FACULTÉ
DE LETTRES, TRADUCTION
& COMMUNICATION
UNIVERSITÉ LIBRE DE BRUXELLES

Forging Grassroots Mobilization

Detecting Astroturf Groups and Measuring their Lobbying Success

Thèse présentée par Brieuc LITS
en vue de l'obtention du grade académique de Docteur en Information et Communication
Année académique 2018-2019

Sous la direction du Professeur François HEINDERYCKX, promoteur

Acknowledgments

This dissertation would never have been completed without the encouragement, support, and assistance of many individuals. First of all, I would like to express my gratitude to the members of my supervising committee: my supervisor François Heinderyckx, for his trust and his valuable advice on academic life; Johan De Rycker, for the continuous intellectual guidance at the office or in Schuman; Glen Cameron, for his support from across the Atlantic; Theodoros Koutroubas, for introducing me to the world of lobbying; Nicolas Baygert, for the lively debates on politics and Nadège Broustau, for the fruitful discussions on different chapters of this dissertation.

I would also like to thank all my colleagues from the 11th floor. Not only have I benefitted enormously from discussions with them over the years, but they provided me with a peaceful and pleasant environment. Going to the office was a genuine pleasure and this great atmosphere was especially helpful in the final weeks of writing this dissertation.

Finally, I would not have dared to embark on this long journey without the constant support and faith of my family and friends. I feel extremely lucky and grateful for being surrounded by such stimulating persons. In particular, I would like to address my gratitude to my father, for reading the whole dissertation and contributing many decisive comments; my mother, for her support and permanent encouragements; Grégoire, for his tips to make it as a PhD student; and Corentin, for helping me in taking my mind off work when I needed to.

Abstract

The research topic of this dissertation is the use of astroturf lobbying in democratic societies. This tactic consists in creating fake grassroots movements for political purposes while keeping the real identity of the instigator secret. By lying about its true identity and by simulating citizen support for or against a political issue, this unethical strategy represents a threat to the well-being of democracy. For this reason, this study aims to shed light on astroturfing with two research objectives.

The first objective aims to design a method to detect astroturf groups that are taking part in political debates. The method used for this purpose is a framing analysis. The underlying assumption is that astroturf groups frame an issue differently than genuine grassroots movements. The research design includes a quantitative text analysis of documents published by 72 interest groups active on the hydraulic fracturing debate in the United States. The method has successfully led to the identification of 12 astroturf groups.

The second objective aims to assess the influence that astroturf groups have on public policy. For this purpose, the position papers of 31 interest groups active on the issue of hydraulic fracturing in the European Union have been analyzed with a similar quantitative method. One astroturf group has been identified from that analysis. To measure its influence, the evolution of the frames used in two reports voted by the European Parliament in 2012 have been studied with a correspondence analysis. The results show that the coalition of which the astroturf group is part was successful in influencing one of the two reports.

The two case studies are insightful in understanding the role that astroturfing plays within broader lobbying strategies. Indeed, the findings of this study show that astroturf groups are spreading in the public sphere with the aim to deceive policymakers and public opinion in order to influence public policy.

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Introduction

1. Setting the Argument

If one were to enter the term *lobbying* in the search box of the Washington Post's, the Guardian's or Politico's websites, one would mostly find articles about how governments are swayed by corporate lobbyists, about politicians accepting bribes, or about how the industry financed scientists to conduct research on their behalf. However, this representation of lobbying in the media is often misleading and offers a narrow view on what lobbying is. Not all lobbyists are "cigar-chomping men who wine and dine the nation's lawmakers while shoving dollar bills into their pockets" (Birnbaum, 1993: 56). Cases of abuses by lobbyists exist and should be denounced, but one should not limit its understanding of lobbying to that. The misconception of the concept raises the question of the role of interest representation in democratic societies.

In light of the pluralist theory, lobbying is an essential tool for democracy. It means that all organizations, from the powerful and resourceful private companies to citizens defending a minority, can voice their concerns and represent their interests to policymakers. The rationale behind lobbying is that policymakers receive information from all the sectors of the society that could be impacted by a new piece of legislation in order to make an informed decision for the common good.

Though the pluralist school of thoughts has been criticized, notably regarding the economic imbalance between private and public groups, it offers an interesting point of view from which interest groups can be defined and from which their role in democratic societies can be explained. It corroborates the idea that the term *interest group* must be understood as a wide variety of organizations, from grassroots movements to religious groups, and should not only refer to corporate lobby groups, as it is often the case in media representations.

From that perspective, lobbying is thus a communication process, an exchange of information between interest groups possessing expert knowledge on a topic and institutions who do not have the resources to produce that expertise. However, during this exchange of

information, some interest groups might rely on questionable strategies to influence policymakers. The one that is the core subject of this dissertation is called *astroturfing*.

Put simply, this strategy aims to manufacture citizen support for or against an issue in order to influence policymakers, the media, or the public opinion. Astroturf lobbying can take different forms. It can be done by setting up a bogus NGO, paying people to demonstrate in the streets, hiring actors to go to public hearings, sending petitions signed with fake names, or purchasing followers on Twitter. By keeping the identity of the actual sponsor of the strategy secret, astroturf lobbying raises ethical questions. It could indeed endanger the functioning of policy-making processes in democratic societies, which should be based on accurate information and facts, and further taint the negative representation of lobbying.

Despite the democratic concerns resulting from astroturf lobbying, little academic attention has been devoted to the subject. One of the reasons behind that is probably the methodological obstacles that emerge from studying a concealed research object. It is indeed complicated to collect data on astroturf efforts, to interview astroturfers, or to observe the phenomenon taking place in the public sphere. However, this questionable lobbying strategy raises many questions: Does astroturf lobbying happen frequently? Is astroturf lobbying illegal? Is astroturf lobbying useful in swaying policymakers? Is it possible to uncover astroturf efforts before they happen?

This study aims to shed light on astroturf lobbying by pursuing two main research objectives. The first objective is to design a method to detect astroturf groups. The second objective seeks to evaluate the influence that astroturf groups can have on public policy. The theoretical grounding on which the method to reach these two objectives has been designed is based on the concept of *framing*.

As Berry (1993) suggests, the roles of interest groups are manifold. They represent their constituents, they participate in the political process, they educate the public about political issues, they frame political issues, they bring new issues to light through agenda-building, and they monitor policies affecting their constituents. These roles are key to the potential success of lobbying strategies.

An interest group may try to bring an issue to light but will do so by emphasizing certain aspects of the issue, and by hiding others. Following the pluralist ideals, if one group supports an aspect of an issue, an opposing group will emerge and present another side of the issue. Consequently, as they consider the issue in different ways, both interest groups will strategically frame the issue by evoking different values. For instance, in the case of nuclear energy, the nuclear industry is more likely to emphasize the argument of how nuclear energy produces low carbon emissions while citizen groups might express their concerns about the risks of nuclear accidents and will illustrate their arguments with the recent catastrophes that happened in Fukushima in 2011. The process of highlighting some aspects of an issue while neglecting others is called *emphasis framing*. It is now well established from a variety of studies that frame choice plays an important role in public policy.

However, there is a dilemma for astroturf groups, that is, the way they will frame the issue at hand. Recent research has shown that the frames used by interest groups can be explained by different factors: the logic of influence and the logic of membership (Schmitter and Streeck, 1999; Klüver and Mahoney, 2015). The former means that interest groups behave in accordance with the target of their lobbying campaign. The same frames will not work as efficiently when trying to influence the DG Trade of the European Commission or the Environment Committee of the European Parliament. The latter requires the interest groups to mobilize frames in accordance with the members they represent. For example, corporate lobby groups would rely more on economic frames and citizen groups on public frames such as the environment or public health. However, astroturf groups represent private interests while appearing like a genuine grassroots movement. The underlying hypothesis for detecting astroturf groups and measuring their lobbying success is that the frames that they invoke are significantly different from the ones of genuine grassroots movements, which allows to isolate them.

2. Structure of the Dissertation

This study consists of four different chapters. The first chapter focuses on defining the role of lobbying in democracies and explaining what astroturfing is. It first presents a brief history of interest representation activities in the United States and the European Union. Notably, it depicts the evolutions of the regulations that aimed to render lobbying more transparent after significant scandals. The distinction between direct and grassroots lobbying is studied as it paves the way for understanding the scope of astroturf lobbying. This recent phenomenon is under-studied and the literature on the subject is scarce and scattered. The objective is to clarify the concept and to present the rationale behind the use of such strategies in terms of lobbying. Furthermore, the social and democratic threats that astroturfing entails within the public sphere are discussed.

The second chapter presents the research objectives and the methods used to attain them. Two objectives are at the core of this study. First, the aim is to design a method that allows the detection of astroturf groups. Second, a model is suggested to assess the influence of astroturf groups on public policy. The research design to answer these two questions revolves around the concept of framing. A thorough review of the literature on this concept is offered given the controversy surrounding framing studies in recent years. In light of that, a method based on quantitative text analysis has been deemed the most fruitful for reaching the two objectives.

The third chapter presents a case study that aims to answer the first research question about how to detect astroturf movements. An analytical process of four steps has been designed for that purpose. The first one is the issue definition. In this chapter, it is the debate of hydraulic fracturing and shale gas in the US that has been selected. Second, interest groups active on this issue have been identified. Third, a corpus is assembled with documents published by interest groups, which allows identifying the frames that they used. Fourth, a framing analysis is conducted in order to isolate the astroturf groups from the genuine grassroots movements.

The fourth chapter's purpose is twofold. First, it aims to replicate the method developed in the third chapter in another political context. It is again the issue of shale gas and hydraulic fracturing that has been selected, but this time in the European Union. Second, this chapter aims to answer the second research question about measuring the lobbying success of

astroturf groups. For this purpose, a specific piece of legislation from the European Parliament has been identified in order to see its evolution. The results are helpful in understanding the role that astroturfing had in the debates.

There are structural differences between the US and the EU regarding the issue of shale gas. The decision-making process, the lobbying practices, the public sphere, the shale reserves, the geology, the market, or the hydraulic fracturing technology are all elements that make the two cases very different. For that reason, this study is not aimed at comparing astroturf efforts between the US and the EU. Both corpora serve different purposes and focus more on the agency aspects of the issue, or how actors organize and try to influence public policy debates in their respective polity.

Chapter One: From Grassroots to Astroturf Lobbying

Introduction

The research topic of this dissertation is the use of astroturf lobbying in democratic societies. This topic has been understudied in the fields of interest representation and political communication, and various are the knowledge gaps regarding this practice. As far as astroturfing is concerned, only a handful of researchers have strived to conceptualize the phenomenon and to explain its emergence in recent years. It is, therefore, necessary to replace these concepts in a theoretical context before suggesting new avenues of research. This chapter is divided into three sections with the aim to explain what the term *astroturfing* encompasses, how it emerged in democratic societies, and how legitimate it is in regard to other lobbying practices.

The first part is dedicated to answering the question of whether lobbying is a necessary evil for democracy. One the one hand, this practice is sometimes described as shady, murky, opaque or obscure, and, on the other hand, is regarded as a healthy method to provide policymakers with expert and necessary information before implementing new public policy initiatives. The objective is to depict a brief history of lobbying activities both in the United States (US) and the European Union (EU) since those two political systems are under scrutiny in chapters 3 and 4 respectively. This historical perspective is helpful in understanding how these activities were conducted at first, how legislative efforts were brought forward to regulate them, and what legitimacy lobbying has nowadays.

The second part of the chapter focuses on explaining the differences between the lobbying actions that are used to exert influence on the policymakers, the media or the public opinion. Following the discussion about the legitimacy of certain forms of lobbying, a distinction is made between the actions that are based on access and the ones based on voice. This disentanglement of lobbying tactics provides explanations on the development of unethical strategies such as astroturfing and its implicit threats to pluralist and democratic values.

The third and last part of this chapter precisely looks at the danger of astroturfing for the well-being of democracy. By looking at the existing literature on astroturf lobbying and at the

different forms it can take, a clear picture of the phenomenon is depicted before its ethical dimension is discussed in light of normative communication theories. The observations justify the need for further research on the topic and pave the way for more empirical studies on astroturfing.

1. Lobbying in Democratic Societies: A Necessary Evil?

The etymology of the term lobbying is hazy. Some authors claim that the word originated at the Willard Hotel in downtown Washington, DC, and was used to describe people, mostly wheelers and dealers, who would frequent the hotel lobby because they knew it was one of the favorite places where Ulysses S. Grant, US President from 1869 to 1877, would go to drink brandy and have a cigar (Smith, 1996). Other sources locate the origins of the word earlier in the United Kingdom. With the establishment of the modern British Parliament by the Acts of Union in 1707, it was typical for Members of Parliament (MP) and peers to gather in the hallways – the lobbies – of the House of Parliament before and after parliamentary debates. Citizens and people representing private interests would enter the lobbies with the hope to access MPs and expose their issues of political matter (Koutroubas & Lits, 2011). Notwithstanding the exact origins, both versions concur on what lobbying refers to. It pertains to citizens who meet policymakers in order to defend their interests and try to persuade the lawmakers to shape policy to their benefits. In other words, lobbying is "the stimulation and transmission of a communication directed to a governmental decisionmaker with the hope of influencing his decision" (Milbrath, 1960).

In order to understand how lobbying has evolved over the years and why the reputation of lobbyists is sometimes controversial in the eyes of the public, it is necessary to look back in history. The first traces of lobbying, be it in the US or the EU, are symptomatic of the opacity that surrounds such activities. Instances of evil practices such as bribery, blackmail, conflict of interest or abuse of power made the headlines in the past and participated in creating a social representation of the lobbyists that is not flattering. Despite the efforts made to distance lobbying activities from such practices, newspapers are still having a field day with stories of the Jack Abramoff's of this world. However, even though such abuses exist, governments and institutions seek to make the relationship between policymakers and lobbyists more transparent and strive to legislate and institutionalize interest representation activities.

This section sums up the evolution of interest representation in the US and the EU. This summary is not exhaustive but pulls together critical elements of the history of lobbying practices that are essential to understanding how lobbying strategies are used nowadays and why tactics such as astroturfing saw the light of day and potentially threaten the well-being of democratic societies.

1.1. The Evolution of Lobbying in the United States

This first subsection gives an overview of the evolution of lobbying practices in the United States. Often referred to as the cradle of lobbying, the US has a long and troubled history of interest representation. First, an emphasis is put on the numerous cases of influence abuses, such as corruption and briberies, that has hit the US over the years and the reactive legislative processes that have been set up to make these opaque practices more transparent. Second, special attention is directed at the proliferation of interest groups from the 1960s onwards, as it durably changed the nature of policymaking in the US and embodied the power of grassroots campaigning.

1.1.1. Influence, Corruption, and the Need for Transparency

In the United States, even though lobbyists and influencers unofficially existed until the famous Bill of Rights in 1791 the term lobbying would have started to appear in written form in 1820, with a letter addressed to the Senate (Gelak, 2008: 8):

> Other letters from Washington affirm, that members of the Senate, when the compromise question was to be taken in the House, were not only *lobbying* [emphasis added] about the Representatives' Chamber but, were active in endeavoring to intimidate certain weak representatives by insulting threats to dissolve the Union (April 1, 1820, New Hampshire Sentinel)

Already at that time, the word was thus used to describe people meeting with lawmakers in order to represent special interests, and a clear line was drawn between lobbying activities, which are protected by the First Amendment of the Constitution to petition, and intimidation. It is about forty years later during the so-called Gilded Age and the rapid economic growth of the country that corporate lobbying took off and was in full swing. This rapid growth also marked the rise of some extremely questionable lobbying practices. After the ending of the Civil War, the railroad lobbyists sought to sway the Government regarding the prices of railway facilities and did so in such a questionable way that significant demands emerged from the public to regulate lobbying practices (Chari, Murphy, & Hogan, 2007). During that period, a pioneer stood out in the person of Sam Ward, also known as the *King of the Lobby*, who was famous for inviting lawmakers to fancy dinners, drinking fine wines, smoking cigars, in the hope to cement friendships with well-placed politicians. However, even if Sam Ward

would consider himself as a *social lobbier*, such methods to influence lawmakers were deemed illegal, and he found himself convicted of bribery. He admitted guilt in 1875 but nonetheless declared that "I do not say I am proud – but I am not ashamed – of the occupation" (Hall & Wolff, 1988: 495). The conviction of Sam Ward is not an isolated case and many lobbyists were blamed for corrupting politics during the Progressive Era, which leads researchers to claim that "political corruption is almost inevitable in a political culture and that is exactly what must be learned by the political public and taught by political scientists" (von Alemann, 1989: 856).

In response to these concerns of corruption, the Congress enacted the Federal Regulation of Lobbying Act in 1946 whose purpose was to reduce the influence of lobbyists. Two elements of the Act are of particular importance. The first is that it includes a provision aiming to define what lobbying is, including the difference between direct and indirect lobbying, which is further explained in detail in the following section of this chapter. The Federal Government defined Lobbying in Section 307 of the Lobbying Act:

> The provisions of this title [lobbyists] shall apply to any person (except a political committee as defined in the Federal Corrupt Practices Act, and duly recognized State or local committees of a political party), who by himself, or through any agent or employee or other persons in any manner whatsoever, directly or indirectly, solicits, collects, or receives money or any other thing of value to be used principally to aid, or the principal purpose of which person is to aid, in the accomplishment of any of the following purposes:
> a) The passage or defeat of any legislation by the Congress of the United States.
> b) To influence, directly or indirectly, the passage or defeat of any legislation by the Congress of the United States.

The second important element is the willingness to create a register where lobbyists have to subscribe to engage in lobbying activities and where they should disclose their lobbying expenditures. Indeed, according to Title III of the Legislative Reorganization Act of 1946 (2 U.S.C. 261-270; also known as the Federal Regulation of Lobbying Act):

> Any person who shall engage himself for pay or for any consideration for the purpose of attempting to influence the passage or defeat of any legislation by the Congress of the United States shall, before doing anything in furtherance of such object, register with the Clerk of the House of Representatives and the Secretary of the Senate and shall give to those officers in writing and under oath, his name and business address,

> the name and address of the person by whom he is employed, and whose interest he appears or works, the duration of such employment, how much he is paid and is to receive, by whom he is paid or to be paid, how much is to be paid for expenses, and what expenses are to be included.

This reactive process is symptomatic of how regulation about lobbying has evolved in the US over the years. Instances of abuses, such as bribery and blackmail, led to stricter rules. The examples of the Watergate and the Wendtel Corporation - an organization that omitted to disclose its lobbying activities and furthermore bribed its way to lawmakers - prompted the Congress to repeal The Federal Regulation of Lobbying Act by the Lobbying Disclosure Act of 1995 (LDA), which is still in force when this dissertation is written (Luneburg & Susman, 2006). This Act defines lobbyists as:

> Any individual who is employed or retained by a client for financial or other compensation for services that include more than one lobbying contact, other than an individual whose lobbying activities constitute less than 20 percent of the time engaged in the services provided by such individual to that client over a six-month period.

Further on, lobbying activities are described as follows:

> Lobbying contacts and efforts in support of such contacts, including preparation and planning activities, research and other background work that is intended, at the time it is performed, for use in contacts, and coordination with the lobbying activities of others.

However, one loophole in the LDA is that it exempted grassroots lobbying and religious lobby groups to register and disclose lobbying expenditures.

One of the latest examples of this reactive process going from abuse to stricter rules is undoubtedly the case of Jack Abramoff. The powerful and resourceful lobbyist pled guilty in January 2006 to fraud, conspiracy and tax evasion (Hrebenar & Morgan, 2009). Abramoff scandal was highly mediatized as it involved the bribery of many US officials, including staff from the White House. This massive lobbying scandal notably led to the movie *Casino Jack* retracing the career of Jack Abramoff, portrayed by Kevin Spacey, and depict the influence of money in the US political system. The Abramoff scandal has led to the latest major

amendment of this law in 2007 and strengthens the requirement for lobbyists to register with the Clerk of the United States House of Representatives and the Secretary of the United States Senate, including stricter rules regarding meals, gifts, and trips paid for by lobbyists.

The question of money in politics in the United States is troubling and may lead to confusions for citizens to understand the difference between political donations and bribery. Indeed, in order to fund their campaigns, political parties and politicians may accept money from diverse contributors and namely through important Political Action Committees (PACs). Theoretically, the sum of money offered by the anonymous benefactor is not given directly to a political figure but helps to fund its campaign. Whereas bribery implies some exchange of favors, or *quid pro quo*, political contributions are not considered as corruption. However, the distinction between the two is sometimes blurry and contributes to cast a negative light on lobbying more globally. This dissertation does not focus on that financial aspect of American politics and solely focuses on lobbying as a communication process.

Though it is hard to evaluate the actual number of professionals conducting advocacy activities, lobbying in the United States keeps expanding dramatically in terms of financial turnover.[1] The most recent calculations based on the Senate Office of Public Records show that 11 514 registered lobbyists were active in 2015, which shows a slight decline below a record high of 14 824 in 2007. Most of the lobbying activities aiming to influence federal legislation occur in Washington, DC, with many interest groups having offices on K Street, which became a metonym for all lobbying activities happening in the US capital.

1.1.2. The Explosion of Social Movements in the 1960s

The explosion of liberal organizations in the 1960s had a strong influence on the evolution of interest representation and the nature of politics in America. The rise of such interest groups had lasting consequences both on the ways interest groups conduct their advocacy strategies, but also on the policymaking process.

In the early 1960s, citizens mobilized for social reasons, outstandingly to defend civil rights for black people and to protest against the Vietnam War. Those groups were genuine social

[1] See, e.g., Jeffrey H. Birnbaum, *The Road to Riches Is Called K Street: Lobbying Firms Hire More, Pay More, Charge More to Influence Government*, Washington Post, June 22, 2005.

movements who managed to get their views absorbed by a political party. Despite their success in putting the issue on the political agenda, these movements would quickly fade away afterward.

The interest groups that have been established later on have benefited from the success of these liberal advocacy organizations and have learned the lessons from their short lifespan. More and more issues were subject to mobilization of citizens and, for example, environmental groups and consumers groups have flourished in the late 1960s and the 1970s. The difference with their predecessors is that they are not protest-oriented and that they are run like business organizations with an emphasis on raising money to enjoy longevity.

The success of these social movements has two significant long-term consequences in American politics. First, it changes how the national government elaborates its policies. Whereas policies were made in "closed subgovernments, each involving a relatively stable and restricted group of lobbyists and key government officials" (Berry, 1993: 34), the policymakers now have to listen to much broader policymaking communities. Berry calls that type of policymaking *issue networks* and defines it as "a set of organizations that share expertise in a policy area and interact with each other over time as relevant issues are debated. […] The result of issue network politics is that policymaking has become more open, more conflictual, and more broadly participatory" (Berry, 1993: 34-35).

The second consequence is the reaction from conservative organizations and the Republican Party. Noticing the success of liberal advocacy organizations, new conservative citizen groups were set up to try to counter the influence of such liberal movements. The issues defended were the likes of abortion or family rights. Moreover, when Ronald Reagan was elected in 1980, he made it a priority to focus on economic growth and saw liberal movements as slowing down this agenda. Consequently, conservative citizen groups were more likely to be consulted when making new policies. However, even though Reagan was successful in limiting the propagation of liberal citizen groups, the overall conservative counter was a failure and "the transformation of interest group politics led to large-scale structural changes in the public policymaking process" (Berry, 1993: 34).

As the decision-making process became more issue-centered and participatory, various types of organizations became involved with the aim to have their voice heard. In this sense, the practice of lobbying nowadays is not the preserve of specific interest groups solely designed for that purpose, but other players come into play and compete to gain the politicians' ears. The influence game in the US therefore also involves trade unions, think tanks, news media, consumer organizations, or PACs, whenever they deem a policy could impact their interests.

1.2. The Evolution of Lobbying in the European Union

This subsection focuses on the evolution of lobbying activities in the European Union. In comparison to the US, lobbying in Europe and vis-à-vis the European institutions in particular is a much more recent practice. First, an emphasis is put on the professionalization of interest representatives in Brussels and how the regulation of lobbying practices regarding transparency differ from their American counterparts. Second, two theoretical perspectives on the role of interest groups in the European integration are discussed, which leads to a better understanding of how the EU political structures offer different opportunities for organizations to defend their interests.

1.2.1. European Integration and Transparency Stalemate

It was in the 1950s that the European integration started following the end of World War II and the horrors it entails. The founding fathers such as Adenauer, Churchill or Schuman saw integration measures as a means to keep peace in Europe. The first steps in that direction were of economic matter with the creation of the European Coal and Steel Community (ECSC) with the Treaty of Paris in 1951. The six countries that signed the treaty (Belgium, France, Italy, Luxembourg, the Netherlands, and West-Germany) decided to go forward a few years later in 1957 with the Treaty of Rome establishing the European Economic Community and the European Atomic Energy Community. From that time onwards, lobbying was in perpetual motion. Daniel Guéguen (2007) distinguishes four cycles in the development of European lobbying:

The *times of construction* (1957-1970) were marked by the invention of the Common Agricultural Policy (CAP). Lobbying was considered *fusional* because of the permanent

exchange and cooperation between the officials of the Commission and the agricultural industry to create the legislation of the CAP (Guéguen, 2007).

