting a system of elite reproduction. On the other hand, the LPS exerts an influence on the current government through these highly cohesive subgroups, and so its ability to influence is more effective than if it were exerted on less cohesive subgroups or individuals with little or no connection to each other.

### *Circulation of elites and social reproduction processes: two different chains of opportunity*

As we have already observed in this section, in both cases many ex-ministers from earlier periods did not return to government. This situation has generated a series of vacancies in both government structures, as well as two different processes of circulation or renovation.

In the case of the PP government, a soft process of political renovations can be inferred, mostly due to the role of the prime minister, Mariano Rajoy, as a bridge between the 'old guard' and the younger generation of PP leaders: three of the 14 ministers in 2012 (including Rajoy himself) had been ministers between 1996 and 2004; four more had been deputy ministers; three were parliament leaders with strong links to the classic political party structure, and two were regional and local leaders with links closely associated with the original party chiefs. The soft political transition inside the structure of the PP created a government network in 2012 that was more cohesive than its socialist counterpart and that reflects strong ties to governments and structures of the past. In this case, the political party structure, which did not suffer huge electoral defeats in 2004 and 2008, helps to maintain a strong connection between both types of leaders.

For its part, former ministers and directors in the PSOE also left major vacancies when they withdrew from politics. Most of these vacancies were occupied in 2004 by Rodríguez-Zapatero's new political team, but there was a bigger breakup between the two generations of socialist leaders. Nevertheless, the data and cohesive blocks analyses show that this breakup depends on the LPS dynamics: some important leaders in 2004 who acquired ministerial rank, such as José Bono (minister of defence) and Pedro Solbes (minister of the economy), were strongly bound to the 'old guard', as were many of the members of the more technical ministries. The lack of governmental experience of Rodríguez-Zapatero's inner circle forced the new prime minister to rely on technicians who were much more related to former socialist ministers and less to the political party structures, generating a sort of 'bureaucratic inertia'. The LPS members are therefore relevant and influential because they mediate in the relationship between the political and the bureaucratic factions of the 2004 government elite.

Consequently, as Harrison White (1970) noted in his book *Chain of Opportunities*, in both cases we see that professional or political careers are far from being independent of the decisions and trajectories of others. The LPS is relevant to explaining part of the trajectory and upward mobility of some of the current government members, showing that this network has its own dynamics of promotion of individuals. In addition to this, the mechanism for creating vacancies that we have already mentioned constitutes a particular version of the 'circulation of elites': the new governments are, on the one hand, composed by some ministers from former periods who are now returning and, on the other hand, by former high-ranking officials who have been promoted thanks to their experience and the professional contacts acquired in previous governments. This circulation process appears to be a 'blocked' or inbred one, because the vast majority of the recruitments are based on former contacts inside leading organizations.

## Discussion

The above analyses have indicated the differences in the relevance of the LPS in the two governments. The expanded governmental networks display a higher level of cohesion and connectivity, thus reflecting a significant alteration of its main structural characteristics (Latent Power Structure Hypothesis). Though there are clear differences between the two governments that have been exposed and described in the faction analysis, the degree of cohesion and, consequently, of latent internal organization within them is very similar when the LPS is considered. This suggests that there are structural similarities between governments under a bipartisan political system that may not be registered by a more classical approach.

The LPS also reveals an increased number of links to several social organizations that influence governments. In the case of the PP, we can see that when the LPS is considered, the governmental structure attains a greater number of connections to large firms trading on the Ibex-35 and banking institutions, over a period of financial turmoil and highly indebted national economies, when priority contacts with financial mediators can be considered a special asset. However, the PSOE expanded government has fewer links to private firms but significant relations with relevant regional governments in which the party was in power in 2004, as well as with European and other international institutions. Nevertheless, these ideological differences are expected to diminish, given the recent and progressive entry of numerous socialist LPS members onto the boards of large private companies. In brief, we can conclude that the LPS contributes to showing a clearer map of the resources of power that are absorbed after the constitution of a government, something that we consider to be a necessary stage in the process of the circulation of elites.

As regards the type of circulation process that takes place (Chain of Opportunities Hypothesis), we identify a 'blocked' or inbred process, in line with Mills's reflections (1956). In this regard, the government members are recruited mainly because they had established links in the past with either former ministers or high-ranking officials who finally were not recruited and thus remained in other social institutions. Political trust and relational capital are crucial and are key to being recruited as a minister, reflecting a scheme of chain of opportunities (White 1970) in which individual characteristics matter, but in combination with professional and political social networks. Moreover, the reinforcement of the network structure thanks to the inclusion of the LPS, especially in the most cohesive subgroups, reflects a process of elite reproduction in which those recruited in the past eventually consolidate their positions at the heart of the government. Indeed, these LPS connections to the government may even result in career continuities for these members outside the executive, especially in the organizations now occupied by LPS members.

Finally, the relational approach deployed here has revealed an alternative way of analysing the relationships between public and private agencies, in which the duality of the relations plays a central role: instead of treating the state and private enterprises as two separate and sometimes divergent agencies or political actors, we have analysed the power structure as an assembly and a social network that comprises social positions of power occupied by individuals. 'Invisible rulers' exert, first, a potential influence on

public agencies like the government, because they are often situated in positions of leadership in big firms and other institutions and maintain political and personal links of trust with current political leaders; second, they occupy latent and strategic social positions that make them highly attractive to private enterprises, which are keen to recruit them after they leave office. This external influence on democratic institutions can also worsen the performance (and people's perceptions) of democracy during an unstable political period like the present one.

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