During *the low tide* (1971-1987), lobbying in Brussels was mostly *diplomatic* and was carried out at the highest levels due to the shift from qualified majority voting to unanimity. It is with the first direct election of the European Parliament (EP) in 1979 that businessmen and organizations started to see the necessity and the advantages of setting up offices in Brussels, the seat of most European institutions. Contrarily to the Commission's employees, Members of the European Parliament (MEPs) are elected. They thus represent people who voted for them and usually seek to be reelected in their constituency. Even though the Parliament did not have the same power as it has nowadays, it represented a new channel of influence in Brussels, and lobbyists would try to influence them via their national political representatives (Lehmann, 2009).

During the third period (1988-2005) lobbying became more *strategic*. The Single European Act was signed in 1986 and was the first major revision of the Treaty of Rome. It marked a return to qualified majority voting and promoted the economic integration and harmonized different laws among the twelve countries forming the European Community at that time. In 1992, the Treaty of Maastricht was signed, and the European Union was officially born.

Guéguen (2007) considers that the lobbying became *transversal* as from 2006. The latest Treaty to have come into force was the Lisbon Treaty in 2009. The three most notable changes and revisions are the majority needed in the Council of Ministers, which went from unanimity to qualified majority voting; the new law-making powers ascribed to the European Parliament; and the creation of delegated and implementing acts that give new powers to the Commission for implementing specific legislations. Finally, it is worth noting that from six countries who signed the ECSC in 1950, the European Union expanded gradually to 28 countries in 2013, before its first ever contraction in 2019 when the UK effectively leaves the Union.

Throughout the years and the enactments of new treaties, increasing powers were transferred from the Member States to the European institutions. Given that most of the institutions have their headquarters in the capital of Belgium, Brussels has attracted an ever-increasing number

of would be influencers, including lobby organizations. According to Transparency International, which is an NGO advocating for more transparency in EU politics, there would be around 26 000 lobbyists with a regular presence in Brussels.[2]

In comparison to the history of lobbying in the United States, fewer cases of bribery and corruption seem to have made the headlines of newspapers in the EU, but it does not mean such murky practices do not exist on this side of the Atlantic. As for evidence, British investigative journalists demonstrated in 2011 that three MEPs allegedly accepted a bribe of 100 000 euros per year in exchange for tabling amendments to legislation.[3] However, the debate surrounding transparency was less related to political scandals, but more so because of the complexity of the European decision-making process. As Héritier (2003) states, "because of the opacity of the decision-making processes of the Community bureaucracy and its innumerable informal committees and opaque policy networks as well as that of Council meetings, an attempt was made to secure a right to information in these areas" (p. 821).

In its willingness and as its duty to represent the European citizens, the EP was always the institution that was more prone to adopt tighter transparency rules. In 1991 already, Marc Galle, Chairman of the Committee on Rules of Procedure, the Verification of Credentials and Immunities suggested a proposal for a code of conduct as well as a register for lobbyists. However, this proposal was not a success, notably because of the controversies on how to define the term lobbyist. A second report was more successful a few years later and led to the creation of a register for lobbyists (Lehmann, 2009: 56-57).

Regarding the European Commission, the first traces of regulation on lobbying emerged with a Green Paper on the European Transparency Initiative (2006), and which led to the creation of a European Transparency Register, which will be later common to both the Commission and the Parliament. In that document, the term lobbying is defined as follows:

[2] Data retrieved September 20, 2017 from https://transparency.eu/lobbyistsinbrussels/
[3] EURACTIV (March 21, 2011). Journalistic spoof traps MEPs in bribery affair. Retrieved September 20, 2017 from https://www.euractiv.com/section/public-affairs/news/journalistic-spoof-traps-meps-in-bribery-affair/

> All activities carried out with the objective of influencing the policy formulation and decision-making processes of the European institutions. Accordingly, *lobbyists* are defined as persons carrying out such activities, working in a variety of organizations such as public affairs consultancies, law firms, NGOs, think-tanks, corporate lobby units (*in-house representatives*) or trade associations (p. 5).

Even though more power of initiative was attributed to the European Parliament and the Council, the Commission still has most of the initiative power for writing new regulations and directives. Lobbying transparency regarding the European Commission is thus vital given its role of agenda-setter. This institution is a strategic venue for lobbyists to exert their influence because, as Obradovic (2009) points out, "European legislation can be influenced in the most efficient manner in the pre-drafting stage" (p. 299) of the policymaking process. Advocates for a mandatory Register thus stress the need for more transparency at that crucial point of the policymaking process.

It is in 2011 that the Transparency Register becomes common to the Commission and the Parliament. However, its main flaw resides in its voluntary nature that necessarily diminishes its effectiveness. The US experienced the same difficulties when they created a non-mandatory register with the Lobbying Act of 1946, only to fix it into a mandatory register in the Lobbying Disclosure Act almost fifty years later in 1995. However, it seems that the EU did not learn the necessity of making its Register mandatory.

Indeed, Jean-Claude Juncker decided to put transparency high in his political program when campaigning in 2014 to become the President of the European Commission. He promised to introduce a mandatory lobby register, common to all the European institutions. This promise came as a surprise as history has shown that the Commission was always behind the European Parliament regarding transparency initiatives. However, following the election of Juncker, it became clear that the Commission would not keep its promise to make the Register legally binding and only introduced lighter reforms such the obligation for top cabinet members to list all the meetings they held with interest representatives. Though it shows some progress from the Barroso Commission, the initiative still has flaws, for instance the lack of sanctions if officials do not keep their list of meetings up to date.[4]

[4] Legislative text available at http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2014.343.01.0022.01.ENG&toc=OJ:L:2014:343:TOC

The case of the European Commission's Directorate-General for Financial Stability, Financial Services, and Capital Markets Unions, or DG FISMA, illustrates the loopholes of the current version of the Register. Even though the Commission communicates on it with the motto *no registration, no meeting*, the fact is that the current rules stipulate that only the most senior employees have to disclose their meetings with lobbyists. That represents only 250 employees out of 30.000. When looking at the meetings held by DG FISMA between January to July 2016, only 16% were held by top officials and thus disclosed in the Register. That means that more than 80% were actually concerning lower officials meeting with interest representatives who were not necessarily registered.

1.2.2. The Role of Interest Groups in the European Integration

There are two schools of thoughts competing regarding the influence and the role of interest groups in the process of the European integration. On the one hand, liberal intergovernmentalism perceives the European integration as a process that is primarily driven by economic interests, and authors like Hoffman and Moravcsik believe that the European integration has strengthened the power of the Member States. This would suggest that the interest groups would mostly pursue activities at the national level. On the other hand, neofunctionalism emphasizes the role played by interest groups and social movements on the European integration and the EU decision-making process (Shapovalova, 2015). Consequently, several authors such as Haas (1958) or more recently Saurugger (2002) who brings forward the hypothesis of a new "community mode of interest representation" (p.4), which would result from a shift of power from the European Member States to the European institutions.

In more detail, Stanley Hoffmann (1966), in his book *Obstinate or Obsolete: The Fate of the Nation State*, has established the theoretical model of *intergovernmentalism*. His main idea, which consequently influenced other scholars, stresses the role of Member States in the European integration. Based on the initial model established by Hoffman, Moravcsik (1995) redefines it as *liberal intergovernmentalism*. The main idea resides in the fact that national governments have the ultimate power regarding the integration process. National interest groups are thus engaged in the process of national preference formation, while national governments may use supranational institutions to reduce opposition from unsupportive

domestic groups (Moravcsik, 1998). This theory does not recognize any role of interest groups in the EU integration and the EU decision-making process (Cowles, Caporaso, & Risse-Kappen, 2001).

This model was criticized by several authors. One of the criticisms, put forward by Robert Putnam, was that this approach is guided by the logic of two-level games. That is that only the national politicians participate at both domestic and international levels and that domestic interest groups pursue their interests by exerting influence on their governments (Putnam, 1988).

Conversely, Haas (1958), considered as the founding father of *neofunctionalism*, posited the premise of a new theory of European integration in his book *The Uniting Europe: Political, Social and Economic Forces*. This model, strongly influenced by the concept of gear, or more commonly referred to as the *Monnet* method, is based on two theoretical postulates, which are the functional spillover and the political spillover in order to explain the European political construction.

According to Schwok (2005), the functional spillover assumes the formation of new political, economic and social forces and the migration of national political stakes at the European level. The political spillover, analogous to the first, highlights the fact that the loyalty of non-state actors is reoriented towards supranational powers, to the detriment of national powers. Consequently, this model highlights two critical facts: first, the European integration would have weakened the sovereignty of National States and resulted in the transfer of a large part of their competences to the European level; secondly, it highlights the importance of the role played by interest groups in the integration process. It should be noted that this theoretical model has generated a plethora of criticisms from many authors. Among them, the one formulated by Hoffmann (1966), the first thinker of intergovernmentalism, who considered that neofunctionalism does not sufficiently take into account the role of national states in the construction of Europe and would simplify the concept of state governance too thoroughly. Nonetheless, neofunctionalism has inspired the conceptual approach of the EU multi-level governance.

The European Union does not correspond to any existing political model because of the absence of a European State or Government *stricto sensu*. In this sense, Kohler-Koch and Larat (2009) underline the weak hierarchy of the decision-making process and the absence of a vertical axis of strong power, which would favor the horizontal coordination of a series of non-state actors. Consequently, research on European integration has focused on the concept of multi-level governance in order to qualify the political system that is specific to the EU.

According to the multi-level governance theory, national states no longer monopolize the decision-making competences but are shared by different actors at different levels, both horizontally and vertically. It implies that different political arenas from different levels – subnational, national and supranational – are interconnected rather than centralized at a national level, such as advocated by the intergovernmentalism scholars. This means that subnational actors, including interest groups, operate at national and European levels, creating transnational coalitions (Marks, Hooghe, & Blank, 1996; Shapovalova, 2015).

There are two main consequences for interest groups. The first one is that multi-level governance means that there are thus more avenues for interest groups to voice their opinions and exert influence in the decision-making process. As Greenwood (2011) explains, "for EU institutional politics, the complex interplay between subnational, member state, and supranational tiers of authority creates multiple arenas, venues, and points of access" (p. 23). This leads to interest groups choosing strategically the venues where they believe they can be more successful. This concept, coined as *venue-shopping* by Baumgartner and Jones (1991), is detailed later in this chapter. The second one exposes the economic consequences of having numerous avenues of influence. The cost of mobilization can drastically rise when an interest group decides to campaign at both national and European levels.

1.3. Theoretical Model Supporting Lobbying in Democracies

After highlighting the historical developments of lobbying activities in the US and the EU in the previous section, this subsection explores the theoretical groundings explaining the need for interest representatives in modern democracies. How, from a macro-level perspective, can lobbying activities be justified and to what extent can they be considered healthy for democracies?

1.3.1. Pluralism in the United States

In an attempt to explain the ethical dimension of lobbying in the US, Keffer and Hill (1997) realized that there was "a widespread perception among the general public that lobbying influences negatively the character of legislation, and that anyone who lobbies belongs to a special interest group" (p. 161).

Despite this pejorative image often attributed to lobbying, the question is to understand, from a theoretical perspective, why then do institutional actors keep collaborating with lobbyists. The answer to this question is as old as the Constitution of the United States itself. As stated earlier in this chapter, the First Amendment of the Constitution gives citizens the power to petition. It means that citizens are granted political powers that can be used if they consider policies to be unfair to a segment of a constituency. As for the other Amendments of the Constitution, these rights are inalienable, which means that the activity of interest representation has a long and deep anchorage in US history and in the mind of American citizens. Thus, if lobbying activities were to be forbidden, it would mean that the Government would withdraw some political powers from its citizens, and, countries where petitioning and lobbying are considered illegal are often referred to as authoritarian or totalitarian. Lobbying activities, protests, and petitions are at the core of the United States *democracy*, understood from the ancient Greek *demos,* common people, and *kratos,* power.

The view that the American democracy is a marketplace where individuals and groups are allowed to represent their interests to the Government has developed as a school of thought for many political scientists in the past sixty years and is known as *pluralism*. In this theory, democracy is thus seen as a marketplace where a plurality of organizations such as political parties, trade unions, NGOs, and interest groups are competing to exert influence on different issues that affect them or their constituencies. Consequently, this competition between different interests assures that the decision-making process is not monopolized by a political elite (Dahl, 1958).

This concept of pluralism can be rooted in James Madison (1787) seminal essay No. 10 from *The Federalist*. This collection of articles advocated for the need of a Constitution and described what will be known as interest group politics. Indeed, what Madison describes is the construction of the United States based on a system of checks and balances with the

accountability of a government to a plurality of citizens and interests, and not a single few voices. Even though Madison's views were expressed in a time where lobby groups were not as numerous and organized as today, he correctly perceived that people organize into *factions* in order to represent their interests.

However, he feared that without any forms of checks and balances, some factions could represent a threat to a popular government. He feared that, as factions pursue their own interests, one could acquire too much power as to rule over the others, or the *tyranny of the majority* as he phrased it. Madison (1961) believed that too much freedom would lead factions to oppress each other instead of "co-operating for their common good" (p. 78). In Madison's mind, the solution to that risk was the creation of a republican form of government who are given "the responsibility for decisions to a small number of representatives who are elected by the larger citizenry … [and] … would provide the necessary checks on the worst impulses of factions" (Berry & Wilcox, 2015: 3). Madison advocates for some form of Republic that would prevent the hegemony of factions. In layman's terms, whereas oil or tobacco industries could dominate a single state, it would prove much harder to dominate the entire territory of the United States with a Federal Government at its head. Consequently, "the strong infrastructure provided by well-organized groups makes a pluralistic society a reality and a representative system of government meaningful" (Herring, 1929).

Even though this idea that a plurality and a diversity of interests represented over a vast land such as the United States provides checks and balances was already in the spirits of Madison's essay, it is only as from the 1940s and 1950s that political researchers, such as David B. Truman or Robert Dahl in his seminal work *Who Governs?*, focused their attention on interest groups *per se*, and the political bargaining that occurred between these groups (Ainsworth, 2002). Four different premises can be identified in describing the ideal pluralist model where mobilization is seen as a natural product of shared concerns (Wiarda, 2005: 149):

- An equal access to the policy-making arena;
- A fragmentation of the marketplace;
- A competitive process for determining policies;
- A neutrality of government.

However, this model has consequently been criticized over the years. Following the *transaction perspective*, mobilization is biased by collective action problems. The central argument developed by Mancur Olson (1965) is that there is an overrepresentation of interest groups with concentrated interests in comparison to groups with diffuse interests. He explained this bias by the free-riding phenomenon, or the fact that groups belonging to a diffuse interests' coalition do not perceive the necessity to mobilize as they will reap the benefits nonetheless. In that conception, the community is in favor of a certain form of elites, as explained by Schattschneider (1960). The Elite pluralists accept the premise that there are a multiplicity of groups competing for power and influence, but they reckon that this competition is neither fair nor pure. Elite pluralists subsequently contend that in the political marketplace resides an elite that has acquired more power, money for instance, and that exerts more influence than other groups. This is, of course, reminiscent of the *tyranny of the majority* professed by Madison nearly two hundred years before. However, "political elites are not a monolithic, unified interest group representing their own narrow group of interests but rather are diverse, competitive elites representing a wide range of interests" (Glasberg & Shannon, 2010: 19). Hence, elites do respect the policy-making process even though they possess a higher power in the political marketplace. However, in response to the transaction's perspective, a neopluralist current emerged with the idea that the collective action problem is not as severe as presented by Olson and that it can be solved, for instance with the allocation of funding for underrepresented interests by the Government (see Lowery & Gray, 2004; Walker, 1991).

1.3.2. A Chameleon Pluralism in the European Union

Whereas in the United States the right to petition and organize collectively to make its voice heard by the Government has been anchored since the Declaration of Independence from Great Britain in 1776, interest representation in the European Union is a much more recent practice *per se*. The concept of pluralism, so deeply rooted in the American political history, has also been mobilized to characterize the EU polity as a whole, notwithstanding the fact that Member States embody a varying degree of pluralism in their own national polity. However, the legitimacy of lobbying activities in Europe is also based on the evolution of the EU institutions, their competencies, and their resources.

From the establishment of the European Coal and Steel Community (ECSC) in 1951 to the entering in force of the Lisbon Treaty in 2009, more and more regulatory competencies have been transferred from national to European level. Over the years, the Commission, the Parliament and, the Council have gained more and more competencies in numerous fields, ranging from monetary policy in the Eurozone to environmental issues. In order to carry out these tasks, the EU spends around 6% of its annual budget on staff and administration. The Commission relies on around 33 000 employees, the Parliament employs 6 000 people and around 3 500 employees work in the general secretariat of the Council of the EU. Considering other EU agencies, there are some 55 000 civil servants employed by the EU.[5] As a comparison, the city council of Birmingham in the UK employs more than 60 000 public servants. It is arguably a challenge for the EU to handle public policy that affect 500 millions of European citizens with such a limited staff, and this shaped the way of how interest groups interact with the EU institutions.

The relationship between the EU institutions and interest groups is not unidirectional. In light of the resource theory formalized by Pieter Bouwen (2002) notably, EU lobbying lies between institutional demands and interest groups supply. In other words, in the case of the Commission, for instance, there is a need for expert information. As the agenda-setter, the Commission has the right of initiative when it comes to drafting new policies. Given the reduced number of civil servants, it is impossible for the Commission to have deep expertise in all the areas and on an ever-growing number of issues where new legislation is needed. Consequently, the Commission needs the expertise from interest groups that might be impacted by a new directive or a new regulation and that is how interest groups legitimate their lobbying activities in the EU. This participation in the policy-making process can take different forms from *public consultations*, where all EU citizens and organizations can participate, to the setting up of *expert committees* gathering experts of a given sector. This form of lobbying is often described as *informational lobbying*, as opposed to "pressure lobbying" (Broscheid & Coen, 2003). Informational lobbying means that an interest group has expert information such as impact assessments, market figures or technical knowledge, on a specific issue and exchanges that piece of information in order to gain access to the policy-making process, by way of attending conferences, fora or expert committees.

[5] Numbers retrieved September 20, 2017 from http://europa.eu/rapid/press-release_MEMO-11-473_en.htm?locale=en

The concept of *access* is at the heart of the matter for scholars interested in governance and interest representation. As explained earlier, equal access is one of the premises of the pluralist theory. However, different remarks can be addressed when analyzing the EU institutions representation and participation system. Theoretically, EU pluralist scholars acknowledge David Truman's (1951) premise that "open access to policymakers enables interest groups to provide checks and balances against powerful states officials" (p. 55) and hold it true for the EU environment. Access to policymakers by interest representatives would allow a constant re-equilibration all along the policy-making process, as for each interest group exerting influence from one side of the fence, another one would oppose it. Postulating that those groups have equal access, it is down to the policymakers to take an informed decision in light of all the information they gathered from different consultations.

However, numbers do not support this hypothetical equilibrium. Table 1 shows the breakdown of organizations listed in the Transparency Register depending on the nature of interest they defend.[6] On the one hand, from all 11 541 registrants, more than 60% belong to section I and II and represent private interests. On the other hand, only 26% are listed as Non-Governmental Organizations. Moreover, this only takes into account the organizations who filled in the Transparency Register. Given that interest groups are not obliged to subscribe to it, it is possible to assume that the gap between private and general public interests might be even more important.

I	Professional consultancies/law firms/self-employed consultants	1342
II	In-house lobbyists and trade/business/professional associations	5662
III	Non-governmental organizations	3062
IV	Think tanks, research and academic institutions	871
V	Organizations representing churches and religious communities	51
VI	Organizations representing local, regional and municipal authorities, other public or mixed entities, etc.	553

Table 1 Interest groups by type (European Transparency Register, 2018)

[6] Data retrieved September 20, 2017 from http://ec.europa.eu/transparencyregister/public/homePage.do

How to explain that imbalance? Hix & Høyland (2011) echo the downfall of the Olsonian logic of collective action. According to them, "where public interests are concerned, people can simply *free ride* on the actions of others; reap the benefits of higher environmental protection for instance without helping an environmental group to lobby government" (p. 160). This imbalance leads researchers to sometimes describe the nature of the EU system as *elite pluralism*. Coen (1997) defines it as "a lobbying system in which access to the policy forums and committees is generally restricted to a limited number of policy players for whom membership is competitive but strategically advisable. As such, EU institutions can demand certain codes of conduct and restrictions in exchange for access" (p. 98).

Even though it has been demonstrated that private actors are more important in terms of number and economic resources, describing the whole EU system as elite pluralism could be erroneous, according to Rainer Eising (2007). His study on pluralism in the EU "does not hint at the emergence of elite pluralism in the EU but points to important variations across the EU institutions and among the working level and their political leadership in each institution" (p. 384).

Coen and Richardson (2009) also propound this view and contend that "EU pluralism might be best characterized as a kind of chameleon pluralism, capable of changing its appearance over time during the policy cycle for a given policy problem or within a sub-sector over a longer period of time" (p. 348). According to the authors, the policy-making process follows natural steps where the number of consulted participants is broad and varied at the beginning but then tightens to only a few insiders as it reaches the end of its cycle. Moreover, as Eising mentioned, sub-sectors of EU institutions all have their own history and their own formal and informal relationships with stakeholders from their issue networks.

As an illustration, Coen and Kastaitis (2013) notably described the case of the European Commission. Their conclusions show that a form of elite pluralism can be observed in the EU system but that the EU sub-systems showed forms of chameleon pluralism. Put simply, it means that business interests are more preponderant in attempting to influence the Commission, but that it is not necessarily the case in each DG. Depending on the age of the DG, the nature of the policy domain or even the involvement of Member States, the

population of interest groups may greatly vary and thus be best labeled as chameleon pluralism.

Finally, some authors put forward the view that the EU system embodies neo-pluralism values. According to these authors, the State, or in this case the Commission, looks to provide privileged access to the segments of the society that are underrepresented. In a concern for equality, the Commission grants funding to NGOs or social movements to try to rectify the aforementioned imbalance and reach a social equilibrium. Even though it is fair to say that the gap between business interests and general interest groups has narrowed in recent years (Greenwood, 2007), the fact that the EU institutions fund organizations whose mission is to influence them in return is particular and raise questions, leading Kohler-Koch (2010) to contend that the EU actually tries to manufacture a synthetic European civil society.

1.3.3. Lobbying: A Cure or a Curse for Democracy?

There are divergent views on the role of lobbying in democracy, as evidenced in the media. Whereas some journalists take a firm stance and subsume lobbying as corruption[7], others present a more balanced opinion, such as the article published by the European media EURACTIV and titled *Lobbying: a dirty aspect of the EU bubble or a necessary part of the legislative process, depending on who you ask* (EURACTIV, 2017).[8] The objective of this subsection is to look at the arguments brought forward by two extreme camps, one seeing lobbying as an activity that is legitimate and enables democratic participation, and the other perceiving it is a practice conducted mostly by private interests in total opacity, and to understand that lobbying is not all black or white.

On that note, the history of interest representation in the US and the EU offers different perspectives. In the US, there is a long tradition of lobbying anchored as a right in the Constitution. It is considered as such despite the numerous cases of abuses over the years, which only led to more stringent regulations. On the other hand, lobbying in the EU is

[7] Vincent De Coorebyter, Le Soir (November 21, 2017). Comment les lobbys court-circuitent la démocratie. Retrieved November 21, 2017 from http://plus.lesoir.be/125480/article/2017-11-21/comment-les-lobbys-court-circuitent-la-democratie

[8] Sam Morgan, EURACTIV (November 2, 2017). The Brief: Berlaymont lobby blues. Retrieved November 21, 2017 from https://www.euractiv.com/section/energy-environment/news/the-brief-berlaymont-lobby-blues/

considered as necessary because the EU institutions simply do not have the sufficient workforce and resources to produce and rely on their own knowledge and information to produce new regulations. Understaffed, they need the expert information from interest groups, which in exchange ask for access to the policy debates.

In his book *Lobbying, Pluralism and Democracy*, Luigi Graziano (2001) grounds the debate in theoretical and philosophical terms and comes to the conclusion that:

> The truth about whether lobbies as regulated political activity are an evil or a remedy, or possibly both, depends on one's conception of liberty and of democracy. The liberal spirit stirs in their favor, or at least adheres to an idea of liberty that assigns an important role to organized groups in society, while the egalitarian soul turns up its nose or decries scandal (p. 18).

Graziano avoids the caveat to reduce lobbying to a Manichean view of good or evil. Lobbying activities can take different forms, sometimes with pure and democratic intentions, and sometimes for personal gains. However, he explains that the question of interest representation in democratic societies should not be summed up to political scandals as tabloids could be tempted to do but must be addressed more broadly and in light of political theories such as the pluralists advocate. From a pluralist perspective, and the normative caveats it entails, five elements can be drawn up to assess how lobbying could be part of a democratic policy-making process:

- Information exchange
- No illegitimate power relations
- Pluralism in values
- Open access to every group
- Transparency in decision-making

These conditions must be considered as normative ideals to envisage lobbying in a pluralist democracy, and strategies that go against these principles cast doubts about the legitimacy of the decision-making process and participates in maintaining a negative image of lobbying activities.

The question tending to put lobbying into one of two boxes is reductive. In polities such as the US and the EU, participation in the policy-making process is available and sometimes encouraged. It is the essence of democracy. From there, interest groups try to get their voice heard. To do so, they rely on a range of tactics. Some are legal and legitimate, such as petitions or demonstrations. Others are either illegal, such as bribery, or unethical, such as astroturfing. Lobbying can therefore not be subsumed to be a good or evil practice in democracy because of all the forms it can take. The following section focuses precisely on lobbying tactics, to see where the border lies between democratic lobbying tactics that help policymakers to make informed decisions and unethical or illegal ones that corrupt the decision-making process.

2. Disentangling Lobbying Tactics

In democratic societies, the purpose of interest groups is to influence the outcome of a policy that is discussed at a given time. It can be by bringing a new issue to light through agenda-building, or on the contrary, by advocating for the status quo. Be that as it may, interest groups may rely on a variety of tactics to design their global lobbying strategy. In this dissertation, the term *tactic* thus refers to a single action (i.e., organizing a demonstration, publishing a position paper), whereas a *strategy* is designed on a longer-term, and possibly combining different tactics in order to reach a policy goal. This action repertoire ranges from transparent and legitimate actions such as petitions or press conferences to opaquer or even illegal tactics such as bribery. It seems that the latter often occupies the headlines of newspapers and contributes to depicting a negative image of lobbying.

This section aims to give an overview of the tactics that are used by interest groups in their own rights, and the ones that deviate from legality. As the third and fourth chapters of this dissertation respectively focus on the US and the EU contexts, examples to illustrate these tactics are chosen accordingly. The objective of this section is in no case to build an exhaustive list of lobbying tactics. Practitioners, as well as researchers, strive to do so already with articles and handbooks on EU or US practices (Bardon & Libaert, 2012; Beyers, 2004; A. S. Binderkrantz & Krøyer, 2012; Gais & Walker Jr, 1991; Grossman & Saurugger, 2012; Offerlé, 2009). The idea with this section is to look at the panoply of tactics available to interest groups, be it in the US and the EU in order to understand the rationale behind the emergence of astroturf lobbying, which is the research object studied in this dissertation.

2.1. Comparing EU and US Lobbying Tactics?

As this dissertation focuses on cases from the US and the from the EU, one could be tempted to systematically try to compare how lobbying is conducted in both polities. This is not the aim of this study that instead investigates the two political contexts for different research purposes. It is necessary to lay on cautionary remarks regarding the different lobbying styles between EU and US interest groups. There is indeed a consensus in the academic literature showing that the two different political arenas generate different lobbying styles (Hanegraaff, Poletti, & Beyers, 2017), however, comparing both systems could indeed lead to different biases. Lowery, Poppelaar, and Berkhout (2008) address this issue and highlight the obstacles and barriers to conducting such comparative studies, be it theoretically or empirically. One

of them is the fundamental differences between the two political systems in the ways policies are made and regarding the level of participation granted to interest groups. Of course, this holds true for comparing other polities such as Japan, Canada, or Brazil where interest representation is conducted and regulated differently. It is, however, relevant to see how US and EU practices have somehow influenced each other over the years, as different strategies emerged as more relevant in one or the other polity.

As explained earlier, the US has a longer tradition of lobbying than the EU, where the lobbying boom mostly occurred with the establishment of the Single Market in 1993. This newly created market represented opportunities for the EU, but also for American companies who saw an access point to millions of consumers. It is thus around that time that different US associations, including big players from K Street such as Burson-Marsteller, Hill & Knowlton, Edelman or Weber & Shandwick, decided to expand their activities in the European capital, bringing their US advocacy expertise from Washington to Brussels. When studying the influence of the US lobbying style on EU practices in the field of environmental politics, Coen (2005) explained how US firms demonstrated the necessity to successfully steer the policy debates by maintaining "direct, regular, and reliable representation at the European Commission" (p. 211).

Meanwhile, a range of forms of organization that proved successful in the US has been transposed in the EU context. Emblematic cases include the setting up in 1983 of the European Round Table of Industrialists (ERT), similar to the Washington Industrial Round Table. And it can be applied to much less-known associations such as AMISA2. This association, which was not registered in the EU Transparency Register before an interview with Corporate Europe Observatory, represents the interest of companies of the likes of Exxon, Total or Google. They do so with pressure politics. For instance, they organize breakfast meetings with top EU officials. The US influence on such practices is palpable. The President of the association, when outlining the history of its association, explains that "I am a *one-man-show* and AMISA2 got started in July 2010. Before that, there was a different organization of the name of AMISA (since the 90s) which was then created on the model of an organization GBF in Washington DC, but which ceased to exist. I took the good name in

2010 in order to continue along the same lines and to build on the good reputation among the professionals and with the institutions. The nearly 6 years now confirm my approach."[9]

Conversely, the American associations and companies establishing new quarters in Europe had to cope with the fact that practices were not always directly transposable from the US to their European counterparts. Whereas the American political system is open to pressure lobbying and campaign financing through PACs for instance, the currency of EU lobbying is information (Broscheid & Coen, 2003; Chalmers, 2013). This approach was well understood by the American Chamber of Commerce. Being on the front line and representing the interests of all major American companies conducting business in Europe, AmCham EU had to adapt its strategy to a new political arena where informational lobbying is the norm, and hence focuses on developing precise and technical expertise on a variety of issues.

This hybridization of lobbying makes it even harder to conduct comparative studies in the field of interest representation. The case of AmCham EU is very telling, as they had to face the fact that the EU is less open to pressure politics but centered on informational lobbying. Lobbying tactics cannot merely be copy-pasted from one political setting to the other but must take into account peculiarities of various forms, political, social, legal or even cultural. Next section focuses on the lobbying tactics that are commonly used in democratic societies, with an occasional focus on specific tactics rather used in the EU or the US and provides explanations on why certain interest groups favor specific strategies over others.

2.2. The Logic of Access and Voice

The literature on interest representation usually separates lobbying strategies into two groups: the ones where interest groups are seeking access to policymakers and the ones to make their voice heard even outside the political arenas. The former refers to the access to venues where decisions are taken and where exerting pressure could steer the votes in one's way. Conversely, when interest groups cannot get access, they may use public political strategies to voice their position on a pressing issue. The distinction between those two sets of strategies has also been labeled differently, such as *insider vs. outsider* lobbying or *direct vs. indirect*

[9] Retrieved November 21, 2017 from https://corporateeurope.org/power-lobbies/2016/05/lobbying-over-croissants-and-coffee

lobbying. These dichotomies boil down to having direct contact with a policymaker within its institutional arena or mobilizing outside the venue to get attention on an issue.

The question of access is inextricably linked with the concept of pluralism discussed previously. Following the pluralist ideal, equal access to all interest groups, from business groups to NGOs, allows a policymaker to have all the necessary information to make an informed decision. Granting access to groups representing diverse interests would, therefore, theoretically lead to balance competing interests and keep the government from acting single-handedly. However, as aforementioned, neither the US nor the EU has a complete pluralist system, and different levels of access are granted among interest groups. This is why gaining access remains an essential objective for interest group as "power of any kind cannot be reached by a political interest group, or its leaders, without access to one or more key points of decision in the government. Access, therefore, becomes the facilitating intermediate objective of political interest groups. The development and improvement of such access is a common denominator of the tactics of all of them" (Truman, 1951: 333).

To some extent, the pluralist approach explains the rationale behind inside lobbying. Broscheid and Coen (2003) have looked at the different definitions of insider lobbyists as it encompasses a plurality of profiles, "ranging from lobbyists with legitimate consultation rights (Dahl, 1986; Grant, 1978) over lobbyists that are consulted because they are sympathetic to the government's preferences (Jordan and Richardson, 1987), to those actors actively involved in bargaining and policy negotiation (Maloney et al., 1994)" (p. 168). Concretely, interest groups seeking access try to get a seat at the table of different venues where political bargaining is taking place, such as advisory bodies, expert committees, political fora, high-level groups, and so forth. The question is thus to know how to gain access. Pieter Bouwen (2004) has conceptualized this strategy by explaining that it all comes down to access goods. These access goods usually take the form of unique expert knowledge that is provided by the interest group to the political actor they try to influence. The more critical and specific is the information, the more likely access will be granted.

If an interest group does not get access, or if it does not want to for strategic reasons, it can rely on a voice strategy to perform what Ken Kollman (1998) calls *outside lobbying*. He defines it as "attempts by interest group leaders to mobilize citizens outside the policymaking

community to contact or pressure public officials inside the policymaking community" (p. 3). The key element of this definition lies in the fact that such public political strategies take place in different public spheres with the purpose of being more visible to the eyes of the general public, politicians, and the media. Outside lobbying can take the form of demonstrations, protests, media campaigns and, according to Kollman, serves two purposes: to signal and to expand conflict. On the one hand, it can be used to draw attention on an issue – or an aspect of an issue – that is not discussed, and thus bring this item to the agenda. Consequently, the second purpose is conflict expansion, that is to increase the salience of the issue at hand in order to "involve more people in the conflict until the balance of forces is changed" (Schattschneider, 1960: 40)

Two explanatory models are usually brought forward by researchers to justify the choice between those two kinds of strategies. The canonical model has a resource-based explanation. In this model, organizations are seen as entities whose priority is to survive within a political setting (Gais & Walker Jr, 1991; Lowery, 2007). Associations, therefore, mobilize resources that allow them to maintain the financial support of their members or their constituencies, while at the same time attracting the government's attention. In this model, the premise is thus that interest groups avoid costly and inefficient strategies and act according to a costs and benefits approach. Hypothetically, the implications are that the interest groups who already have access to policymakers would further invest in access strategies while groups that are at the periphery of the polity would invest in voice strategies. Based on the exchange goods they possess, the hypothesis is that *specific* interests rely more on access strategies and *diffuse* interests on voice strategies (Dür & Mateo, 2013).

The second model is more balanced and puts an emphasis on the institutional context, where an interest group defines its lobbying strategy depending on the institution it wants to influence. For instance, following the concept of multi-level governance of the EU, the institutional variability and change in venues lead advocacy associations to adapt their political practices (Aspinwall & Schneider, 2000). As each institution has its specific role, an interest group may have a more favorable relationship with a specific venue and thus expect more success by focusing on it. That concept of *venue shopping* is detailed in the following section.

Scholars sought to test these two models empirically with different findings. By conducting 157 interviews with EU-level private and public actors, Beyers (2004) demonstrated that access and voice strategies are indeed widely used, but most interestingly, are also extensively combined. Those results concur with Binderkrantz (2005) similar research in Denmark. However, even if inside lobbying is not the only privilege of business associations, Dür and Mateo (2013) demonstrated that it is resource-rich groups that favor inside tactics, and more specifically on distributive policies, as such groups usually have in-depth information valuable to grant them access. On the other hand, that study shows that citizen groups are more inclined towards outside strategies. In light of these findings, the resource-based model might explain some variations of strategies used by different types of groups, but other contextual elements must be taken into account to explain how the tactics are combined on a long-term strategic level. On that aspect, Beyers concludes that institutional factors have a significant effect on the choice of strategies. For instance, NGOs and citizen groups seek access to the European Parliament more than the European Commission, and the other way around for business associations.

Lastly, before presenting lobbying tactics more in detail, it is worth noting that specific tactics are somehow intertwined with voice and access logics. For instance, as Chalmers (2013) observed, it appeared that voice tactics are important in granting access for interest associations to EU policymakers. More than a dichotomy, it is preferable to envision these tactics as encompassing a varying degree of both outside and inside attributes. Figure 1 shows how different tactics can be assessed on an inside/outside scale.

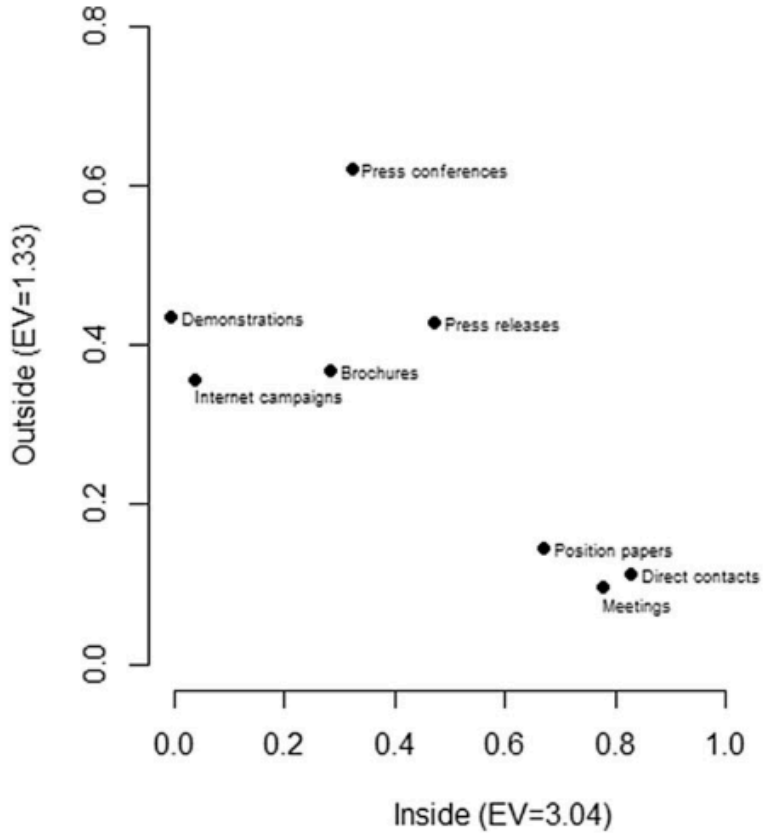

Figure 1 Outside and inside tactics (Dür and Mateo, 2013)

2.3. Insider Tactics

2.3.1. Finding the Right Interlocutor

From the proposal of a new piece of legislation to its possible implementation, various actors from various levels of power are involved in the process with more or less decision power. These different levels of power represent different opportunities for lobbying efforts and all the actors involved in the decision-making process can become targets for lobbyists in their goal to influence public policy outcomes. It is thus vital for an insider lobbyist to find the right interlocutor to convey its message and to the choose a venue that offers the best prospects of lobbying success in comparison to its opponents (Pralle, 2003). This political strategy is referred to as venue shopping.

The concept of venue shopping was developed by Baumgartner and Jones (1991) in the book *Agendas and Instability in American Politics*, in which the authors scrutinize how policy evolves in the USA. In order to describe how issues rise and fall on the political agenda, they came to develop a punctuated equilibrium model. They notice that policy is usually characterized by long periods of stasis, which are then punctuated by abrupt changes. There are thus long stances of stability, and radical changes emerge at some point, due for instance to changes of government or shifts in the public opinion. Yet, policy change can also be induced by the influence of vested interests along the decision-making process. The authors focused on the strategies that were used by advocacy groups to change the course of action and noticed that the multiplicity of venues offer multiple opportunities to stall or even kill a bill. Put simply, "because the implementation of policy typically involves multiple levels of governments, those opposed to the policy can delay change by resisting its implementation in a variety of locations" (Bardach, 1977: 179).

Venue shopping is often depicted as a strategy used by interest groups that are on the losing side and hope that a change of venue will help them in reaching their policy goal. Indeed, building on Baumgartner and Jones' work, Pralle (2003) explains the mechanism of venue shopping by the fact that "alternative venues give policymakers and advocacy groups who are on the losing side of policy an opportunity to go over the heads of, or around, a policy elite intent on maintaining the status quo. If successful, the policy conflict moves into a venue where these challengers compete more equally with their opponents, or into an arena where their opponents are not yet mobilized." (p. 236). Moreover, depending on the issue, interest groups might focus their attention on different venues at the same time and as Holyoke (2003) pointed out, "the history of almost any issue reveals an ebb and flow of lobbying activity by interest groups from one venue to the other" (p. 325)

Despite these strategic and rational considerations, Pralle adopts a more balanced approach in explaining the rationale behind such practice, starting with the label *shopping* itself. According to her, the term shopping gives an impression of choice for advocacy groups to change venues, whereas finding an alternative venue is sometimes a last resort possibility than a well-thought strategy. Pralle thus uses the term *settling* rather than shopping to overcome this illusion of choice. Also, Pralle contends that the reason for choosing a venue

over another is not always strictly rational, but also participates in building and maintaining the image of an interest group. The goal is not only to aim for a venue that maximizes the likelihood of lobbying success but also has a longer-term vision in order to mobilize supporters and reaffirm its identity.

The concept of venue shopping has also been applied to the European context. On that regard, the multilevel governance of the EU described in the previous section fits interestingly to the concept. With a supranational level adding to the national and local layers of power, some researchers are prone to characterize the plurality of avenues of influence as *multivenue* shopping in the EU (Beyers & Kerremans, 2012). The multiple levels of decision-making also offer a clear view of how venue shopping can be done vertically or horizontally. Vertical venue shopping refers to an interest group targeting an institution that is located higher or lower in the chain of the policymaking process. For instance, that would be the case of an NGO on the losing side of a health issue debated at the national level, and that tries to bring the issue to be discussed at the World Health Organization. Horizontal venue shopping, it implies a change in venue at the same level of power, or even within the same institution. For example, that would characterize an association of nuclear energy producers trying to move the issue of nuclear energy from DG Environment to DG Energy or DG Enterprise, with whom they potentially have a better relationship.

Yet, as Pralle explained, changing the venue of where a policy is made is easier said than done, and interest groups often have to *settle* for a venue rather than to *shop*. Whether an interest group manages to bring the issue to an alternative venue or not, the question of access remains of first importance. In order to facilitate gaining access, a controversial strategy used by interest groups in recent years consists in hiring former policymakers. The idea is simple: it involves recruiting officials, who were elected or not, but who were involved in the policymaking of the issue at hand. This phenomenon has been known as *revolving doors* to describe the permanent game of going back and forth from a public function to the private sector. The added value for hiring a former high-level official is manifold and includes an in-depth knowledge of the legislative process, a supposedly sound knowledge of the issue, and close relationships with all the actors of the issue network, therefore providing privileged access (T. LaPira & Thomas, 2012).

This practice is seen as controversial as it raises the issue of conflict of interests. How indeed can one trust the integrity and independence of a policymaker if a job offer awaits that person from an organization with vested interests? A recent example of those critics arose after the departure of José-Manuel Barroso, President of the EU Commission between 2004 and 2014, to Goldman Sachs. Conversely, senior officials who previously worked in the private sector might also have their legitimacy and integrity put in doubt, as it was the case for Miguel Arias Cañete, who had to face multiple questions and opposition before becoming Commissioner for Energy after having worked for oil and gas companies.

No structural solutions have been brought forward so far to counter revolving doors. In the US, the Lobbying Disclosure Act addresses the problem by introducing a cooling off period of one to two years for Senators or officials before being allowed to lobby their previous institutions. As far as the EU is concerned, only a quick fix in the form of a code of conduct was set in 2014, following the same idea of a cooling off period. However, there are still limitations to the current regulations, as evidenced with the recent case Jonathan Hill, who went through the revolving doors from working for a financial services company to becoming Commissioner for Financial Stability, Financial Services and Capital Markets Union, before leaving that position seven months later for joining a lobby group.

2.3.2. Transmitting Information

Finding the right interlocutor and gaining access are the first and second steps for an insider lobbyist. The third step is to transmit its message. Already in the early scientific literature, lobbying is described as a communication process (Milbrath, 1960). Later research has shown that the transmission of information is primordial in designing a successful lobbying strategy. The possession of unique expertise, or access goods in Bouwen's terms, can be used as a bargaining chip to get a seat at the table of negotiation. By using the economic concepts of supply and demand, Coen and Richardson (2009) make a clear distinction between the platforms that are developed by institutions – the demand side – in order to collect information from the outside world, and the various media used by interest groups – the supply side - to proactively or reactively transmit their positions on a given topic.

As noted in the previous section, the institutional players often have to cope with the fact that they do not have the financial and human resources to produce and gather the necessary

information throughout the policy-making process. It is especially true for the EU institutions and the US Congress to a lesser extent. Along those lines, institutions are eager to set up exchange platforms with stakeholders in order to obtain reliable data before the making and the implementing of a policy. These settings represent as many entry points for interest groups to deliver their information and to share their worldview on the issue, often by underpinning it with their own studies.

In the United States, an institutionalized method to do so is via congressional hearings. It provides a setting where *witnesses* can share their knowledge, facts or opinion during the policy-making process. The witnesses might be Members of the Congress, interest representatives, academics, or even citizens that can be impacted by the issue on the agenda. Similarly, the European Parliament follows the same logic of participation through public hearings.

The EU also offers other settings where organizations from the civil society, business associations and citizens can partake. As agenda-setter, the Commission has the important task to lay the ground for future regulations. It is necessary to take the pulse of the society and the Commission, after research and the publication of green and white papers, rely on public consultations. These online questionnaires are open to associations and individuals to express their views and positions on a future policy. However, the results of these consultations are not binding and solely aim to take the pulse of society.

Another formal and essential aspect of the EU decision-making process is the setting up of expert groups. Bringing together experts from the public and private sectors, with a significant presence of academic experts, these groups provide sound information and studies sought by the Commission to shape future pieces of legislation. As these groups gather on a more or less regular basis, having a seat at the table is essential to be informed and to steer the debates in a certain way. In a less formal format, the Commission is also enthusiastic in setting up fora with stakeholders. The Commission often restricts the access to a limited number of stakeholders who are expected to provide fast and reliable information for policy-making and are sometimes decried for their industrial and business aspects (Broscheid & Coen, 2007).

To meet these institutional demands, interest groups must gather information and define their position on different aspects of the issue that they want to influence. The information an interest group wants to transmit is usually either political or technical. The former aims at informing the policymakers about the political consequences of a specific policy, sometimes leading to opaque horse-trading and pork-barrel politics. The latter focuses on technical aspects of a debate and is usually based on studies or impact assessments.

In addition to transmitting expert knowledge reactively to the invitation of the institutions, interest groups seek to spread their position through different channels proactively. The cornerstone of such strategy relies on the publishing of a position paper. This document, usually one or two pages long, sums up the stance of a group on a given issue. It has strategic importance as it embodies the framing and the spin that a group wants to give to the policy. Some aspects of the issue are highlighted while others are carefully omitted. The concept of framing, which is further developed in Chapter 2, is of most importance when designing and implementing a lobbying strategy as it reveals how an issue is perceived by an interest group and encompasses the solutions suggested for that issue. Moreover, it has been demonstrated that different arguments find greater acceptance among different groups as framing differs by venue (Frank R. Baumgartner, 2007). Position papers are usually available on the website of advocacy groups and can be sent directly to the policymakers.

Perhaps more iconic in the insider playbook are the face-to-face meetings. Cultivating close connections with policymakers is key to influence and pushing a specific agenda. Arranging a direct meeting with a policymaker in his office is legal and allows a representative to make its case. New transparency rules are increasingly stricter, as more and more officials are asked to publish their meetings with lobbyists online. To avoid this scrutiny, lobbyists are sometimes keen on favoring informal meetings outside the walls of the institutions, where they can notably suggest ready-made amendments on a piece of legislation being discussed.

As mentioned earlier, an essential element of a lobbying strategy is to win the debate on the science surrounding an issue. David Miller (2010) called that process *science capture*. It usually involves financing studies and research to underpin one's position and present it as undeniable. This tactic is not new in essence, as evidenced by the long successful history of the tobacco industry which downplayed the effects of smoking on health (Holden & Lee,

2009). Other sectors, such as the food and alcohol industries (Miller & Harkins, 2010) or climate change (David Miller & Dinan, 2015) have been studied and present the same attempts at capturing scientific expertise. This way of steering the scientific debate raises ethical and legal questions, as for recent evidence the debates in the EU on the use of glyphosate and where Monsanto is accused of *ghostwriting*, that is research led by corporate employees but authored by scientists.[10]

2.4. Outsider Tactics

Next to insiders' tactics seeking to gain access, an alternate route of influence is to voice its concerns across the media or to mobilize sufficient citizen support to put pressure on the policymakers. Contrary to inside lobbying, the transmission of information is done here indirectly, either through media channels or mobilization campaigns. Such tactics are therefore referred to as *indirect lobbying*, or also as *outside lobbying*, given that the influence is exerted outside of the policy arena.

Kollman has identified two major objectives for relying on outside lobbying strategies, that is to attract attention and expand conflict. Another objective can be added to that list for an interest group to privilege outside rather than inside lobbying, and that is to secure membership. As demonstrated by Lowery (2007), interest groups want first and foremost to survive. This survival is more often than not depending on the funds received from their members. Moreover, whereas a successful inside strategy might receive little attention, media campaigns and grassroots mobilization will offer broader visibility to its constituency, which concurs with the argument that civil society organizations and NGOs, who dramatically depends on donations, are prone to favor outside lobbying strategies.

2.4.1. Political Public Relations

An indirect way to seek influence for an interest group resides in the setting up of public political tactics. This usually involves close contacts with the media to raise awareness and salience on a specific aspect of an issue. In order to attract media attention, lobbyists rely on

[10] Stéphane Foucart et Stéphane Horel. Le Monde (October 4, 2017). « Monsanto papers », désinformation organisée autour du glyphosate. Retrieved November 21, 2017 from http://www.lemonde.fr/planete/article/2017/10/04/monsanto-papers-desinformation-organisee-autour-du-glyphosate_5195771_3244.html

the usual tactics used by public relations (PR) practitioners. That implies contacting reporters directly, writing letters to news media, issuing press releases, holding press conferences or publicizing research reports.

Applying PR tactics for political purposes is not new but has been theorized recently by Strömbäck and Kiousis (2011) in an emerging field they coined *political public relations*. They define it as "the management process by which an organization or individual actor for political purposes, through purposeful communication and action, seeks to influence and to establish, build, and maintain beneficial relationships and reputations with its key publics to help support its mission and achieve its goals" (p. 8).

In trying to develop and emulate a new strand of research, the authors stressed the peculiarities of applying PR tools to political settings and fostered the debate on the approaches to theorize it. A recurring aspect that emerged from their handbook is the necessity for a political actor, be it a politician or a lobbyist, to rely on a convincing narrative and rhetoric (Hallahan, 2011). As explained further in Chapter 2 of this dissertation, the success of public political tactics might indeed be assessed by the strategic framing of a message. The likelihood of having its position relayed in the media might indeed depend on how the message is crafted.

Alongside the media-oriented tactics, it is worth noting that interest groups can also disseminate information in the public sphere through other channels. One notorious way in the US notably is the purchase of advertising spaces on billboards or TV. However, studies have shown that political advertising is much less used in EU countries, due to more stringent rules on the matter (Kaid, 2004).

2.4.2. Mobilization Tactics

Following the etymology of the word, it is the people who hold power in a *demo-cracy*. Of course, in representative democracies, citizens delegate much of this power to representatives through elections. However, options are available for citizens to voice their concerns between elections. These tactics consisting in mobilizing citizens to make their voice heard by policymakers are referred to as *grassroots* lobbying. The origin of the term is

obscure but supposedly appeared in the early 1900s in the US to express the true spontaneity of social movements from ordinary people.

The right to petition that has been detailed previously can be referred to as a grassroots tactic. As guaranteed by the First Amendment of the US Constitution, American citizens have the right to petition their government. In the EU, this right is protected by article 227 of the Treaty of the Functioning of the European Union. The right to petition embodies the power that citizens can redeem if they feel that a piece of legislation is unfair or undemocratic. Forms of petitions have evolved over time as evidenced by the European Citizens' Initiative (ECI) of the European Commission. Created in 2011, it allows EU citizens to call the Commission to make a legislative proposal, provided it has been backed by more than one million citizens coming from at least seven different Member States. This mechanism has however been decried, and only four have met the necessary criteria, without guaranteeing a follow-up by the Commission. Despite not always leading to real pieces of legislation, significant support for an ECI can still be used to pressure the Commission as it was the case for the ban on glyphosate, which created great turmoil in the public opinion.[11]

Petitioning has indeed become much easier in recent years thanks to the Internet and websites such as www.avaaz.org or www.change.org. However, the efficacy of this form of internet campaigning has been criticized and became referred to as *slacktivism*, a pejorative word made of the terms *slacker* and *activism*, to denounce the low-threshold action that citizens do to make themselves feel better, but without having much effect.

Despite this shortcoming, internetworked social movements have significantly increased over the years. By using social networks, interest groups have the possibility to contact and mobilize their supporters easily, to secure their membership, to measure the support they gather, to organize events, or to address policymakers directly. Examples from over the world are often brought forward to depict the role and the power of social networks for social change such as the Arab Spring or the Occupy Movement, leading researchers to plead for a new virtual public sphere, or a public sphere 2.0. Caveats about technological determinism regarding the public sphere are presented in the following section.

[11] More information on the case available at http://europa.eu/rapid/press-release_IP-17-5191_en.htm

Another tactic based on mobilization is demonstrating. Demonstrators embody Kollman's characteristics of outside lobbying as it aims, by gathering citizens in symbolic places, to signal and expand conflict over an issue. The number of demonstrators is, of course, crucial in attracting the attention of the media, which in turn, could add to the pressure put on policymakers with the demonstration. This pressure can subsequently force them to listen to the protestors and to grant access to the organizers of the event. It thus shows how voice tactics could be used to *indirectly* lead to gaining access to the venue indented to be influenced.

Similar in some fashion to grassroots strategies, grasstops approaches involve the mobilization of influential leaders of communities who use their influence to contact decision makers (Gabriel, 1992). This tactic is, of course, reminiscent of the two-step-flow model (Katz & Lazarsfeld, 1970) and the third-party endorsement popularized by Edward Bernays, often called the father of public relations.

Edward Bernays, a nephew of Sigmund Freud, studied the power of advertising and public relations and understood the power that grassroots movements could have to influence the public, media, and political agenda. He came to the realization that those movements can be manufactured. The creation of bogus grassroots movements simulating citizen support is called *astroturfing* and is at the heart of this dissertation. The next section is devoted to review the scientific literature on the topic and present the numerous forms it can take.

3. Astroturf Lobbying: Capturing the Voice of Civil Society

Astroturf lobbying consists in simulating a spontaneous mobilization from citizens on a political issue. It can range from purchasing followers on Twitter to paying citizens to demonstrate in the street, or from writing and sending false public letters to policymakers to the setting up of front groups and bogus NGOs. While first traces of astroturf efforts can be found in the United States, it appears that like other lobbying tactics this strategy has crossed the Atlantic Ocean and is now an emerging technique used by interest groups to lobby the European Institutions or to sway the public opinion of the Old Continent.

In this section, the origin of the term astroturfing is presented to understand where it first emerged. A review of the literature is then presented on a chronological basis in order to illustrate how astroturfing was mostly studied in North America in the beginning and then how research on the topic has expanded to other continents. The objective of the literature review is also to emphasize the variety of angles from which our research object can be observed. Even though this dissertation solely focuses on analyzing astroturfing as a political communication and lobbying strategy, it is worth noting that astroturf efforts also occur in various sectors of society.

Finally, the threat that astroturf causes to democratic societies is addressed. First, the normative ideals of the public sphere theory are discussed and applied to astroturf movements. An alternate vision is suggested to better illustrate the effects that such groups could have on public policy debates. Secondly, astroturfing is also confronted with the pluralist values presented in the first section of the chapter. Finally, a look at the excellence theory of public relations is looked at, and its criticisms from the contingency theory or public relations shed light on how to look at obscure lobbying practices. By looking at normative theories in the fields of communication and public relations, opportunities emerge to approach astroturfing theoretically and empirically.

3.1. Where and Why Astroturf Took Roots

Even if the term *astroturfing* was not used until the 1980s, stealth campaigns have already been designed for centuries and have been seen as a powerful tool to advance a political agenda. Such a process can even be seen in Shakespeare's Julius Caesar as he alleged that

Caius Cassius wrote and sent anonymous letters to convince Brutus to betray Julius Caesar in Roman times:

> [Cassius] I will this night,
> In several hands, in at his windows throw,
> As if they came from several citizens,
> Writings all tending to the great opinion
> That Rome holds of his name; wherein obscurely
> Caesar's ambition shall be glanced at.
> (Shakespeare, *Julius Caesar*: Act 1, Scene 2, Page 13)

This story is, of course, fictional and cannot be referenced scientifically, but still shows that the idea to use astroturf efforts for deception was present in 16th century England already. A more concrete case is the setting up of a front association called *International African Association* in the late 1800s by Leopold II, King of Belgium, in order to legitimate the colonization of Congo and facilitate its economic exploitation. Another compelling example is the *torches of liberty contingent* of 1929, where American women were seen smoking publicly. It was later discovered that Edward Bernays and the president of the American Tobacco Company orchestrated the whole march by paying these women with the sole objective to boost the sales of cigarettes in the US.

It is only in 1986 that a US Senator from Texas, Lloyd Bentsen, coined the term astroturfing to describe a manufactured public relations campaign. His staff had received an unusually high number of letters from citizens who expressed their concerns about a new policy proposal aiming to regulate the liquor business. It appeared that these public letters actually originated from the liquor industry itself. The Senator tried to reassure its constituency by saying he was able to "tell the difference between grass roots and AstroTurf" (Walker, 2014: 33). Bentsen thus cleverly qualified this fake grassroots movement as astroturfing in reference to the brand of synthetic grass AstroTurf, or fake grass in other terms. Originally, astroturfing refers to a communication campaign pretending to emanate spontaneously from concerned citizens while it is actually sponsored anonymously by corporate interests.

The fact that astroturf lobbying has taken off around that time is not surprising and is actually telling about the rationale behind such strategies. As detailed in the first section of this chapter, the US has seen an explosion of citizen groups in the political arena. Those

advocacy groups gained momentum with symbolic wins on issues such as the Vietnam War or civil rights. Those organizations often started as spontaneous grassroots movements and gained legitimacy in the political landscape. Their success attracted some attention from business groups who would have loved to gain the same respect and legitimacy as these movements. As Berry (1993) phrased it, "most business groups would love to have the respect that these citizen groups command in the press. For all the financial strength at the disposal of oil lobbyists, no representative of the oil industry has as much credibility with the public as a lobbyist for the Natural Resources Defense Council" (pp. 35-36).

The rationale behind astroturfing is for a business to find an alternate way to convey its messages with more credibility. The goal is to capture the voice of civil society in the political debates. In this regard, creating a front group, for instance, opens "avenues for businesses to influence policymakers and for wealthy donors to sway political campaigns and to leave few fingerprints" (Drinkard, 1997: 10). Because this strategy is based on deceiving policymakers and citizens, it raises concerns about the democratic aspect of the public policy process (Fitzpatrick & Palenchar, 2006). These concerns are all the more pressing that astroturf lobbying has developed as a distinct industry that sociologist Edward T. Walker (2014) qualified as *grassroots for hire* to depict how easy it has become for public affairs consultants to manufacture public participation.

3.2. Academic Attention to Astroturfing

Even though such strategies are reminiscent of propaganda techniques and appeared long before the 60s, it is worth noting that the existing literature on the subject is still at an early stage and is very scattered. Most research on the subject has been conducted in North America, the cradle of astroturfing, but is now emerging in Europe as well. The first scholarly work about the astroturf phenomenon started to really emerge in the 90s under the impetus of Stauber and Rampton (1995) and Beder (1998). Even though they do not explicitly use the term, they shed light on the *damn lies* that are sometimes used by the public relations industry. Among them, the setting up of front groups and the publication of scientific reports written by controversial expert groups are examples of creative strategies created to influence public policy outcomes. From that time onwards, the fields from which scholars have conducted research on astroturfing were scattered, leading to some confusion about what the term really encompasses.

Early academic work putting an emphasis on astroturfing was Lyon and Maxwell's (2004) who strived to formalize the potential benefits that interest groups can reap from investing in astroturf efforts. Their economic modeling shows that astroturfing can theoretically be very attractive from a political but overall a business point of view. However, they did not consider the potentially damaging effects on the reputation of a company getting caught in practicing such shady activities. Astroturfing is indeed a stealth tactic that implies to keep the true identity of its instigators secret for as long as possible, which goes against the good practices in PR (Parsons, 2008). The risk of being linked to such activities was later studied by Mattingly (2006) who conducted a qualitative exploration of structures and processes in corporate political actions. He links the success of lobbying activities in shaping public policy with the necessity to have a good and lasting relationship with policymakers. Being accused of astroturfing would affect the credibility and therefore complicate subsequent lobbying efforts for an organization.

Further readings lead to the 2004 US election for Senate and what Robert Klotz (2007) called *plagiarized participation*. He formalized this concept whereby "would-be participators are encouraged to present the words of others as their own in support of a cause" (p. 3). The similarity with Bentsen's definition of astroturfing is striking, as an anonymous source is manufacturing support for its own private interests, but in this case through Internet campaigning.

Interestingly, McNutt and Boland (2007) suggested that environmental issues are more likely to be targeted by astroturfers. The research conducted by Cho, Martens, Kim, and Rodrigue (2011) supports this assumption. Based on a psychological experiment, their findings suggest that "astroturf organizations are effective in creating the sought uncertainty in the minds of people exposed to their message" (p. 23). Along the same lines, the finding of a study conducted by Bsumek, Schneider, Schwarze, & Peeples (2014) demonstrated how the coal industry developed astroturf campaigns in the US in order to defend their interests. The findings show that the coal industry's strategy is to propose a multi-front corporate advocacy campaign, which includes the use of front groups. The authors define this strategy as *corporate ventriloquism* and explain how the industry has adapted its rhetoric in order to challenge and undermine the voice from genuine grassroots movements.

The evolution of information and communication technologies (ICT) was at the center of McNutt's work when he considered the implication of astroturfing for nonprofit advocacy (McNutt & Boland, 2007) and the digital divide that it creates between advocacy organizations (McNutt, 2008). Indeed, the appropriation of the voice of civil society can also be done on the Internet and is often defined in the literature as *sock puppetry*. As Zhang, Carpenter, & Ko (2013) stress it, the Internet appears to be a perfect platform for astroturf campaigns as it can easily provide a cloak of anonymity for its users. The idea behind sock puppetry is to create fake accounts, personas or bots in order to converse and to automatically relay the messages and ideas of their creators. Researchers from the field of ICT have strived to evaluate the influence of such campaigns and also to design tools to detect such murky activities (Ratkiewicz et al., 2011).

In recent events, the use of data for political communication has been under scrutiny. Many praised Obama's team in the 2008 US election on adequately gathering and using data on American citizens. Whereas this strategy relied on new political marketing tactics, such psychographic profiling and behavioral micro-targeting can lead to murkier practices. That was the case of the company Cambridge Analytica, who allegedly influenced the 2014 US elections, the Brexit Vote, or the Nigerian elections, to name a few. Their modus operandi is based on two steps. First, the company gathers as much data as possible on potential voters, with questionable means as it was the case with their using Facebook data. The second step is to launch computational propaganda messages tailored to each one of them on social media, thereby favoring the spreading of fake news. It is that last step that can be characterized as astroturf efforts, as the instigators can then create fake personas online with the aim to sway people's opinion.

Online astroturf efforts can be critical when they are consciously relying on sound personal data, and the result of such propaganda could be serious. Along those lines, it is worth mentioning the impetus of the Oxford Internet Institute who set up a research group focusing on the proliferation of fake news on social media. For instance, they unearthed and explained the use of sock puppetry in the Brexit debates, where both sides created political bots to sway the public opinion on Twitter. Howard and Kollanyi (2016) showed that the "computational propaganda had a small but strategic role in the referendum conversations" (p. 1).

Even though most research has been conducted in the United States so far, scholars from other countries also had a look at the phenomenon, possibly due to the growing number of detected cases in recent years. For example, Wear (2014) analyzed the link between populism and astroturfing when deconstructing the campaign *The convoy of no confidence* that took place in Australia in 2011. The idea behind this campaign was to create a citizen movement, symbolized by a trucking convoy, in order to oppose the Australian government's stand on carbon emissions. The rally was actually organized by the National Road Freighters Association but presented itself as a genuine citizen movement. In Europe, Laurens (2015) has published a paper after following the setting up of an astroturf group from the inside. He explained from a sociological perspective how the evolution of the European political structures and the need for the European institutions to regain trust from their citizens lead businesses to try and legitimate their actions through front groups to feed that need of institutional legitimacy.

As explained earlier, researchers from various fields have contributed to the current knowledge of astroturfing. However, it appears that the term itself is not always used to designate the same reality. Depending on the field of research or on the geographical and political context, different meanings coexist. It is in that context that Boulay (2012) strived to suggest a comprehensive definition in order to clarify and ease further research on the matter. She sees two conditions that must be fulfilled to characterize a communication process as astroturfing: "a communication strategy whose true source is hidden, and that pretends to emanate from a citizens' initiative" (p. 61). From that definition and as Table 2 shows, astroturfing can take many different forms. It can describe the fact of buying fake followers on Twitter, posting positive comments under a false identity on TripAdvisor, paying citizens to demonstrate in the street, creating fake grassroots organizations with misleading names, and the list goes on. Building on this definition and applying it to political settings, astroturf lobbying thus refers to the simulation of citizen support for political purposes. In relation to the outside lobbying tactics presented before, Table 2 presents how they can be corrupted and turned into astroturf efforts.

Grassroots Tactics	**Astroturf Forms**	**Examples**
Civil Society Organization (NGOs, Non-Profits)	Front groups	National Smokers' Alliance, Tea Party
Letters to policymakers	Plagiarized participation, canned letters	Bentsen and the liquor industry
Petitions, polls	Usurping identities, multiple votes	UK Vapors
Demonstrations	Remunerated demonstrators	Convoy of No Confidence
Internetworked Social Movements	Sock puppetry, computational propaganda.	#Brexit, 50 cent party, Troll Factory in St Petersburg, Cambridge Analytica

Table 2 Grassroots tactics and astroturf forms

3.3. Societal and Democratic Threats

Presenting itself as a grassroots movement while in reality advocating for private interests is problematic in democratic societies for various reasons. First is the question of ethics. It is a moral failing to deceive, to lie, to distort reality. Consequently, astroturfing represents a threat to the democratic process. Indeed, the purpose of civil society organizations is precisely to defend the interests of the citizens and to make their voice heard directly by the policymakers, or indirectly via the media. The fact that citizens devote time and energy to a greater cause is one of the roots of their legitimacy. However, the financial and human resources of such organizations are often little compared to the resources of private companies and trade organizations. The fact that private interests simulate spontaneous citizens movement to disseminate their messages is problematic as it challenges the voice of genuine grassroots movements. Those different voices will be competing in the public sphere, and real citizens movements might need to spend some of their limited resources to legitimate their messages and denounce the private actors who try to appropriate the voice of civil society.

Cases of astroturf lobbying have flourished all over the world with more or less success. Some emblematic examples include the foundation of the National Smokers Alliance in 1980, a front group that gives the appearance of a grassroots movement against smoke-free laws; the 50 Cent Party, in reference to people hired by the Chinese Government who would supposedly receive fifty cents for each positive message for the Communist Party posted online; and the Tea Party, an allegedly franchised Republican grassroots movement advocating for less taxes in the United States, but who appears to have close ties with the Koch industries.

These examples of astroturf efforts demonstrate how the simulation of citizen support can be problematic in a democratic decision-making process. This subsection looks at theories from different disciplines to understand the threats posed by astroturfing. First, the notions of legality and ethics are discussed. Second, the public sphere theory is presented as it permits to understand better when and how astroturf groups emerge in society. Third, the concept of astroturfing is confronted to the pluralist ideals to show its potential threat from a political science perspective. Finally, the contingency theory of accommodation in public relations is borrowed to give more nuance to the astroturf phenomenon.

3.3.1. Is Astroturfing Illegal, Unethical, or Both?

The examples described earlier raises an inevitable question: is astroturfing legal? The answer is complicated for numerous reasons such as the territory where the action takes place, the nature of the tactic, and the purpose of the campaign. First, the legislation is not the same everywhere and the evolution of the law regarding astroturfing does not follow the same pace in different countries. As it was the case for regulating lobbying, the US is more advanced, and the State of New York was actually the first authority to condemn it in 2009. Lifestyle Litt was indeed condemned for asking its employees to post positive comments online about the company (Boulay, 2015). However, most cases condemning astroturf efforts are of a commercial nature. The same applies to the EU where astroturfing is considered to fall under the scope of the Unfair Commercial Practices Directive (Tigner, 2009).

The use of astroturfing for political purposes is not as clearly reprehensible by the law. Setting up a bogus NGO is not illegal per se but using it as a front to direct political donation in order to avoid the limit established by the election campaigning rules goes against the law.

To know if astroturfing is legal thus depends on the nature, the purpose, and the location of the endeavor.

What is less controversial is to know whether astroturfing is ethical or not. Authenticity and transparency in communication are concerns that have been addressed in the academic literature. Public relations scholars propose recommendations to follow for ethics in communication. Patricia Parsons (2008) considers lobbying and PR as acceptable in a democratic society but should follow six steps:

- Avoid false, fabricated, misrepresented, distorted or irrelevant evidence to support your point of view;
- Avoid intentionally specious, unsupported or illogical reasoning;
- Avoid trying to divert the public's attention by using such approaches as smear campaigns, or evoking intense emotions;
- Avoid asking your public to link your idea to emotion-laden values, motives or goals to which it is not really related;
- Don't conceal your real purpose (or the real supporters of your cause);
- Don't oversimplify complex situations into simplistic, two-valued or polar views or choices.

Grunig (2013), on the other hand, explains that ethics in communication is a matter that should be handled by the practitioners themselves. They can do so by agreeing on codes of ethics and codes of conducts. Different professional associations have done so and suggested codes of deontology (International Association of Business Communicators, Public Relations Society of America, and the list goes on). One code is however considered as primary and inspires others: The Code of Athens.[12] It was adopted in 1965 by the International Public Relations Association and provides notably three articles that show how astroturfing is unethical:

Each member of the PRII:

- Shall endeavor to establish the moral, psychological and intellectual conditions for dialogue in its true sense, and to recognise the fight of the parties involved to state their case and express their views;
- Shall refrain from subordinating the truth to other requirements;

[12] Text available at https://www.prii.ie/about/codes-of-practice/code-of-athens.html

- Shall refrain from using any manipulative methods or techniques designed to create subconscious motivations which the individual cannot control of his own free will and so cannot be held accountable for the action taken on them.

Both scholars and practitioners' standards consider that astroturfing is unethical and undermines ideals of democracy. The next subsection presents the links between ethics in communication and democracy with the Habermas theory of the public sphere.

3.3.2. The Public Sphere Seen as a Constellation of Issues

To this day, Sophie Boulay is probably the researcher who proposes the most extensive research when it comes to studying astroturf strategies. Her doctoral dissertation was dedicated to the subject and offers an analysis of 99 cases, which allowed her to paint a clear picture of the phenomenon. She also offers theoretical grounds about the risks of astroturfing to democratic societies by applying the standards of the ideal public sphere laid down by Jürgen Habermas (1962) when he described a Bourgeois public sphere acting as a counterweight to absolutist power in Europe in the 18th Century. The objective is to build on the conclusions that astroturf efforts are not aligned with the ideals of the Habermasian public sphere, and to pull together key elements from subsequent critiques, namely the fragmentation of the public sphere and the role of ICT within it. As the normative idea of the public sphere does not seem to offer sufficient grounds for empirical analyses of astroturf cases, an alternate representation is proposed that is closer to the idea of issue networks explained earlier in this chapter. Indeed, a suggestion is to conceptualize the public sphere as a constellation of issues around which gravitate various interest groups. This representation is helpful in describing the astroturfing process and the rationale for private interests to rely on it.

In political communication, the public sphere theory has probably been one of the most discussed and debated concepts over the years. According to Jürgen Harbermas (1962), the Bourgeois public sphere serves, on the one hand, as a mediator between the State and civil society and, on the other hand, as space where critical discourses can be formulated on an equal footing and addressed to the political institutions. Habermas considered then that all citizens had access to this public sphere in order to debate over public issues in an unfettered manner and, after deliberation, reach a collective agreement, known as public opinion. This

process of creating such public opinion is based on the theory of communicative action (Habermas, 1985) whereby reason is not grounded in instrumental terms, but rather in emancipatory communicative action. The basic premise is therefore that citizens undertake cooperative action based upon mutual deliberation and argumentation for the common good.

From that perspective, it seems evident that astroturf efforts undermine the core concept of a public sphere. Lying about one's identity in order to deliver a message goes against the idea of communicative action. However, the normativity of the public sphere is one of the main critiques addressed to Habermas because it outlines how actors should behave and not how they actually do. For instance, he stressed the importance of reaching a consensus as a result of private persons engaged in enlightened debate (Serghini & Matuszak, 2009). However, it becomes difficult to believe in such rational debates in regard to the irreconcilable interests of different actors. Habermas (1992) acknowledged that shortcoming when revisiting his theory thirty years later by explaining the disappearance of such debates in favor of compromises of opposing interests.

In order to apprehend the enlargement of the public spheres to new publics, such as social movements, interest groups, and communication professionals, scholars have theorized the public sphere as fragmented (François & Neveu, 1999; Miège, 1995), that is to say as constituted of a multiplicity of arenas where conflicts in the production of meaning take place. Scholars sometimes refer to *public spheres* in the plural, with the emergence of new political and social movements debating on a growing number of societal issues. Along those lines, Gitlin (1998) used the term *sphericules* in his work to illustrate this fragmentation.

This fragmentation is magnified with the constant evolution of communication technologies, which led Castells (2007) to develop the claim that there is a "historical shift of the public sphere from the institutional realm to the new communication space" (p. 238). An enthusiastic part of the society, including some journalists and researchers, has been eager to praise the power of the Internet and social media in particular in the success of internetworked social movements. Examples of a potential new digital public sphere are flourishing all over the world, from the Indignados in Spain to the Occupy Wall Street movement in the United States, or from the Chilean students' protest to the Arab Spring, to

name a few. The main argument put forward is that in a networked society, social media has facilitated the organization and the recruitment of a substantial number of supporters, giving them more legitimacy to defend their interests.

This debate about the Internet and democracy has been fostered by Peter Dahlgren (2005) and tempers the views of an overly optimistic vision of the public sphere 2.0. He mentioned the transformations that the public sphere has undergone with the evolution of ICT. Two of them are of particular interests in our quest to further knowledge about astroturfing. Firstly, Dahlgren pointed out the "massive growth in media outlets and channels, along with changes in the format of media output, the blurring, and hybridization of genres, and the erosion of the distinction between journalism and non-journalism" (p. 150). Boulay follows the same train of thoughts and explains that the crisis of the media industry, facing rationalization, budget cuts, and viewership pressure, made critical for journalists to publish stories as soon as possible. Those pressures leave less and less time for journalists to verify their facts and sources properly and hence to read through astroturfers' playbooks. Secondly, Dahlgren emphasizes "today's increased number of political advocates and political mediators, including the massive growth in the professionalization of political communication, with experts, consultants, spin doctors, and so forth sometimes playing a more decisive role than journalists" (p. 150). It seems clear that, on the one hand, the evolution of ICT might offer some advantages in the creation and mobilization of social movements, but on the other hand, there are tech-savvy communication professionals who can take advantage of these technologies as well.

Building on the observation that the public sphere is fragmented, it is suggested to represent it as a constellation of issues as it offers a better understanding of the rationale behind the launching of astroturf lobbying campaigns. The first step to consider the public sphere as a constellation begins with placing the issues at the center of our focus. Cobb and Elder (1971) defined an issue as "a conflict between two or more identifiable groups over procedural or substantive matters relating to the distribution of positions or resources" (p. 82). As in a stellar constellation, new issues emerge every day due to societal, environmental, technological or political events. On this note, it is important to look at the issue-attention cycle suggested by Anthony Downs (1972), and that aims to identify different stages in the media, and public attention to an issue: (i) Pre-Problem Stage, (ii) Alarmed Discovery Stage, (iii) Realizing of the

Cost of Problem Resolution, (iv) Decline of Public Interest Stage and (v) Post-Problem Stage (Figure 2). It is usually during that second stage that we see the formation of interest groups. They start to organize, communicate and create alliances once the issue has been identified and organize their lobbying campaigns before the policymakers have taken a decision on the issue.

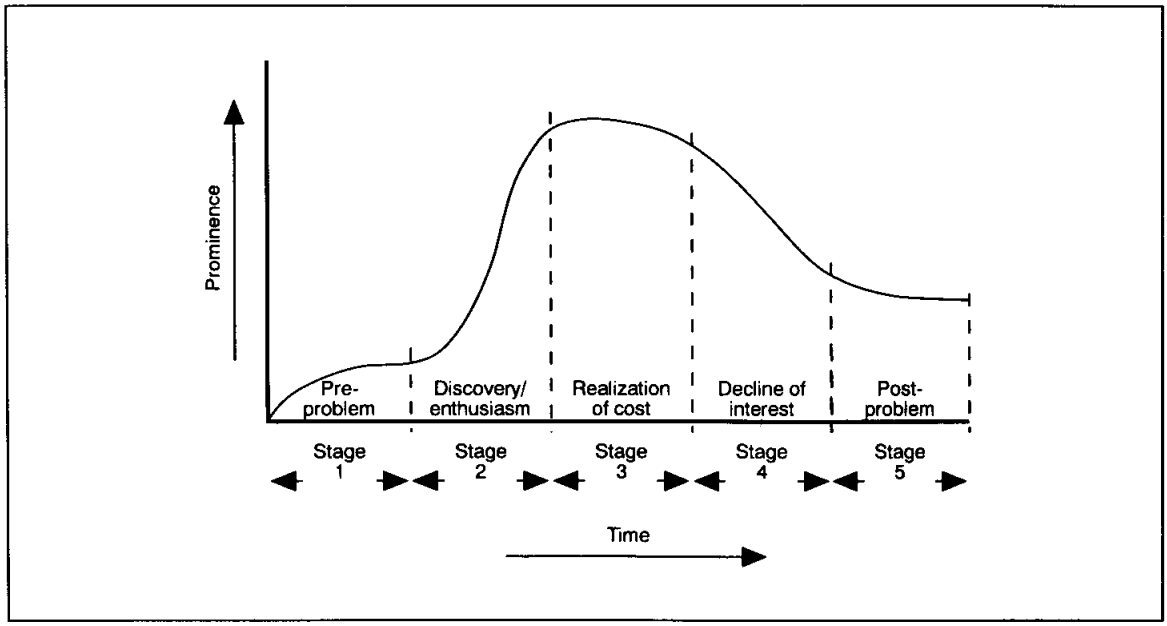

Figure 2 Issue-attention cycle (Downs, 1972)

As astroturfing is a hidden strategy by definition, it is thus helpful to know when we have the higher chance to detect their emergence regarding a specific issue. In order to uncover and analyze astroturf lobbying endeavors, it seems that it is necessary to select an issue that is still at an early stage in the issue-attention cycle as to see it appear in the constellation before it fades away. Indeed, research has shown that political astroturf activities tend to be ad-hoc and issue-specific (Boulay, 2015) and that their creators are eager to erase all traces of astroturf communications once the policymakers agreed on a decision.

Interest groups gravitate around these issues that appear and disappear. The hypothesis is that private interests rely on astroturf activities in order to obliterate the influence that civil society organizations might have. The objective for them is to challenge their views and their frames and, in the end, to capture the voice of civil society (Miller, 2010). Astroturf groups

would thus look like a genuine grassroots movement in order to reframe the issue at hand and compete for the legitimacy that is usually given to citizens groups (Berry, 1993).

3.3.3. The Transgression of Pluralist Values

In this subsection, astroturf characteristics are confronted to the four premises that form the pluralist model. Albeit normative, this model presents ideals that polities should tend to for a democratic way to make policies. Lobbying plays a crucial role and is often depicted as the scapegoat for transgressing these premises, and astroturfing makes no exception, on the contrary. By looking at the mechanisms on how astroturfers transgress those pluralist values, the necessity of studying and understanding it becomes even more pressing. The following four premises (Wiarda, 2005), are discussed subsequently:

- Equal access to the policy-making arena;
- Fragmentation of the marketplace;
- Competitive process for determining policies;
- Neutrality of policymakers.

Policymakers only have so much time to devote to consulting stakeholders. Access to the political arena, therefore, becomes a scarce and competitive good, and pluralists deem equal access to policymakers a necessity. However, astroturf groups can unbalance the equality of access. By setting up front groups, private interests look at alternate routes to gain access and convey their messages to their targets. By doing so, they struggle and compete with genuine citizen movements to be the interlocutor representing the voice of civil society, which could lead to a false balance in terms of access. This false balance can become even more problematic when no competition emerged spontaneously. The use of astroturfing, in this case, could give the illusion of a consensus on the part of citizens.

Along the lines of the first premise, pluralists consider the political arena, understood broadly, as a marketplace of ideas. In order to function, this marketplace has to be fragmented in order to avoid a *tyranny of the majority,* as described by Madison. With the anonymity of astroturf practices, the marketplace appeared more fragmented than beforehand, as new citizens seem to take part and mobilize to express their views. However, as private interests are actually using these groups as puppets like a ventriloquist, the broader fragmentation of the

marketplace is travestied and only solidify the view of existing *market shares*, leading more and more to a monopoly rather than an open market.

Astroturf efforts also transgress the ideal of the fair competition in designing policies. The most apparent transgression is how business or trade associations are using corporate ventriloquism, as described earlier, and try to unbalance the representation of interests to policymakers. In parallel, and maybe less intuitively, astroturf tactics can also be used against corporate competitors as well. That was the case of Oracle and Naspers, two tech giants, who set up a front group called *Fair Search* to file a complaint with Belgian authorities against Google.[13] Such practices render competition fierce and unfair to some extent. Astroturfing thus not only takes aim at nonprofits and NGOs but can also be used to build coalitions against a competitor.

Finally, Wiarda (2005) explains that the neutrality of government is a State where "there are no overwhelmingly powerful political forces that can monopolize or dominate the policy-making process to their advantage" (p. 149). Astroturf efforts do not directly impact this premise to pluralism unless politicians or officials become astroturfers themselves. They can do so to enhance their image or to try to create a bandwagon effect by boosting the number of supporters before elections. Cases of political figures purchasing followers and creating bots on Twitter are numerous in the last decade, notwithstanding the investigations about foreign governments mingling in national elections.[14][15][16]

[13] Nicholas Hirst and Mark Scott. Politico (February 2, 2018). Oracle and Naspers' stealth lobbying fight against Google. Retrieved February 15, 2018 from https://www.politico.eu/article/oracle-naspers-fairsearch-google-lobbying-europe-antitrust-android-competition-margrethe-vestager/

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[15] Nicholas Confessore, Gabriel J. X. Dance, Richard Harris and Mark Hansen. The New York Times (January 27, 2018). The Follower Factory. Retrieved April 2, 2018 from https://www.nytimes.com/interactive/2018/01/27/technology/social-media-bots.html

[16] Nick Robins-Early. The Huffington Post (July 3, 2017). Far-Right Bots Are The Secret Of Marine Le Pen's Social Media Boom. Retrieved April 2, 2018 from https://www.huffingtonpost.com/entry/marine-le-pen-bots-twitter_us_58bc21c1e4b05cf0f40125d6

3.3.4. A Contingency Model for Assessing Astroturf

Another angle from which the ethics of astroturf lobbying can be assessed is the excellence theory of public relations by James E. Grunig and his wife Larissa A. Grunig, (1992). With this seminal theory, they introduced four models of public relations into which PR campaigns can be categorized.

The *press agentry model* refers to the willingness of press agents to make the headlines without consideration about the means to achieve it. Rooted in the 19th century, this model leaves no room for research, investigation or ethics and focuses mainly on creating news to manipulate the public and induce changes in behavior. The *public information model* represents a shift towards more accuracy and truth in communication. It remains a one-way communication and practices include the publishing of press releases, reports or brochures with the hope to attract attention from journalists. The *two-way asymmetric model* is also called the *scientific persuasion model*. As a two-way model, there is a consideration of the targets of messages. PR practitioners would collect data to design better campaigns and influence more easily the receiver of the message, hence the asymmetric dimension. Finally, the *two-way symmetrical model* refers to the use of communication and PR for mediation and conflict resolution by listening to all stakeholders. The goal is to listen to the needs of all publics and act upon that because all parties must benefit.

The last model of Grunig's theory has been criticized for being impossible to reach. Based on arguments from game theory, Cancel, Cameron, Sallot, and Mitrook (1997) have demonstrated with the *contingency theory of accommodation,* that the perfect two-way symmetrical model can never benefit all parties and that all PR campaigns cannot be reduced to four boxes without understanding the context. Instead, they propose to see the two-way communication as a continuum going from pure advocacy to total accommodation.

These critiques are inspiring in finding a way to assess astroturf communications. At first sight, astroturfing certainly seems to tick all the boxes to be considered in the press agentry model, or to some extent to the two-way asymmetrical model. Indeed, by using Parson's (2008) argumentation on differentiating propaganda and persuasion, astroturfing shows clear signs of the former, as it "fabricates evidence to support a point of view… [and]… conceals the real supporters of a cause" (p. 107).

However, just as it is complicated to reduce PR tactics into four boxes, it is also difficult to assess lobbying campaigns as purely astroturf. As Cancel, Cameron, Sallot, and Mitrook (1997) suggested a continuum to evaluate more precisely how accommodating or persuasive was a PR campaign, a continuum could be developed in order to assess the extent to which a lobbying campaign is successful, going from genuine grassroots to pure astroturf (Figure 3).

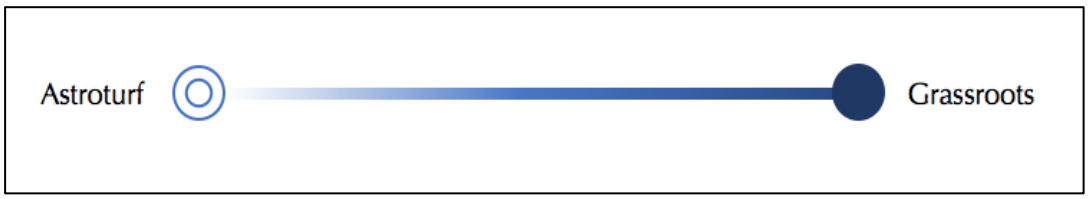

Figure 3 Contingency model from astroturf to grassroots

To illustrate this argument, two examples verify the necessity of a continuum. First of all, a genuine grassroots movement may see the light of day, spontaneously led by concerned citizens willing to make things change, and then be given an astroturf boost, by buying fake followers on Twitter or by paying people to demonstrate with them for instance. The impetus is genuine, but astroturf techniques are used to enlarge the campaign and appear more prominent in the eyes of policymakers. Conversely, a business may start an astroturf from scratch, by founding a bogus NGO with a misleading name and be later supported by real citizens who believe in the arguments of the astroturf group. In both cases, the campaigns mix grassroots and astroturf aspects making it challenging to categorize the campaign strictly as astroturf or not. A contingency model is therefore preferable for assessing astroturf movements.

Conclusion

The objective of this first chapter is to contextualize the emergence of astroturfing and to understand where it stands amongst the action repertoires of lobbyists. The ambiguity surrounding the necessity of lobbying in democratic societies has been resolved by mobilizing the thoughts of pluralist authors. The representation of public matters as well as sectoral interests is thus conceived as a fundamental right in a democracy. However, the question of how this representation is carried out may raise ethical questions.

Indeed, interest groups have the opportunity to either conduct strategies that aim at seeking direct access to policymakers in order to communicate their views or to focus on mobilization and media strategies to voice their concerns. As detailed in this chapter, an extended repertoire of these lobbying tactics is lawful and rightful. Lobbying only becomes problematic when tactics are conducted in violation of the law or the ethics. Along those lines, when private interests manufacture their own grassroots movements in an attempt to capture the voice of civil society, astroturfing can corrupt the essence of a democratic process.

Given its hidden nature and the methodological challenges that it entails, astroturfing has been understudied by scholars and is still misunderstood in many aspects including its influence on public policy debates. Following the review of the literature, astroturf lobbying can be defined as a communication strategy simulating citizen support for political purposes. After having defined the concept and identified the challenges it raises in this chapter, the following one focuses on designing a theoretical and empirical apparatus to address existing knowledge gaps regarding astroturfing.

Chapter Two: Studying Astroturf Lobbying with Emphasis Framing

Introduction

After narrowing down on the existing literature on interest groups and shedding light on the democratic problems brought by the use of astroturf efforts, this chapter presents the objectives of this dissertation and the ways to attain them. Building on the review of the literature in the first chapter, two main objectives emerged. In order to address the stealth nature of astroturf groups, the first objective aims to develop a device to reveal fake grassroots. The second objective, more explorative, aims to measure the influence of astroturf groups on public policy initiatives.

The ways to accomplish the two objectives are based on a long-discussed theory in the fields of social and psychological sciences: the framing theory. Throughout this chapter, the two prominent schools of thoughts on that topic are presented, including the most recent debates regarding the applicability of this concept in the field of political communication. The understanding of the concept on which the research design is built takes its roots in the sociology tradition and considers that interest groups strategically highlight certain aspects of an issue and omit others in order to shape the debate and convince politicians about the superiority of their own worldviews. The use of the framing theory for interest group studies is developing, and new applications to the deconstruction of astroturf cases are envisaged here. This study propounds the view that framing methods can be revitalized in communication sciences and can pave the way to build a robust research design to fulfill the objectives of this dissertation, despite the methodological challenges that characterize astroturfing.

Finally, the last section of this chapter is concerned with the methodology of this study. Numerous the caveats are to be taken into consideration when studying practices that are ethically questionable. A focus is put on the research design in itself, which is based on quantitative text analysis method. This innovative method presents advantages in terms of operationalization but also shows limitations regarding the interpretation of some results. The application of framing analysis to both objectives is substantially similar but differs in certain aspects that are detailed in the last section of this chapter. These considerations are addressed

before the presentation of the results regarding the detection of astroturf efforts (Chapter 3) and regarding the measurement of astroturf lobbying influence on the decision-making process (Chapter 4).

1. Objectives of the Study

1.1. Detecting Astroturf Lobbying Efforts

The crucial element that makes an astroturf tactic ethically questionable resides in the concealing of the true identity of its instigators. As Daniel Freund from Transparency International sums it up in an interview with *Politico*, "with astroturfing, it's hard to tell if a group is an independent voice or one that's acting on behalf of a company."[17] An observation shared with Alberto Alemanno, a professor at HEC Paris, explaining how "astroturfing is misunderstood and largely invisible to most people".[18]

In an attempt to look like a grassroots movement, private interests violate most of the normative theories of communication and political science, but also most codes of ethics of public relations and public affairs. A critical objective is thus to find a way to uncover them and ascribe them with their true origins and financial ties, despite the possible legitimacy or veracity of the content of the message. The first objective of this study is, therefore, to design a method to reveal astroturf endeavors and make public debates and policy-making processes more transparent.

Scholars who have studied astroturfing acknowledge the problem of concealment, but few are suggesting solutions. In fact, according to Boulay, astroturf activities are most often denounced by journalists in the course of their investigations rather than by academic researchers (2015: 72). There is an emerging academic focus on astroturf detection that focuses on computational propaganda and the use of bots on social networks. For example, Ratkiewicz et al. (2011) were pioneers in the field and designed a program called *Truthy*, which helps detect smear campaigns and astroturf cases on Twitter. Along the same lines, the Computational Propaganda Project at the University of Oxford also analyses algorithms and automation on the microblogging website to find bots that relay misinformation and manipulate public opinion.

[17] Nicholas Hirst and Mark Scott. Politico (February 2, 2018). Oracle and Naspers' stealth lobbying fight against Google. Retrieved April 2, 2018 from https://www.politico.eu/article/oracle-naspers-fairsearch-google-lobbying-europe-antitrust-android-competition-margrethe-vestager/

[18] Ibid.

These initiatives are of course welcome and much needed in a time of political misinformation but solely takes into consideration social media and microblogging environments such as Facebook and Twitter. The question of uncovering alternate astroturf tactics, such as front groups, has however been overlooked by the scientific community. This study aims to fill that knowledge gap.

The method suggested in this study to detect astroturf lobbying efforts is based on the postulate that interest groups are *framers* (Baumgartner, 2007: 487). In order to influence policymakers, interest groups active on an issue have to define what is problematic and what is not and suggest a solution. They have to *frame* their position by selecting arguments and by omitting or discrediting others. Recent research has shown that different factors can explain how interest groups choose frames: the logic of influence and the logic of membership (Klüver & Mahoney, 2015; Schmitter & Streeck, 1999). The former means that interest groups behave in accordance with the target of their lobbying campaign. The same frames do not work as efficiently when trying to influence Directorate-General Trade of the European Commission and the Environment Committee of the European Parliament. The latter supposes that the interest groups mobilize frames in accordance with the members they represent. For example, corporate lobby groups would rely more on economic frames and citizen groups on public frames such as the environment or public health.

However, there is a dilemma for astroturfers, that is, the way they will frame the issue at hand. Astroturf groups represent private interests while appearing like a genuine grassroots movement. Will they use the frames from the interests they truly represent? Will they try to counter-frame the ones suggested by genuine grassroots movements? Or will they try to reframe the issue entirely?

The assumption on which the method to detect astroturf is based on this paradox. The purpose is to determine whether framing strategies used by lobbyists resorting to astroturf differ significantly from those used by real grassroots movements so as to open the possibility to instrumentalize those differences to detect and unmask astroturfing. These differences can be observed and measured by looking at and mapping the interest groups depending on their framing, and to isolate the fake grassroots. In other words, the assumption is that astroturf movements rely on different frames than genuine civil society organizations.

At first sight, this assumption might appear trivial. Paul Lazarsfeld's (1949) experiment on *the paradox that is common sense in social science* helps to add some perspective. Based on 600,000 interviews of servicemen following the Second World War, the opus *The American Soldier* has been of seminal importance for social scientists. In writing a guide for its readers, Lazarsfeld questioned the concept of *obviousness* in social sciences. To do so, he listed six statements, accompanied by a short explanation, considered as the main findings that would be developed in this substantial study on the behavior of American militaries in wartime. For instance, the first example compares the mental stability between well-educated and less-educated servicemen:

> Better educated men showed more psycho-neurotic symptoms than those with less education. (The mental instability of the intellectual as compared to the more impassive psychology of the-man-in-the-street has often been commented) (p. 380).

The list goes on and asserts findings that might appear as obvious, even more so with the short explanation that accompanies the assertion. However, the truth was otherwise. For all six *obvious* statements, Lazarsfeld showed that the results proved the exact opposite. In the first example, it was actually the poorly-educated soldiers who were more neurotic than those with high education. The point made by Lazarsfeld is that hypotheses and research questions might seem obvious or common sense. Yet, scientific research can prove the opposite of what was expected. The role of social scientists is to question what seems obvious as the results might turn out to be counter-intuitive.

This *problem of social acoustic*, as Lazarsfeld phrased it, can be applied to the first assumption of this study. On the one hand, it seems obvious that astroturf groups would use a different framing than genuine grassroots since they represent different interests. On the other hand, one might find obvious that astroturf groups use a framing similar to civil society organizations since they aim to look like one. Only an in-depth analysis can offer a definite answer, and, if it is confirmed that astroturfers use different frames, that would mean it is possible to uncover them, which paves the way for transposing and generalizing the results into a device to reveal fake grassroots.

In a way, the first objective of this dissertation can be compared, to some extent, to medical research and virology in particular. This branch of science focuses on the different aspects of viruses and looks at the ways to prevent the spread of infectious diseases. Research in the fields includes techniques to isolate the viruses with the objective to detect the disease at an early stage of development (i.e., by finding a trace in blood or tissue samples). Here, the attempt is to detect astroturf from traces based on the frames they used. Thus, the sooner the fake grassroots are uncovered, the less detrimental it is for the well-being of democracy.

1.2. Assessing Astroturf Lobbying Influence

One of the fundamental questions in the field of lobbying studies is to measure the success that interest groups have on public policy proposals. It is not rare to read in the newspaper or the hear on the radio that lobby groups have swayed the policymaking process to their benefits, yet it is quite difficult to isolate the potential influence of one group or one campaign on policymakers, let alone to assess the power of much murkier practices such as astroturfing. The second avenue of research of this study aims to suggest and test innovative ways to assess whether astroturf groups are influential on policy debates and, therefore, to determine the extent to which they corrupt aspects of a democratic policymaking process.

To do so, this subsection first explains the evolution of scholarly research lobbying's effectiveness, from the first biased forms such as interviewing lobbyists themselves or trying to link lobbying spending with influence, to newer forms of measurements including preference attainment and what is of particular interest for this research, framing analyses. Lastly, a method is elaborated to evaluate, as objectively as possible, the role of astroturf lobbying in the making of policies.

The most extensive study ever done on measuring lobbying success was conducted by Baumgartner, Berry, Hojnacki, Leech, and Kimball (2009). In their seminal book *Lobbying and Policy Change: Who Wins, Who Loses, and Why,* the authors are the first to address the question of assessing lobby groups influence on a large set of data and paved the way for subsequent and more refined research on this challenging topic. Their research design includes interviews with more than 300 lobbyists and government officials on a variety of about 100 issues faced by the Federal Government of the United States. They chose this extensive fieldwork to reflect on and shed light on the hidden stages of the policymaking

process that are often overlooked in academic research as many egregious cases do not hit the headlines because journalists do not deem them newsworthy. Journalistic perception and depiction of lobbying activities are thus misleading as bills that are killed or bills regarding niche issues are overlooked.

The findings emanating from this study depict a clear picture of lobbying activities in Washington. The authors notably found that 60% of lobbying campaigns failed to induce policy change. Changing the status quo that has been built in a neoliberal and globalized world order implies therefore long and hard efforts. This finding illustrates the punctuated equilibrium model defined by Baumgartner and presented in the first chapter, which explains that the US policy process is steady over time – Baumgartner uses the word *sticky* to describe the nature of policymaking – only to be disrupted brutally at some point.

Along those lines, LaPira, Thomas, and Baumgartner (2014) contend that there are two worlds of lobbying in Washington. As they explain:

> The first world, where most lobbying attention is directed, is one in which we see a great deal of interconnectedness and interest diversity. The second world, home to an overwhelming majority of policy domains, cultivates niche lobbying and policy balkanization. That these two worlds exist simultaneously is precisely why observers fail to agree on what typical or average lobbying is. We believe that this is why the political science literature on interest groups have been contradictory for so long (p. 27).

This reality confirmed Mahoney's (2007) findings who compared the US and the EU lobbying styles. She performed 149 interviews with lobbyists in order to assess the attributed influence of interest groups on a range of 47 issues. Interestingly, she demonstrated that the US system is based on a winner-takes-all reality, whereas the EU system relies on compromises negotiations, which allow more interest groups to attain partial achievements of their policy goals. There are however similarities between both systems in terms of lobbying success. One is the fact that the size of an issue has consequences on the likelihood of influencing it. Concretely, the bigger the scope of an issue, the smaller the chances for an interest group to attain its goal. Niche issues, therefore, present attractive arenas in comparison to multiple-sector or system-wide issues. In a way, Mahoney's findings that larger-scope issues often lead to stalemate find echoes in the rationale behind outside lobbying. When interest groups do

not get access to policymakers and feel that they are on the losing side, outsider tactics aim to expand the conflict. By so doing, it raises the salience of the issue and attracts the attention of new organized interests, which leads to increasing the scope of the issue, and consequently the chance of keeping the status quo.

Another important finding from Mahoney's study is the dominance of business in the US policy debates. Although she and Baumgartner (2005) have demonstrated the highly significant correlation between the increase of social movements in the US from the 70s onwards with the increase of public hearings on related issues, her research on lobbying success shows that the industry is more successful in winning the debates and gain substantial advantages in a winner-takes-all setting as it is the case in the US. It is different in the EU where the hypothesis of business being more successful than citizen movements has been tested and infirmed by Dür, Bernhagen, and Marshall (2015). After an analysis of 70 legislative proposals, they noted that business actors were far less successful than citizen groups in achieving their policy preferences. These results are not as surprising as one might expect, given that the EU Single Market was fully completed when the research was conducted and that the new policy proposals often concerned consumer or environmental issues, and on which NGOs have expert knowledge and legitimacy. In light of these results and the power that citizens movement actually have, setting up an astroturf group seems like an opportunity to benefit from the underestimated influence of civil society organizations.

These findings contradict the widespread belief that tends to often subsumes lobbying to businesses spending money for influence. Drawing on the same dataset they used for their book, Baumgartner, Berry, Hojnacki, Kimball, and Leech (2014) have focused their attention on money and policy change. Counter-intuitively, the authors found no impact of lobbying expenditure on policy outcomes. The image of multinationals buying their way into political institutions to successfully exert influence has thus no scientific basis. However, an interesting analysis from this research on money and lobbying brings astroturfing into play.

> We could not find that smoking gun that many seem to expect linking money to outcomes. […] We think the reason is that it will not be found as long as we seek to establish a link between lobbying and policy change. Rather, the link is much more basic. It has to do with which concerns are represented in the halls of government, which ones are vastly over-represented because they mobilize powerful corporate

> interests who hire hundreds of lobbyists as well as PR firms capable of *generating "grassroots" campaigns* [emphasis added] to protect their interests, and which social groups are either completely absent or speak only with a muffled voice. (p. 208).

The question of building methods to assess lobbying influence on public policy has challenged researchers for a long time. The first attempts were based on interviewing lobbyists or policymakers, but this approach had significant biases in the results (Heinz, Laumann, Nelson, & Salisbury, 1993). Indeed, lobbyists seem to consistently overestimate their influence, as if to prove their worth to potential clients, while politicians overlook a possible influence from a third party, implying their work is irreproachable. To overcome these biases, researchers have strived to design methods that were more objective, despite the difficulty to isolate the real influence of an interest group from other contextual determinants that could lead to shifts throughout the making of a policy (i.e., political scandals or natural catastrophes).

Recent advances have been made in this sense with the INTEREURO project. One of their methods is to look at the preference attainment of coalitions of interest groups (Bernhagen, Dür, & Marshall, 2014; Dür et al., 2015; Klüver & Mahoney, 2015). Concretely, it involves quantitative analyses of the position and the desired outcomes of involved interest groups, and to separate them on a one-dimension scale between the ones advocating for new or more stringent regulations and the ones who are advocating for the status quo. The evolution of the position from the institutions, from the legislative proposal to the final piece of legislation, is then looked at to evaluate which coalition has managed to steer the debate in their direction and attained their objectives.

Looking at coalitions rather than interest groups taken individually is relevant for several reasons. First of all, it allows overcoming the bias of attributing a major shift in policymaking to only one organization, as could have been the case by solely interviewing lobbyists on a qualitative level. Secondly, studying interest groups as coalitions gives a more representative picture of how lobbying is conducted. Building coalitions is indeed a necessity in creating advocacy strategies because it brings together groups sharing the same objectives and thus speaking with a *louder* voice in the political arena, as their legitimacy increases with the broader constituency they represent. As Mahoney (2007) explains, "the coalition can signal to policymakers that a policy position has the support of a large and varied group of interests

and that the coalition can provide a framework for more efficient use of resources" (p. 6). Quite interestingly these alliances can sometimes be ad-hoc or structural.

In the EU for instance, alliances are often structured in the sense that most trade associations act as umbrella associations bringing together national or cross-sector associations. These associations usually have a unique identity, financial and human resources, and offices located in Brussels to conduct business at EU level. In Washington, alliances are more informal and vary over time and issues. Once again, the appeal for creating fake grassroots movements emerges to create a coalition that seems more legitimate with partners from different profiles, as explained by Berry (1993):

> Alliances are composed of both old friends and strange bedfellows; relationships are built on immediate need as well as on familiarity and trust. Organizations that do not normally work in a particular issue network can easily move into a policymaking community to work on a single issue. […] Citizen groups, rather than simply being the enemy of business, are potential coalition partners for different business sectors. They are especially attractive as coalition partners because they have such a high level of credibility with the public and the news media. A characteristic of the culture of interest group politics in Washington is that there are no permanent allies (p. 35).

The method suggested by Bernhagen et al. (2014) and Dür et al. (2015) is limited by the fact that it reduces the debate to only one dimension, often a binary struggle between business and civil society organizations. However, as Thomson (2011) has demonstrated in his comprehensive book on EU policy debates, most legislative debates are inherently multidimensional, with coalitions wanting to steer the debate in more than one or two ways. To overcome this hurdle, Klüver and Mahoney (2015) have designed a method that allows mapping interest groups and institutions on a multidimensional scale, based on the clusters of words that they are using. In other words, the authors developed an innovative framing analysis to map interest groups based on the aspects of the issue they highlight and by performing a factorial correspondence analysis. This representation permits to depict coalitions on a broader political spectrum as well as the evolution of the institutional positions.

The first objective of this study is to see how astroturfers frame issues and how they compare with other interest groups. Once the astroturf groups are identified on a graph, it is thus

possible to see their role in the policy debates, to see in which coalitions they truly act, and if their coalition has been successful in influencing the legislative proposal. The second objective is to assess the influence of astroturf groups on public policy.

This objective is complex and entails methodological challenges that are assessed in the last section of this chapter. Among them is the indicators that are selected to assess the potential influence – and its magnitude – on the policymaking process. The assumption is that performing framing analyses is the most robust method to achieve this purpose. Given the heated debates on the framing theory and the critics that might spark from using it loosely, it is essential to carefully define how framing is understood in this study and how the method is designed to achieve the research objectives and to legitimate the results of this study. Next section looks back at the history of framing and explains the emergence of two rival schools of thought. Finally, a revitalization of the concept in the field of interest group studies is proposed.

2. Two Schools of Thought on Framing

This section examines the long and debated history of the framing theory. As from the 70s and onwards, the concept of framing has been widely used and defined by an ever-growing number of scholars from various research traditions. Two main schools of thought have emerged over the years: the sociology-rooted and the psychology-rooted traditions. There is, however, a bone of contention between the two currents about how framing actually works and about the effects it has on people.

The downside of so much attention on the concept is that many definitions and interpretations of what framing is coexist and that this theory can become "victim of its own success" (Entman, Matthes, & Pellicano, 2009: 215). In order to understand how a theory can be so divisive, this section looks at the history of the concept and the pivotal moments that have forged it, notably by presenting the views of the founding fathers of both schools of thoughts, their respective critics of each other, and to finally see how it can be adequately applied to the field of interest group research and to analyze astroturf efforts.

2.1. The Sociological Tradition

References to framing in the sociological tradition can be best tracked to Gregory Bateson (1955). In *A Theory of Play and Fantasy*, the American anthropologist studied how monkeys communicate with each other. More precisely, he studied the metacommunication that allowed the monkeys to interpret the moves made by one of its congeners, to assess whether it was a hostile or a playful behavior, and to act accordingly. In so doing, Bateson demonstrated that no communicative messages, be it verbal or non-verbal, could be understood without a frame of reference, or a *meta-message* as he coined it. He first defined frames as "a spatial and temporary bounding of a set of interactive messages" (p. 197). A frame is thus what allows a living being to interpret an event and to act appropriately.

Another founding father of the understanding of framing in the sociological tradition is Erving Goffman (1974). In his book *Frame Analysis, An Essay on the Organization of Experience*, Gofman considers framing as a "method by which individuals apply interpretive schemas to both classify and interpret the information that they encounter in their day-to-day lives" (p. 21). Furthermore, the sociologist uses the word *frames* to label "schemata of interpretation

that enable individuals to locate, perceive, identify and label occurrences within their time and world-space at large" (p. 21).

Goffman's contribution to the field is essential in the sense that he is the first scholar to offer a classification of frames as well as examples from the everyday life. While suggesting that there are numerous levels of framing, Goffman mainly focuses on defining the *primary frameworks*. Among them, he identifies the *natural frameworks*, which views certain events as purely physical, without interference or agency from an individual, and the *social frameworks*, which relate to "events that incorporate the will, aim, and controlling effort of an intelligence, a live agency, the chief one being the human being" (p. 22). Goffman refers to these latter activities as *guided doings*.

Both frameworks allow individuals to make sense of the world that surrounds them. It helps them to understand events, be they of a natural or social essence, and interpret them. According to Goffman, individuals are capable users of these frameworks, and, if applied to social groups, he explains that the primary frameworks are the central elements of their culture. Members of the same social group thus share the same frameworks that they rely on to understand and respond to events. In sum, framing involves a social construction of a social phenomenon.

Building on Goffman's idea that people interpret events by using frames, Todd Gitlin (1980) decided to apply the frame analysis to media studies, because as he explains, "what makes the world beyond direct experience look natural is a media frame" (p. 6). In his seminal opus *The whole world is watching: Mass media in the making & unmaking of the new left,* Gitlin studied how the media had covered the new left student movement of the 60s and 70s in the US. What he observed was that the news coverage focused more on the protesters themselves and how they looked like, emphasizing on their youth, frivolity, and deviance, but tended to overlook the real reasons and the causes of why the protest sparked in the first place. He noticed a definite effort of the journalists to present the issue in a certain way, by selecting specific elements of the issue and neglecting others, and which incidentally offers a particular angle of the issue to the public.

Based on these findings, Gitlin offers a definition of frames and media frames, which has led to the concept of *emphasis framing* presented in detail later on, and that explains how journalists manage to organize and present information they receive:

> Frames are principles of selection, emphasis, and presentation composed of little tacit theories about what exists, what happens, and what matters. Media frames, largely unspoken and unacknowledged, organize the world both for journalists who report it and, in some important degree, for us who rely on their reports. Media frames are persistent patterns of cognition, interpretation, and presentation, of selection, emphasis, and exclusion, by which symbol-handlers routinely organize discourse, whether verbal or visual. (pp. 6-7).

The question of the effects of media frames on the shaping of public opinion first addressed by Gitlin was later discussed by William Gamson and Andre Modigliani (1989). They developed research on framing with a constructionist approach and applied it to the analysis of media discourse and public opinion. Here frames are perceived as "a central organizing idea or storyline that provides meaning to an unfolding strip of events. The frame suggests what the controversy is about the essence of the issue" (p. 143). Importantly, the authors carefully stress that changes in media discourses do not necessarily *cause* changes in public opinion, but that changes in discourse provide an essential context for interpreting issues and events. In a way, the media discourse offers different interpretative *packages* to the public for constructing meaning on issues like nuclear power. On that particular case, the authors observe different packages such as *progress, runaway* or *public accountability*, which are the three most prominent ones brought forward by news outlets to explain and frame the issue of nuclear energy.

What is especially relevant from their analysis is that they have deconstructed the old-fashioned way of measuring public opinion, that is with surveys containing pre-coded answers and have focused on a constructivist approach to framing. This approach emphasizes the role of social interactions of an active and interpreting audience in the making of representations. By doing so, they have demonstrated that people actually do not share the same preexisting frames and that "different media packages have become part of the public's toolkit in making sense of the world of public affairs" (p. 36).

It is around the same time that David Snow and Robert Benford (1988) have focused their attention on framing processes in the field of social movements studies. Not convinced with the underlying arguments of the resource mobilization theory in the US and the new social movements approach in the EU, they turned to the framing theory to explain the formation and the behavior of social movements. They explain that social movements frame, that is "to assign meaning to and interpret relevant events and conditions in ways that are intended to mobilize potential adherents and constituents, to garner bystander support, and to demobilize antagonists" (p. 198).

This definition brings together elements from previous researchers such as Goffman's meaning creation, Gitlin's selection process, and also brings a strategic vision of framing to the organization of social movements. Snow, Rochford, Worden, and Benford (1986) referred to *frame alignment* in order to describe the linkage that operates between movements sharing the same values, beliefs, and frames. Furthermore, they define as *frame resonance* the success that movements have in spreading their frames over an issue. The authors contributed to perceiving social movements as framers, as agents actively involved in the production of meaning and ideas in the public sphere.

Research on framing has grown exponentially following a piece written by Robert Entman (1993). In this article, the communication scholar tries to clarify what he qualified as a *fractured paradigm,* and in an effort to mend previous research into one paradigm acknowledged by the scientific community, he proposed a definition encompassing the work from various leading researchers in the field:

> To frame is to select some aspects of a perceived reality and make them more salient in a communicating text, in such a way as to promote a particular problem definition, causal interpretation, moral evaluation, and/or treatment recommendation for the item described. (p. 52).

In Entman's view, frames may embody four functions, but not necessarily all at the same time. Frames define issues that are problematic; offer a diagnosis regarding the cause of the problem; evaluate from a moral perspective the cause and its effects; and suggest solutions to remedy the problem first defined.

With its definition, Entman built on Bateson and Goffman's work which considered that a frame *organizes everyday reality* and narrowed its applicability to texts. Indeed, Entman strives to disambiguate the term in order to pave the way for operationalizing framing analysis in the field of social sciences. To differentiate the sociological and psychological aspects of framing, Chong and Druckman (2007) refer to *frames in communication* for the former, since it focuses on "words, images, phrases and presentation styles" (p. 106), and *frames in thoughts* for the latter.

To explain how frames work, Entman (1993) relies on Gitlin's observations about the importance of selection and *salience*, that he defines as "making a piece of information more noticeable, meaningful, or memorable to audiences" (p. 53). In other words, Entman explains that communicative texts can make some bits of information more salient, by emphasizing or repeating certain concepts, words, images, or metaphors, or by omitting them. Later research deriving from this salience-based definition is qualified as *emphasis framing*.

Following Entman's clarifications on the functions of frames and on the ways that researchers can observe and analyze them in communicative texts, research on emphasis framing has grown staggeringly in the last thirty years. Jörg Matthes' (2009) meta-research on framing studies between 1990 and 2005 is telling in that regard and shows that 28,7% of academic articles on media framing use Entman's definition, ahead of Gamson and Modigliani, Gitlin, and Goffman (p. 355). At the time this dissertation is written, Entman's 1993 article has been cited over 12,000 times according to Google Scholar. However, among them are also many critics arguing that Entman's call for a single paradigm for framing is not preferable (Bennett & Iyengar, 2008; D'Angelo, 2002; Scheufele, 1999). These critics are discussed in the following subsection.

Relying on salience to explain framing effects is reminiscent of another oft-cited theory in the field of communication: the agenda-setting function of the mass media. McCombs and Shaw (1972) demonstrated the power that the media had on conveying issues to be discussed among the citizens of Chapel Hill, N.C., USA, during election time. As Bernard Cohen (1963) asserted following Lippmann's ([1922] 2017) work on public opinion: "the press may not be successful much of the time in telling people what to think but is stunningly successful in telling its readers what to think about" (p. 13).

Almost fifty years later, research on agenda-setting has been replicated on varying issues, varying populations, and varying media, and go far beyond the original domain that was the transfer of salience from the media agenda to the public agenda (M. McCombs, 2005). Whereas initial agenda-setting focused on indirect media effects (i.e., What to think about?), McCombs postulated that media had more direct effects (i.e., What to think?) and converged the idea of framing under the umbrella of agenda-setting research. He contends that the media agenda not only raises the salience of an issue but also conveys *attributes* on that issue, depending on how a story is framed. Attributes are "properties associated with the objects and have saliences that can also be transferred from the media to the public" (Maher, 2001: 84).

Based on the theory of agenda setting, a number of researchers have focused on *priming* effects, which refers to "the tendency of audience members to evaluate their political leaders on the basis of those particular events and issues given attention in recent news reports" (Price & Tewksbury, 1997: 175). By selecting what news are important, not only the media are successful in determining the public agenda but would also emphasize on which issues politicians should be evaluated (Iyengar, 1990; Iyengar & Kinder, 2010).

Subsequently, McCombs and Valenzuela (2007) subsumed framing as a second level of the agenda-setting model. On a first level, media would thus transfer salience of an issue, and on a second time the attributes of the issue. However, this proposition has been highly contested over the years (Borah, 2011; Cappella & Jamieson, 1997). The dispute lies in the fact that the processes of agenda-setting, priming, and framing differ in terms of media effects. Agenda-setting and priming would rely on an accessibility model, and, as advocated by the researchers from the psychological tradition, framing would occur with an applicability model.

To summarize, researchers who have worked on framing and who have based their conceptual frameworks on the sociology-rooted tradition, or emphasis framing, consider frames as "a means of understanding how people construct meanings and make sense of the everyday world" (Ferree, 2002: 42). A large body of scientific research has anchored their framing analyses on Entman's definition and have focused on designing empirical apparatus

to observe these frames in communicative texts. In so doing, they observe how individuals, be it journalist, politicians, or PR practitioners, mobilize specific frames to define a problem, identify a cause, make a moral assessment, and suggest a solution to the problem. They do so by emphasizing certain bits of information in the texts while omitting others. The question of framing effects, especially in the fields of media studies where researchers were prompt to correlate the selection of media frames and the shaping of public opinion, is, however, debated, as explained in the following subsection.

2.2. The Psychological Tradition

In parallel to the sociological tradition, another strand of research has focused on framing drawing on psychological and behavioral studies. Scholars from this field have conducted experiments on how individuals respond to pieces of information and how the manipulation of this information – or how the information is framed – could influence their choices and judgments. What differs from the sociological tradition is that these experiments focused on the variation of presentation of logically equivalent information. Therefore, the label *equivalence framing* is used to refer to this school of thought.

The seminal experiment on the topic was conducted by Tversky and Kahneman (1979). Participants who took part in the experiments were given this problem:

> Imagine that the U.S. is preparing for the outbreak of an unusual Asian disease, which is expected to kill 600 people. Two alternative programs to combat the disease have been proposed. Assume that the exact scientific estimates of the consequences of the programs are as follows:
>
> - If Program A is adopted, 200 people will be saved.
>
> - If Program B is adopted, there is a 1/3 probability that 600 people will be saved and a 2/3 probability that no people will be saved.
>
> Which of the two programs would you favor?
>
> - Program A or Program B

Interestingly, is that the two sets of alternatives offer the same expected result of saving 200 people. Both programs are framed in terms of lives saved, however, Program A is a risk-averse solution while Problem B is uncertain and encompasses risks. Both propositions are logically equivalent in terms of lives saved or lost, but 72% of the participants opted for Program A and 28% for Program B. Tversky and Kahneman exposed the same problem to another group of respondents but with two other sets of solutions:

- If Program C is adopted, 400 people will die.
- If Program D is adopted, there is a 1/3 probability that nobody will die, and a 2/3 probability that 600 people will die.

Here the programs are framed in terms of the number of people who would die. 22% of the respondents opted for Program C, the risk-averse option and 78% decided to adopt Program D, which is the risk-seeking choice. The conclusion from this study is that when people were exposed to an option framed in terms of gains (life saved), they were more risk-averse but when the logically equivalent information was framed in terms of losses (lives lost), they were conversely risk-seeking.

Unlike the studies focusing on how media frame events to make sense of them, this experiment looks at how an audience receives a piece of information and how it changes its behavior or its decision-making. Drawing on psychological methods, Tversky and Kahneman wanted to compare equivalent elements in order to isolate the potential effects of the framing of a message. In so doing, the results showed that human choices are influenced by the framing of the problem rather than the utility of the solution. To illustrate the difference with the sociology-rooted tradition, Cacciatore, Scheufele, and Iyengar (2016) note that "psychology-rooted framing refers to variations in *how* a given piece of information is presented to audiences, rather than differences in *what* is being communicated" (p. 10).

The rivalry between the two schools of thoughts is salient in this experiment as they perceive framing effects differently on both theoretical and empirical levels. On the one hand, the sociology-rooted tradition presents a definition of framing based on the emphasis of some aspects of an issue, which therefore increase its salience in the mind of the audience. Framing is thus perceived as a product of *accessibility* since the emphasized elements of the

information are more easily accessible to the audience. On the other hand, the psychology-rooted tradition offers an equivalence-based definition whereby the effects of framing are produced by how a logically equivalent piece of information is presented to an audience. The effects of framing are therefore produced by the *application* of the *frames in communication* used in the presentation of the information to the *frames in thought* of the audience (Druckman, 2001). If the frames are congruent and aligned, a framing effect occurs, if not, the frame is rejected and does not influence the individual. These authors, therefore, refer to an applicability model to explain the framing effects.

Among others, Dietram Scheufele (1999) led the charge from the applicability front with the aim to disentangle the framing effects detected from media frames and the ones observed in audience frames research. One of the limits emitted toward the emphasis framing model is that if and when these effects work, elites could easily manipulate citizens' preference without much resistance. According to the author, the simple fact that a piece of information is framed in a certain way and make attributes more salient and accessible would thus systematically manipulate or influence the behavior of the audience. Or it is not the case.

The claims that the emphasis framing model sees media as causing strong effects, as it was the case with the hypodermic needle or the spiral of silence previously, were addressed and explained by Chong and Druckman (2007) who developed the concepts of *mediators* and *moderators*. Put simply, mediators are variables that raise the likelihood for a frame to resonate for an individual, whereas moderators are variables that temper and condition the framing effects. Druckman (2001) has investigated five main moderators of emphasis framing effects: "predispositions, citizen deliberation, political information, source credibility, and competition" (p. 241). In other words, individuals are not receptors who passively accept an elite or media frame, but have more or less competence, based on their experiences, knowledge, and discernment, to evaluate the frame and decide to reject it if it does not fit their preferences. Druckman concludes that "emphasis framing effects do not work through an accessibility process" (p. 245).

Nonetheless, Druckman (2001, 2007) offers a balanced attempt to differentiate equivalent and emphasis framing and to explain to what contexts both strands of research have their legitimacy. He acknowledges the robustness of the experiments from the psychological

tradition and the validity of the argument that by altering how a piece of information is presented, an effect *applies* if the frame in thought is aligned with the frame in communication. However, as a limit to the applicability model, Druckman points out that most of the research on audience frames focuses mostly on a game theory tradition, which offers the possibility to alter information in equivalent ways. Even though Druckman (2004) considers that emphasis framing effects are a product of applicability, he recognizes the potential of this strand of research because, as he aptly points out, it is sometimes difficult to present a political issue in different but equivalent ways, which may explain the ever-growing popularity of framing research in the fields of political communication and media studies over the years.

In a recent paper enticingly entitled *The end of framing as we know it*, Cacciatore, Iyengar, and Scheufele (2016) fostered debate precisely on the rife use of the term *framing* in all sorts of studies across disciplines and advocate for clarification regarding this label. By looking at the history of research on framing, they come to the point that clarification must be made between the sociological and the psychological traditions.

First, they urge scholars to abandon the term *framing* altogether and distinguish *emphasis* from *equivalent* framing. The authors argue that the sociology-rooted tradition, basing their definition of framing on salience and accessibility, does not allow researchers to isolate the media effects of framing in comparison to other models like agenda-setting or priming. The main critique that Cacciatore et al. addressed to that vision is that nowadays, communication scholars use the concept of framing as a catch-all phrase to describe any media effects study and that the term became ambiguous. Second, and more provocatively, they lobby for a return to a more rigid and narrow equivalency-based definition of framing.

In conclusion, and as illustrated in Cacciatore et al. (2016) recent paper, the rivalry between the two schools of thought is alive and kicking, and definitely not approaching its *end*. Both are arguing for more recognition and hegemony over the use of the concept of framing even if, in 1993 already, Entman said about framing that "hypotheses thoroughly discredited in one field may receive wide acceptance in another" (p. 51). What is probably more important is that, emanating from this scholarly struggle, the concept of frames and framing effects are better understood. However, when giving its thoughts about the future of the agenda-setting

and framing theories, prominent scholar Jay Blumler (2015) said that "regarded strictly as ideas about message impacts on message receivers, these theories may be reaching their sell-by dates. […] And that is why the evolution of these approaches into theories of agenda building and frame building is welcome" (p. 428). The next subsection explores this premise to see whether framing can find a new lifeline in the field of interest group studies.

2.3. Mobilizing Framing in Interest Group Research

Framing has been extensively researched from a psychological and a media perspective. This subsection looks at the application of the framing theory to interest group studies. First, the concepts of agenda-building and frame-building are explained to understand the role of interest groups in successfully building the agenda or set the policy frames. Second, an emphasis is put on the existing literature of interest group framing and the methods that currently exist to design framing analyses.

2.3.1. Agenda-Building and Frame-Building

In light of the agenda-setting and the framing theories, research on interest groups has a different perspective in terms of objectives and methodologies. Indeed, as it has been explained in the first chapter, interest groups conduct lobbying activities in order to influence policies. They push for some items to be put on the political agenda, or on the contrary, to be kept out of the public spotlight. This activity has been described as *agenda-building* (Cobb & Elder, 1971). While agenda-setting aims at identifying the transfer of issues from the media agenda to the public opinion, agenda-building research aims at exploring what influences the media agenda in the first place. Public relations activities, information subsidies or outside lobbying are just a few of the many examples of how organizations may try to build the media agenda.

McCombs and Shaw's study (1993) has been seminal in demonstrating how the media agenda is successful in determining the issues discussed by the public. However, this process solely focuses on one aspect of a broader dynamic between agendas. Indeed, a whole range of events can influence the different agendas. These events can be deliberate or not. On the one hand, a demonstration led by an NGO can push an item on the media agenda and subsequently modify the policy agenda - which was referred to as outside lobbying by

Kollman (1998). On the other hand, a catastrophe like the one that happened in Fukushima in 2011 was not deliberate but also greatly influenced other agenda around the globe like the German government who decided to stop their nuclear energy program from that moment onwards.

The role of interest groups in a society can be understood from the concept of inter-agenda influence. As an anchor post, Rogers, Dearing, and Bregman (1993) have explained the dynamics between the public, the political, and the media agendas and what variables influence each of them (Figure 4). The aim of an interest group is thus to influence the policy agenda either directly, with insider lobbying tactics, or indirectly, via the influence of the media and the public agenda. By so doing, they try to push their own framing of an issue to the policy agenda, which could consequently be conveyed by the media. The policy agenda indeed also influences the media agenda, be it by the coverage of press conferences, interviews, or parliamentary debates.

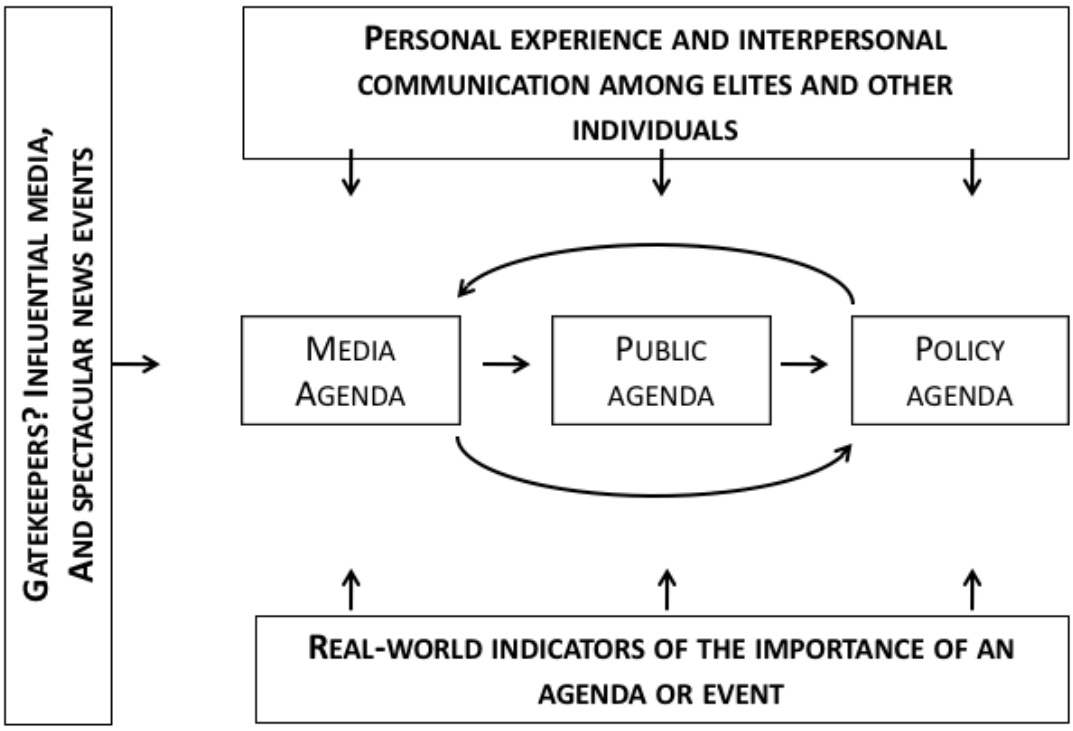

Figure 4 Agenda-setting model (Rogers, Dearing, and Bregman, 1993)

From that dynamic process of agenda-building, many questions arise. Cobb (1971) was already asking about "how issues are created and why some controversies or incipient issues come to command the attention and concern of decision makers?" (p. 905). Baumgartner and Mahoney (2005) gave some answers when looking at the correlation between the increase of congressional hearings and the increase of social movements active on the related issues between 1947 and 1997. However, most studies that have focused on agenda-building and policy change have looked at the evolution of issues themselves, but less so at the framing of those issues.

A question that is overlooked is thus to understand the role of interest groups in determining the frames used in the policy agenda. The answer to this question is developed in Chapter 4, but for a theoretical grounding, attention must be directed to the existing literature on frame-building. Until now, most research in the field has focused on the creation of media frames. However, some researchers are starting to look at how policy frames are formed and what is the role of interest groups in their building, because "linking the literature on framing and issue-definition to the study of lobbying must be a key goal of all of us who study lobbying" (Baumgartner, 2007: 485).

Gamson and Modigliani (1989) offered interesting insights regarding the building of frames and saw three determinants to explain their origins and on which researchers have subsequently worked later on: *cultural resonances*, *media practices*, and *sponsor activities*. (p. 6). These three dimensions still offer an explanatory power nowadays and are explained in more detail.

The cultural resonance explanation draws on the early work of Goffman and sees culture as a primordial part of the building and the reception of frames. In Gamson and Modigliani's view, the potency of symbols depends on the cultural context where they are produced. Depending on the language and the history shared by a group of people, frames can be more or less resonant to them. Metaphors and idioms are examples of elements of language that are often specific to groups of people or even to organizations and are a foundation for creating frames. A telling example in the field of politics nowadays is a webpage of the European Commission about the jargon used in the EU institutions where they explain that "the main problem for anybody working in the EU environment is realizing what counts as

jargon. This includes staff in the institutions and writers in the private sector who tend to reuse the jargon from the EU source texts".[19] Snow and Benford (1988) already discussed that aspect of framing when saying that "some frames resonate with cultural narrations, that is, with the stories, myths, and folk tales that are part and parcel of one's cultural heritage" (p. 210). More recently, Van Gorp (2007) advocated for considering the cultural dimension of framing that is often overlooked when studying framing effects notably. As the essence of framing is in social interaction (Steinberg, 1998), culture plays an integral part in how frames are built.

The media practices dimension refers to journalism norms, regulation, and practices within the newsroom. As gatekeepers, journalists have a crucial role in the spreading of specific frames over others (Heinderyckx & Vos, 2016). Numerous are the studies looking at media frames and their effects on readers or viewers, but, as Carragee and Roefs (2004) criticize, a paradox exists in the fact that a large body of research has focused on media frames, but much less on how these frames are built or sent. Along the same lines, Scheufele (1999) exhorts research to have a closer look at how frames are built in the newsroom. On that regard, Michael Brüggemann (2014) offers an interesting differentiation between *frame sending* and *frame setting*. The former refers to the spreading of actor frames, that is actors outside the media environment, via interviews notably, and the latter refers to the journalist's frames being dominant in the news coverage. In other words, he made a difference between the frames that have been sent from organizations, companies, or PR professionals, which are presented as such, and the interpretative frames implying the effort of the journalist to make sense of the frame critically.

The sponsor activities explanation precisely encompasses the efforts of organizations to spread their worldviews, be it in the media, the political, or the public agenda. It is the dimension that best describes lobbying and PR efforts. In analyzing how the White House influenced the media framing of the 9/11 attacks, Entman (2003) described the concept of *cascading activation*. Entman uses this metaphor to illustrate how a preferred frame flows down from the Administration (i.e., the White House) to other elites, to the media, to the public. Far from being a repetition of the initial frame down the levels, each actor

[19] Text retrieved Feburary 7, 2018 from http://ec.europa.eu/ipg/content/tips/words-style/jargon_en.htm

appropriates the frame and makes its own contribution to the frame, notably by taking into account feedbacks by other lower levels of the cascade. This model thus suggests a strong influence of the elite in the process of frame building. Having worked on the concept of frame sponsorship, Pan and Kosicki's (2001) findings suggest otherwise though. They demonstrated that frame building is not only elite-driven but that citizens can also take part in the construction of frames. Indeed, "social movements are sometimes victorious in their efforts to frame situations as problematic, but only when they operate in a political context that offers them the opportunities to do so" (Kriesi, 1995: 1964). The fact that citizen movements can also be successful in determining frames is another reason explaining why private interest might resort to astroturfing.

2.3.2. Of Interest Group Frames

The previous subsection highlighted the dynamic aspect of the influence inter-agenda and offered the first explanations about how frames are built. However, as it is often the case with framing research, the most substantial body of the literature focused on media frames and less so about how policy frames take shape. As presented in the research objectives, the purpose of this study is twofold as it first aims to explain how astroturf movements frame issues and secondly the interest lies in understanding how the frames used by interest groups can influence the frames used by policy-makers.

Measuring the influence of interest groups on public policy is one of the essential questions in the field of lobbying. As detailed in the first section of this chapter, the question of lobbying success has been increasingly explored by scholars in the last decade. However, due to methodological difficulties, only a few have convincingly demonstrated a method to assess this influence. In order to propose a robust research design, it is necessary to differentiate between different methodological aspects of framing analyses.

The first one is the necessity to differentiate the generic from the issue-specific frames. Researchers have two ways to conduct framing analyses: deductive and inductive. The deductive approach entails the predefinition of given frames to verify the extent to which they are used by the actors that are studied. Building on almost half a century of research on framing, it is fair to say that Semetko and Valkenburg (2000) are the most-cited authors when referring to the deductive approach as they identified the prevalence of five generic frames:

attribution of responsibility, conflict, human interest, economic consequences, and morality (p. 93). Nonetheless, other generic frames can serve as units of study as illustrated by the recent study of Boräng and Naurin (2015) who, by distinguishing self-, other-, public-, and ideal-regarding frames, showed that civil society groups are more likely to share frames with EU Commission officials than business does. The advantage of this approach is that it can be replicated easily across issues or media and it can cope with large samples. The objective of the deductive approach is about theory building.

On the other hand, the inductive approach involves focusing on a single issue and observing the frames that are emerging in the debate. These frames are thus issue-specific as they offer an explanation and make sense solely of the issue at hand. This method is not easily replicated but offers a better understanding of a given issue (Entman, 2007). For example, in an attempt to analyze the influence of interest groups frames on public policy documents, one of the seminal works was conducted by Baumgartner, Boef, and Boydstun (2008). Looking at the issue-specific frames, they deconstructed the death policy debate in the US and showed that interest groups opposing the death penalty manage to reframe the issue, which led to major changes in public opinion, and which further led to major changes in public policy. However, in light of the punctuated equilibrium model, Baumgartner recalls how hard it is to reframe an issue. Given the inertia of the administration and in the inherent constraints of the political process, issues remain somewhat unchanged for long periods of time before suffering drastic changes, as it was the case with the death penalty debate. It is thus essential for an interest group to be successful in getting their frames accepted and reproduced by the policy-makers as early in the decision-making process as possible.

Research on interest group representation and influence not only differs in terms of frames studied but also in term of the unit of analysis (De Bruycker, 2017). So far, studies have mostly focused on two faces of framing (Baumgartner & Mahoney, 2008): *micro-level framing* or *macro-level framing*. The former focuses primarily on the interest group as a unit of analysis and how it strategically frames an issue. The objective in such studies is to understand how interest groups decide on which strategic frames to use in order to be successful in their lobbying campaign, and whether they change their frames depending on their lobbying targets. On the other hand, macro-level framing refers to the study of the collective issue definition. Framing is seen as the process of how a policy is defined and understood (Dudley

& Richardson, 1999). In such studies, the objective is to make sense of the different forces applied to the policy-making process and to understand what is at stake regarding a specific issue. However, few studies have managed to bring together both approaches in order to explain how individual-level framing can impact a collective issue definition.

As it was the case regarding interest group studies in general, mobilizing the framing theory to explain lobbying strategies has first been conducted in the United States, and notably under the impetus of Frank Baumgartner, before taking off in Europe as well, with Christine Mahoney bridging the two continents. The willingness to better understand the critical role that framing can play in the elaboration of public policy documents and how interest groups strategically frame their arguments in order to influence the legislative debates has then increased thanks to the INTEREURO project. This network of researchers from across the EU has first followed the steps of what was previously done in the US before proposing new leads and new methods to study the influence that interest groups have in the shaping of public policy.

One of these new methods was to perform large sample designs that allow measuring interest groups framing based on quantitative analysis of interest groups position papers. As the project brought together researchers from various countries and with considerable resources, large data set were possible to gather and to analyze. One of the most promising avenues for measuring influence from interest groups until now is an innovative methodology of framing analysis designed by Klüver and Mahoney (2015). They decided to look at the frames that are emphasized by interest groups and to compare them with the evolution of frames used by institutional actors. It is thus following the emphasis framing research tradition, because "framing plays an important role in public policy. Interest groups strategically highlight some aspects of a policy proposal while ignoring others in order to gain an advantage in the policy debate" (Klüver, Mahoney, & Opper, 2015: 481). The affiliation to Entman's emphasis definition is patent as framing is based here on the selection of certain aspects of an issue in order to increase its salience. The underlying argument being that successful lobbying efforts lead policy-makers to adopt and integrate frames from interest groups. The use of emphasis framing to measure lobbying success is not new in itself since it has been replicated to different political contexts and different issues (Baumgartner & Mahoney, 2008; Baumgartner et al., 2009; Bernhagen, Dür, & Marshall, 2015; Boräng et al., 2014; Davitter, 2011; Klüver,

2011, 2015; Mahoney, 2008). The innovation lies in the fact that they performed a cluster analysis on a large corpus of data and that they were able to represent the influence of interest groups on a multi-dimensional scale, whereas previous research solely focused on measuring the influence on a single dimension of an issue. They were thus able to identify the frames employed by all interest groups mobilized in a debate and assess their effectiveness by studying to what extent decision makers moved closer to their policy position over the course of the policy debate.

One of the main critiques brought forward by the psychology-rooted tradition was that communication scholars considered framing effects as a product of accessibility, whereas they considered that receivers had predispositions to accept the frame suggested. With the method developed by Klüver and Mahoney (2015), the question of framing effects should be overcome as the frames that are compared, that is the one from the interest groups and the ones from the institutional side, are both *frames in communication*. It is thus possible to look at comparable elements, that is the initial legislative document, the position of the interest group, and the final policy outcome and to see whether the final framing moved closer to an advocacy coalition. Emphasis framing's necessity is therefore justified in the study of political communication and provides a method to assess lobbying influence without having to suffer from the critics emanating from the psychology-rooted school of thought.

To conclude, more than half a century of scholarly attention has brought tensions to a paradigm that has often been considered as *fractured*. Despite the criticisms of researchers from the psychology-rooted tradition, emphasis framing paves the way for innovative research in the field of interest group representation and influence. Moreover, the assumptions presented in this dissertation suggest that framing could even advance knowledge in the field in the sense that it could provide an innovative method to, first, uncover astroturf groups, and, second, to assess their influence on public policy debates. The methodological choices and their inherent challenges arising from these research objectives are addressed in the following section.

3. Methodological Challenges for Studying Astroturfing with Framing

This section details the methodological choices that have been made to reach the objectives of this dissertation. The study of astroturf efforts presents many challenges. First, the difficulty emerging from the concealed nature of the research object will be addressed. Indeed, due to the unethical aspect of astroturf endeavors, initiators of such campaigns tend to remain hidden for as long as possible, which hinders the attempt to explain the phenomenon. Second, to address these methodological hurdles, an operationalization of framing analyses via quantitative text analysis is suggested in light of the theoretical and empirical discussions outlined in the previous section. That leads to the selection of two different case studies, each one aiming at attaining one research objective. Last, the limitations of the empirical approach are detailed to lay out the caveats in the elaboration of the research designs, which are presented in more depth in chapters 3 and 4, and to help with the interpretation of the results of the study.

3.1. The Difficulty of Studying a Concealed Object

Studying astroturf efforts poses numerous conceptual and methodological difficulties. In order to overcome these obstacles, the researcher has to be innovative in designing its method while respecting the rigorous aspects of scientific research.

The first difficulty is of a semantic nature. As presented in the first chapter, no shared definition has been authoritative across the different fields that looked at astroturfing thus far. The most comprehensive one can be attributed to Sophie Boulay who outlined two key elements for a communication strategy to be qualified as astroturf. First, it is a strategy that simulates a citizen initiative and, second, the instigators aim to keep their identity secret.

From that perspective, the study of astroturf endeavors is not limited to the fields of political communication or political science, but to a broader extent to the fields of marketing and corporate communication depending on the purpose of the astroturf strategy. Boulay's definition also encompasses a variety of tactics ranging from hiring real people for a demonstration to the setting up of fake bots on Twitter relaying specific messages. In this study, astroturfing is thus understood and considered as an umbrella concept under which falls a variety of tactics enunciated in the first chapters such as sock-puppetry or the creation of front groups. Applied to the study of strategies having a political purpose, the term of

astroturf lobbying is preferred to characterize the cases studied in this dissertation and to clarify the semantic surrounding the term.

The second element of the definition outlined the willingness for astroturfers to keep their identity secret. Here lies the major obstacle for a researcher to accurately observe and study the phenomenon. The concealed nature of astroturf endeavors means that few reliable data are available for observation and that researchers have difficulties in assembling comprehensive or representative corpora to analyze. Indeed, by definition, a successful astroturf campaign is one that stays hidden and is never publicly revealed as being deceitful. This means that most cases that researchers can get a hand on are actually failed efforts, which could lead to significant shortcomings in the understanding of what astroturfing is and how it works. Indeed, researchers focusing on cases that have missed their objectives and have been disclosed during their actions can only learn about the failure of astroturf movements. An innocent analogy can be drawn with criminologists who study the nature of criminal behaviors of convicted felons. They can only learn from criminals who have failed and got caught in their illegal endeavors, but less so about the ones who got away with their wrongdoings. Similarly, astroturfers that managed to keep their identity hidden are thus difficult to study and observe.

This gap in the scientific knowledge on astroturfing has been the starting point of the first objective of this dissertation that aims to build a method to uncover more easily astroturf movements taking shape in the public sphere. As a corollary, given its subterranean nature, it is hard to assess with accuracy the scope and the trends of astroturfing in different polities. It is thus impossible to evaluate precisely the number of astroturf groups active in one city or one country. Some researchers are eager to talk about a real propagation of such techniques (Walker, 2014), and journalists such as John Fontanella-Khan from the *Financial Times* going so far as claiming that astroturfing has become the norm rather than the exception.[20] However, none of these claims can be supported by robust statistics due to the concealed aspect of the phenomenon.

[20] John Fontanella-Khan (June 27, 2013). The Financial Times. Astroturfing takes root in Brussels. Retrieved Feburary 7, 2018 from https://www.ft.com/content/74271926-dd9f-11e2-a756-00144feab7de

A consequence of the scarcity of reliable data is the difficulty for the researcher to rely on the usual methods used in the field of social sciences. Quantitative methods are difficult to set in motion due to the difficulty of gathering sufficient and representative data. As for qualitative methods, it is the access to astroturfers that represents a significant constraint. Indeed, direct or participatory observation could be fruitful in understanding the modus operandi of astroturf efforts, but it is unlikely that a researcher would be granted access to such fields, notwithstanding the ethical dilemma of being part of such projects. Interviews with astroturfers are also difficult to perform as PR professionals, and lobbyists are reluctant to admit they conduct such shady activities. It is along those lines that Laurens (2015) urged researchers, in terms of methods, to make the most of what they can get ahold of.[21]

In order to overcome these methodological obstacles, various scholars came up with different research designs to deepen the knowledge of concealed communication strategies. For instance, in order to paint a clearer image of how the astroturfing process works, Sophie Boulay decided to rely on an inductive method. Her starting point was to gather data on search engines first and then to make sense of the phenomenon. Her results are telling of the variety of forms that astroturf endeavors can take any of the different purposes it may serve, from a marketing or political perspective. Cho et al. (2011) decided to borrow an experimental design from the psychological field whereby they generated astroturf messages themselves and presented them among other corporate messages to an audience in order to assess the credibility and the impact of the different messages. However, whereas it shows the influence astroturf messages could have, they do so in an artificial setting that does not take into considerations the complexity of the public sphere.

In light of the fieldwork already conducted on the topic, two main objectives have been defined in the previous sections. First, this research seeks to solve the problem of concealment of the research object. By trying to differentiate the interest groups and isolate the astroturfs based on their framing, the collection of data for future scholarly work could be made easier. The second objective entails new solutions to evaluate the influence of the research object on public policy proposals. More exploratory, this objective nonetheless aims to understand the structural mechanisms of potential astroturf influence on the decision-making process that should not be underestimated.

[21] Originally in French: “Faire feu de tout bois” (Laurens, 2015: 84).

More precisely, the method selected to reach the objectives is based on discourse analysis. In the past decades, the distinction between content analysis and discourse analysis has been discussed at length (Tonkiss, 2004). Whereas content analysis would strictly focus on the text, discourse analysis would take the context of enunciation as an integrative part of the research. Even though the boundaries between the two approaches tend to be more and more porous, there are two reasons why the term discourse analysis is preferred in this dissertation to describe the framing analysis that has been performed and analyzed in the following chapters. The first one is that the context in which the text has been produced and disseminated is essential. As the study relies on in-depth case studies, the specificities of the issue must be described and explained so as not to risk an undue generalization of the results notably. Secondly, the characteristics of the enunciator of the message are of particular importance. Astroturfers tend to erase any traces of the real sponsor of the messages, it is thus primordial not to solely focus on the analyzed text, but also to pay attention to the context of enunciation and to the available information on the enunciator. Next subsection explains how discourse analysis is carried out in this research.

3.2. The Promise of Quantitative Text Analysis

The corpora that are scrutinized in this study are made of texts. The robustness of quantitative text analysis in the field of political communication and political science can be assessed in the light of four different assumptions, which must be verified and tested throughout the analytical process (Slapin & Proksch, 2014).

1. The assumption about the *dimensionality of the policy space*: political debates usually involve different dimensions that must be captured appropriately by the analysis tool;
2. The assumption about the *informative nature of texts*: the data selection must include documents presenting information relevant to the policy dimensions;
3. The assumption about the *text generating process*: the documents analyzed must be similar in their production process. In other words, the documents must be written with the same communication purposes by the same type of actors;
4. The assumption about the *compatibility of texts*: the documents of the corpus must be comparable. They must be written in the same language and for the same type of audience.

The software that is used for the framing analyses in this study is KH Coder. This package was designed by Koichi Higuchi, professor in the department of linguistics at the Ehime University in Japan. It is an open source software, which makes replications of the method easier.

KH Coder offers different tools that are relevant to reach the objectives of this study. Indeed, the software can be used to analyze large corpora and make sense of unstructured dataset. KH Coder structures its analyses based on the co-occurrence of words in the different documents of the corpus. Based on the frequency of words in the texts, KH Coder suggests different representations of the data analyzed, for instance, with cluster analyses and correspondence analyses, which are both essential in this study. Other open source softwares such as TXM[22] provide the same tools and can be used as well for such studies.

A caveat that must be expressed is that words as such are not frames (Lakoff, 2010). As Reese (2007) points out, the term *frame* is often confused with *ideas* or *words*, without acknowledging the function of a frame in the sense of Goffman, that is the function to organize and structure meanings of the world. The underlying assumption explaining the choice of relying on tools that base their analyses on the co-occurrence of words is that "documents that contain similar word patterns tend to have similar topics […] and words that co-occur in similar contexts tend to have similar meanings" (Lancia, 2007: 25).

The cluster analysis available on KH Coder allows identifying the central theme of a document by looking at the words that are most used. This cluster of words embodies the frame that is emphasized by the author of the text. This method is thus aligned with the emphasis framing definition, which is based on salience.

KH Coder also performs correspondence analysis. By looking at the frequency with which words are used in each document, this tool allows for displaying the position of interest groups on a two-dimension graph. These two tools provide a means to accomplish the research objectives of this dissertation. Next subsection presents the two case studies with greater detail and notably the epistemological choices regarding the framing theory.

[22] See http://textometrie.ens-lyon.fr/?lang=en

3.3. Two Case Studies for Two Objectives

This subsection introduces the two case studies that have been selected. More than a simple presentation of the issues at hand, it explains and justifies the choice of relying on a method based on case studies revolving around one single issue, that of the hydraulic fracturing for shale gas exploration, but looking at it within two different political systems, the US and the EU. The reasons for selecting this specific issue and for choosing these two different political arenas have not been made randomly but have been carefully selected because they offer specific characteristics that allow building a representative corpus in order to observe astroturf efforts on a more consistent manner. Each case study has been selected and elaborated for attaining a specific research objective via a framing analysis. In light of the theoretical developments on framing explained in this chapter, the operationalization of the research design is detailed and provides an explanation on how this concept is understood and mobilized in this dissertation for studying astroturf movements.

3.3.1. Case Study on the Hydraulic Fracturing Debate in the US

The first case study seeks to answer the first research objective, which is to compare the frames used by astroturf groups with the ones from other interest groups in an attempt to distinguish them from genuine grassroots movements. The issue that has been selected for this case is the hydraulic fracturing debate in the US. Focusing on a specific issue rather than looking at individual or organization level is motivated by the purpose of our study. Table 3 shows the typical characteristics of research on different stages of the influence production process, as developed by Lowery and Gray (2004) first and revised by Berkhout (2010). As astroturfing is considered as a mean and a tool to exert influence, the focus on issues offers the most relevant method to deconstruct such lobbying tactics.

The methodological difficulties have been explained earlier in this chapter and focusing on a specific case study is seen as the most relevant way to answer the first objective. In his book *Case Study Research: Design and Methods*, Robert Yin (2003) considers case studies as the most suitable method to study the evolution of interactions and dependencies between a group of actors evolving in the context of a policymaking process. However, even though "a narrowly defined case study area allows for in-depth investigations, it makes it more difficult to separate contingent factors from more general trends and limits the extent to which

the results can be applied to a broader context" (Liefferink, 1995: 63). As a result, "political scientists, too, have had a difficult time generalizing about lobbying because they often focus only on issues that reach the end stages of the policy process or that are well publicized" (Baumgartner et al., 2009: 7). The method developed in this dissertation does not seek to generalize about astroturf efforts. It serves to create and test a robust method that permits to uncover astroturf movements and that paves the way for analyses based on larger datasets. An in-depth focus on case studies is, however, a necessary first step to subsequently study astroturfing on a broader scope.

	1. The Mobilization and Maintenance Stage	2. The Interest Community Stage	3. The Exercise of Influence Stage	4. The Political and Policy Outcome Stage
Typical question	**Why** do people or organizations act collectively?	Why is the population of organizations as it is? **(Who?)**	Why and **how** do organized interests seek influence?	Why do some interests secure favorable policies and others do not? **(What?)**
Typical focus of theory construction	Individual	Organization	Issues	Political system / Issues
Dependent variable	Collective action	Density, diversity and change of populations	Activities of organizations	Policies, government recognition of problem

Table 3 Characteristics of research on the influence production process (Berkhout, 2010)

The analytical process developed in Chapter 3 follows Chong and Druckman's (2007) research design on frames in communication but is adapted to the identification of frames produced by interest groups. The analysis follows four steps:

1. Identification of an issue;
2. Identification of interest groups active on the issue;
3. Identification of interest group frames;
4. Identification of astroturfers.

First and foremost, the purpose of this research being to find ways to disclose astroturf movements, it is obviously crucial to pick an issue that is most likely to be one that could theoretically attract astroturfers. Moreover, the more astroturf groups are found active on an issue, the more representative the corpus would become. Indeed, as the supposition resides in the fact that astroturf frames differ from grassroots movements, the more robust the results would be if numerous astroturf groups are part of the corpus. The literature review showed a propagation in astroturf lobbying in the US since the 70s (Beder, 1998; Stauber and Rampton, 1995) to the point of becoming an industry in itself providing grassroots for hire (Walker, 2014). Looking at the US as a political arena to find astroturf seems thus promising.

Regarding the identification of the issue itself, McNutt and Boland (2007) suggest that environmental issues are more likely to engender astroturf efforts. The reason behind this thinking is that environmental issues are very conflictual between NGOs and corporate interests. Considering this, attention has been focused on the issue of shale gas, and more precisely the controversial technology used to exploit that resource, the hydraulic fracturing technology. This environmental issue is highly polarizing between corporate supporters and environmental associations. Quite interestingly, it also involves citizens themselves as the resources of shale gas are sometimes trapped under their own land, thus requiring their approval before drilling in their backyards. For all these reasons, the hydraulic fracturing issue in the US seems to offer a breeding ground for astroturf lobbying.

Second, interest groups must be identified. This identification takes into account different types of interest groups such as trade associations, trade unions, non-profits associations, think tanks, companies, or any organizations that seek to influence the hydraulic fracturing policy in the US. Attention must be paid to the fact that the regulation of hydraulic fracturing is incumbent to the States. It is thus the State and not the US Federal Government that decides whether or not companies can drill wells to exploit shale gas in their territory. However, as explained further in Chapter 3, most interest groups organize themselves first at the national level before delegating missions to local antennas, in a top-down approach.

Once the interest groups have been identified, the documents are gathered in order to proceed to the analysis. For this case study, the texts that are collected are the presentation of the hydraulic fracturing issue, which are found on the website of each interest group. Such

documents supposedly present the essence of framing as argued by Entman (1993). The website of interest groups allows them to highlight certain aspects surrounding the debates on hydraulic fracturing, to explain what is problematic about it, and to suggest a solution to the issue. Framing is here considered as a strategic activity to emphasize a specific worldview on the issue, and the documents selected embody this strategy to promote thematic frames over the ones from competitors.

Third, the objective is to define the positions of each interest group and to represent them visually. The use of quantitative text analysis in defining the position of political organizations has evolved in the past couple of decades. *Wordfish*[23] and *Wordscores*[24], for instance, are two computer programs using statistical models counting words frequencies to extract political positions from texts. Adriana Bunea and Raimondas Ibenskas (2015) have however expressed concerns about the robustness of such programs when used in the context of EU lobbying. Whereas it eases the workload in comparison to hand-coding, the shortcoming of these two programs is that the positions of the interest groups studied are placed onto a single dimension. Consequently, issues have to be considered as having one single dimension, which is not the case in reality. As explained earlier in this chapter, most legislative debates are indeed inherently multidimensional, with coalitions wanting to steer the debate in more than one or two ways (Thomson, 2011).

To tackle this problem, Cheryl Schonhardt-Bailey (2005), professor of political science at LSE, designed a computer-assisted method relying on cluster and correspondence analyses. She first looked at the themes – or frames – present in speeches of George W. Bush and John Kerry on national security and performed a correspondence analysis in order to "measure ideas more effectively." Klüver and Mahoney (2015) replicated this method to study the positions of interest groups based on their framing. It is this method that is replicated in this dissertation for the study of astroturf movements.

Fourth and last, the visualization of the data is expected to reveal the distance that separates astroturf groups from genuine grassroots movements. Indeed, this method allows analyzing the individual framing of interest groups. As explained earlier, Baumgartner and Mahoney

[23] See http://www.wordfish.org/
[24] See https://www.tcd.ie/Political_Science/wordscores/

(2008) made the distinction between the two faces of framing. On the one hand, individual-level framing refers to the way an interest group presents its arguments regarding an issue in order to gain support for its position. On the other hand, collective-level framing is understood as "how an overall mix of frames are used collectively over the entire issue debate" (p. 444). The cluster and correspondence analyses thus permit to measure the individual frames of interest groups active in the hydraulic fracturing debate in the US and to identify potential astroturf groups.

3.3.2. Case Study on the Hydraulic Fracturing Debate in the EU

The second case study, which also focuses on the hydraulic fracturing debate in the EU, seeks to accomplish the second research objective about measuring the effects of astroturf lobbying campaigns. The first four steps follow the analytical process of the first case study, but the last one goes into further detail in regard to the possible influence on public policy. Here are the five steps of the analysis:

1. Identification of an issue;
2. Identification of interest groups active on the issue;
3. Identification of interest group frames;
4. Identification of astroturfers;
5. Assessment of the influence of astroturf groups on policymaking.

First, the issue chosen for this case study is similar to the first one about the hydraulic fracturing debate, but in a different context. The same conceptual reasons apply for this choice, that is an issue that is likely to be targeted by astroturfers. The knowledge of having investigated the shale gas debate in the US is also beneficial to facilitate the understanding of the positions and arguments brought forward by interest groups at the EU level, even though differences in terms of frames can be expected because of the structural differences between the US and the EU. However, what is interesting to notice is that the issue of hydraulic fracturing is not at the same stage of the policy lifecycle. In the American context, the shale gas issue is at the end stages of the policy process, whereas in the EU, the idea of exploring shale gas as an energy resource is more recent.

The EU has not started looking at the hydraulic fracturing technology before 2010. Since then, different consultations and recommendations have been issued. This willingness for the EU to address this issue in recent years is another reason to select this case for study. In order to try to measure the influence of interest groups on policies, the hydraulic fracturing issue in the EU offers a clear and recent set of key policy documents easily accessible for study.

Second, the identification of interest groups follows the same steps as for the US case but with two sources of information easing the process. The first one is the transparency register. Even though it is not mandatory for interest groups to register themselves in it, this database is still valuable to identify organizations active on specific issues. The second one is the public consultation that was launched in 2013 by the European Commission regarding the hydraulic fracturing technology. As one of the first steps in the EU decision-making process, interest groups who are eager to shape the debate are expected to participate in the consultation. The results are public and entail the whole list of interest groups that have taken part in the process.

The documents that are analyzed here are position papers and not website presentations as it was the case previously. As the goal is to observe and measure the influence of interest groups on a specific policy, it is more relevant to look at the precise positions that are taken by the interest groups. Those documents are easily available on the interest groups websites or their pages on social media. Contrarily to a general explanation of an issue on a website, position papers are written more for policymakers than for the general public. Therefore, the arguments and the framing are often more detailed with in-depth analyses and policy recommendations.

Third, a cluster and a correspondence analysis are carried out to map the interest groups. The two-axis graph is useful in identifying the different dimensions that the issue can have. Indeed, position papers are used to strategically highlight either the benefits or the damaging effects of a new policy. It is thus interesting to observe if the individual frames of interest groups are aligned with other groups from a similar type and to subsequently see if coalitions can be distinguished.

Fourth, the method for uncovering astroturf movements is similar to that of the first case study. The idea is to see if groups presenting themselves as NGOs use a framing that is significantly different from others. This step is an opportunity to replicate the method used in the US case and to validate the results. However, based on the literature review as well as the exploration of the case in news media, it is expected that fewer astroturf groups were involved in the EU case. It is nonetheless of particular interest to see whether astroturf movements tend to sit alone with their own individual framing, or if they are backing the frames of a coalition.

Fifth, an important aspect of the method used for measuring lobbying success is to link the concepts of individual and collective framing. As Baumgartner and Mahoney (2008) point out,

> Studying the process of framing only at the individual level has little chance of elucidating collective-level changes in framing. At the same time, researchers focusing only on aggregate-level framing will be unable to understand the forces that led to the collective frame without recognizing the micro-level forces that are at play (p. 436).

Rare are the studies trying to combine the analysis of individual frames and their effect on collective frames over time. In a recent paper, Junk and Rasmussen (2018) strive to address this gap by looking at how camp frames are shaped by individual frames, and subsequently, how camp frames influence public policy (Figure 5). One of their main findings is that "emphasis framing is highly significant for the success of advocacy efforts, yet it is collective framing at the camp level that matters rather than individual framing" (p. 23).

The underlying assumption is that emphasis framing does not only structure political conflicts but also has an influence on legislative outcomes (Daviter, 2007, 2011). In order to assess the influence of interest groups on policymakers, the evolution of the frames used by an institution will be analyzed, from the initial position to the final decision. This will be performed by analyzing a corpus of institutional texts using text analysis program KH Coder to see the evolution of the position of the institution and to map it on the two-axis graph. The success of lobbying is assessed by looking at the direction that the emphasis frames of the institution took and to see if it got closer to the frames of a coalition.

It is indeed preferable to look at lobbying success in terms of coalitions than at individual level because "emphasis frames that enjoy collective backing from lobbying camps of like-minded advocates affect an advocate's success, rather than frames being voiced by individual advocates" (Junk and Rasmussen, 2018: 1). It would be too ambitious and certainly unrealistic to measure the success of a single interest group, or in the context of this study of an astroturf group. However, it is interesting to see how their framing is aligned with that of other members of a coalition, and how the coalition fared in their attempt to influence the policy.

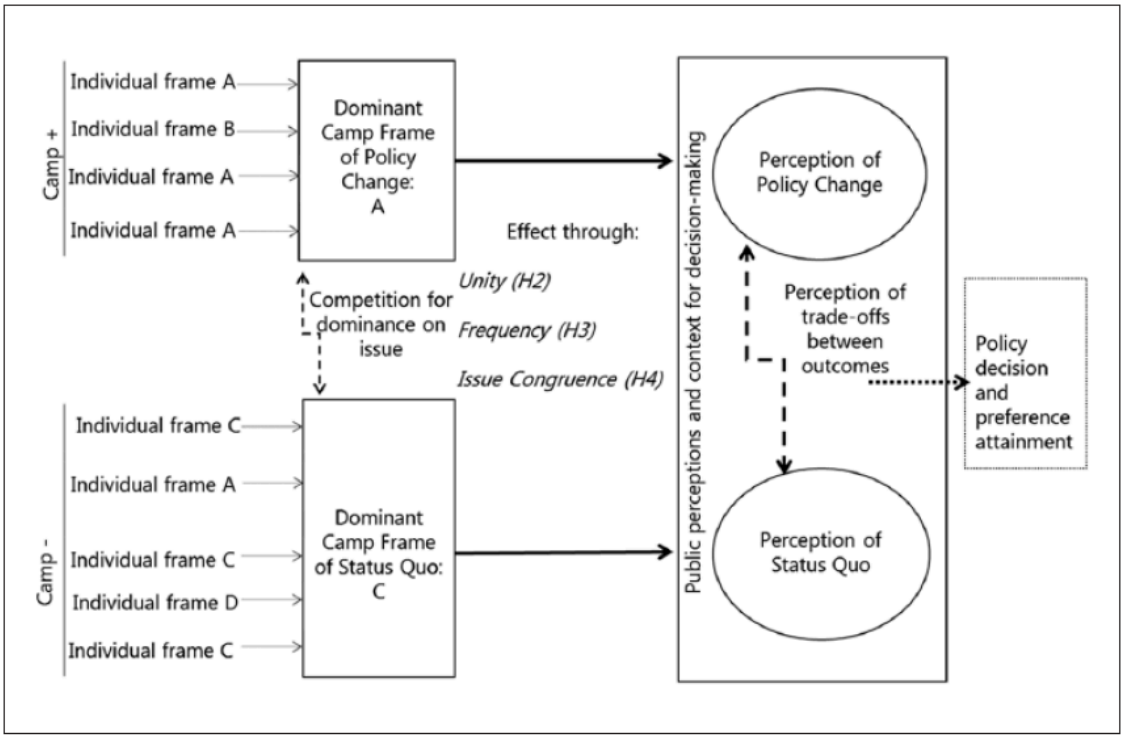

Figure 5 Relationships between individual, camp, and policy frames (Junk and Rasmussen, 2018)

The reason for choosing the EU context rather than the US for this research objective relates to the political culture of these two settings. Mahoney (2007b) has demonstrated that the US is a political arena that is best described as a winner-takes-all setting. The example is basically the fact that a bill is either passed or killed. In such cases, direct preference attainments for measure lobbying success are preferred. On the contrary, the EU is best described as an environment of compromises. When the European Commission starts a policy, it is likely that it becomes an actual directive or a regulation a few years later. However, numerous changes

and amendments will inevitably ensure. Sometimes, policy-makers even simply copy-paste amendments that are suggested by interest groups, as it was the case in the glyphosate debates where amendments were copy-pasted from reports published by Monsanto in 2017[25]. It is thus these changes between the initial text and the final document through amendments notably that can be tracked with quantitative text analysis and justify this method to evaluate the lobbying success of interest groups.

[25] Camille de Marcilly. La Libre (September 15, 2017). Evaluation européenne du glyphosate: Des copiés-collés d'un rapport de Monsanto qui posent question. Retrieved April 30, 2018 from http://www.lalibre.be/actu/planete/evaluation-europeenne-du-glyphosate-des-copies-colles-d-un-rapport-de-monsanto-qui-posent-question-dossier-59bae8c3cd703b6592562325

Conclusion

The literature on astroturfing is thin. One of the reasons behind that is the methodological obstacles that are inherent to the study of a concealed research object. This chapter sought to link the theory to the methodology in order to find ways to reach the two research objectives of this dissertation. The first one questions the difference in frames between astroturf groups and genuine grassroots movements. If a significant and systematic difference can be observed, the result would mean that framing analysis can be used to raise a red flag or even uncover fraudulent astroturf endeavors. The second research objective seeks to evaluate the success of astroturf lobbying on public policy initiatives.

The method to fulfill the objectives rely on framing analysis. The reliance on such methods has been highly criticized in the field of communication over the years, notably from the psychology-rooted tradition. To overcome these criticisms, a thorough look at the historical foundation of the concept has been done to give the term *framing* a sound meaning throughout this dissertation.

In the last section of this chapter, the theoretical discussions over the concept of framing lead to a discussion regarding its operationalization. The objective is not to explain the corpora and the research design in detail, but to explain the methodological choices of relying on a quantitative text analysis to conduct the framing analysis, and to justify these choices in light of the theoretical development. These choices have led to the setting up of two case studies. The first one looks at the issue of hydraulic fracturing in the US and makes up the third chapter. The second case study focuses on the same issue but in the EU context. The findings of that analysis are presented in the fourth and last chapter of this dissertation.

Chapter Three: Detecting Astroturf Groups

Introduction

This chapter is devoted to the first objective of this dissertation, which is to design a method for detecting astroturf lobbying efforts. The first section explains the selection of the issue of hydraulic fracturing in the United States. This choice has been made in light of the literature review and focuses on a case that is likely to be the target of astroturf efforts. A brief history of the issue is presented, and the main benefits and threats of shale gas exploration are explained.

The second section presents the interest groups that are active on the issue. Seventy-two interest groups have been selected for making up the corpus. This corpus of analysis consists of documents published by these interest groups and define the issue of hydraulic fracturing.

The third section presents the results of a cluster analysis. Following a quantitative textual analysis, different clusters of words – or *frames* – have been identified and shed light on how interest groups communicate on the issue of hydraulic fracturing.

The fourth section presents the results of a correspondence analysis, which allows mapping the 72 interest groups on a two-axis graph based on the words that they have used in their communication material. The objective of this analysis is to see whether the framing of some grassroots movements differs significantly from others.

The fifth and last section of this chapter focuses on the outliers whose framing is different and aims to assess if they present astroturf features. Once the astroturf groups have been successfully detected, a subsequent analysis focuses on the role that these groups have played in broader lobbying strategies.

1. The Shale Gas Revolution in the United States

The first step in the objective of uncovering astroturf groups is to identify an issue. Based on the literature review, the hydraulic fracturing debate happening in the United States has been deemed likely to be the target of astroturf efforts. This first section looks at the *shale gas revolution* that took place in the US in the past decades and the elements that makes it a divisive issue. A brief historical background presents the key moments that have led to the emergence of shale gas exploration and the use of hydraulic fracturing all over the country. This controversial technology is briefly explained as to understand the bone of contention between opponents and proponents to the use of shale gas. A closer look at the advantages and disadvantages of exploring shale gas allows shedding light on the nature of interest groups willing to exert influence on policymakers. The first section thus offers the necessary knowledge on the issue selected for the first case study and also offers helpful insight for the second step of this case, which is to identify the interest groups involved in the policy debates.

1.1. Historical and Technical Background of the Shale Gas Revolution

The shale gas revolution refers to the shift to exploring unconventional gas in terms of energy supply in the US. It describes the boom that led shale gas to account for only 1.6 percent of the total US natural gas production in 2000, to 23.1 percent in 2010 (Wang & Krupnick, 2013). This meteoric rise is the result of various factors. This subsection focuses on three key factors, among others, that played a crucial role in the development of unconventional gas exploitation.

1.1.1. Conventional and Unconventional Gas

To understand the issue of shale gas, one must differentiate conventional and unconventional gas. The difference between the two resides in the geological features of the rock from which the gas is extracted. The US Geological Survey defines conventional gas as "gas sourced from discrete fields or pools localized in structural stratigraphical traps by the boundary of gas and water" (Fiorentini & Montani, 2014: 211). This gas is relatively easy to extract. A conventional well must be drilled vertically, and the gas flows. On the other hand, unconventional gas is trapped in rocks that are more difficult to access. The literature usually identifies four different unconventional gas: tight gas, shale gas, coal bed methane, and methane hydrate (Schmoker,

2002). For those types of hydrocarbons, vertical drilling is not sufficient. In addition to vertical drilling, two technologies are needed, namely horizontal drilling and hydraulic fracturing. The latter implies injecting a cocktail of high-pressurized water, sand, and chemicals through the horizontal well in order to fracture the shale rocks and release the gas, as shown in Appendix 1.

Those two technologies are not new per se. First horizontal drilling emerged in the 30s, and the first use of hydraulic fracturing can be tracked to 1947 in the US (Stevens, 2012). However, it is the favorable government policies that allowed companies such as Mitchell Energy to develop and innovate the process. In an attempt to cope with the energy crisis that followed the oil embargo of 1973, the US government took measures, which are presented later in this section, to facilitate the launch of R&D programs in the search for alternative ways to produce energy, and gas in particular. It is thus in the late 70s and 80s that major technological innovations took place and led to the commercial viability of horizontal wells for the production of natural gas and the introduction of massive hydraulic fracturing (MHF) on a larger scale (Wang and Krupnick, 2013).

1.1.2. Government Policy

The shale gas revolution is rooted in the context of the 60s and 70s, a time when the energy situation in the US started to become problematic. This *energy crisis* was the result of the 1973 oil embargo, proclaimed by the Arab members of the Organization Petroleum Exporting Countries (OPEC), and that targeted the US, among other countries, for its support for Israel during the Arab-Israeli War.[26] The embargo led to a period that was characterized by shortages in production and reserves of natural gas due to the price ceiling regulations (Vietor, 1987). The diminution of national gas production, the high prices, and the ever-growing demand in energy from the population pushed the energy issue to the top of the political agenda. As a consequence, the US government took a series of policies promoting the development and the exploration of new sources of natural gas, including unconventional gas.

Looking back at the series of policies undertaken to promote unconventional gas, the shale gas revolution appeared to have been planned for a long time. Indeed, in the aftermath of

[26] More information available at https://history.state.gov/milestones/1969-1976/oil-embargo

the 1973 oil embargo, new federal administrations and agencies saw the light of day. First, the Energy Research and Development Administration was created in 1974 by merging various existing federal research programs, before the Department of Energy (DOE) in 1977, which was responsible for energy policy and R&D programs (Wang and Krupnick, 2012).

An important milestone was the passage of the Natural Gas Policy Act of 1978 (NGPA). According to the US Energy Information Administration, the NGPA had two main objectives. The first was to "set a complex system of wellhead price ceilings".[27] The Federal Government sought to regulate the prices by taking into account information regarding the wells where the gas came from. The idea behind that deregulation was to provide an incentive pricing for high-cost natural gas. These high-cost gas included non-conventional gas, such as Devonian shale, coal seams, geo-pressured bines and, finally, tight gas. Consequently, the second objective was to provide incentives for R&D programs looking at alternative ways to produce natural gas.

Along the same lines, the Crude Oil Windfall Profit Tax Act of 1980 provided tax credits for producing high-cost gas, which also covered oil from shale, tar sands, and synthetic fuels from coal. These credits were beneficial for the industry as it stimulated the development of drilling and producing unconventional natural gas while reducing the risk of investing (Hass & Goulding, 1992).

These energy policies from the 60s and the 70s have helped the industry to improve their technology to extract unconventional gas from shale through hydraulic fracturing. This complex process includes the injection of water, sand, and chemicals to fracture the rock. Quite interestingly, the 2005 Energy Act overlooked and excluded the process of hydraulic fracturing from the Clean Water Act. This loophole means that companies active in hydraulic fracturing do not have to disclose the chemicals they are using. The reason involved is commercial confidentiality. Moreover, the exclusion from the Clean Water Act also means that no environmental impact assessment has to be conducted before drilling a well and injecting chemicals (Stevens, 2012). Nowadays, a legislative proposal called the Fracturing Responsibility and Awareness of Chemicals Acts, or FRAC Act, is being discussed by the

[27] Text retrieved May 3, 2018 from https://www.eia.gov/oil_gas/natural_gas/analysis_publications/ngmajorleg/ngact1978.html

Congress and, if adopted, would require the energy industry to divulge all the chemicals used in their hydraulic fracturing processes.

The evolution of the policies regarding hydraulic fracturing shows that the shale gas revolution is rooted in decades of incentive pricing and tax credits from the US government. These energy policies have helped drilling companies to be innovative in terms of the technology. However, an essential aspect of the issue that must not be overlooked is that it is the States that are competent for authorizing or banning hydraulic fracturing in their territory. For instance, New York and Vermont banned massive hydraulic fracturing in 2012, before being joined by Maryland in 2017.

1.2. The Issue of Hydraulic Fracturing

Cobb and Elder (1971) defined an issue as "a conflict between two or more identifiable groups over procedural or substantive matters relating to the distribution of positions or resources" (p. 82). Over the years, two camps have formed regarding the use of hydraulic fracturing for supplying energy. On the one hand, one group advocates for the exploration and exploitation of shale gas given the favorable impact it can have on the US economy and industry. On the other hand, an opposing group has emerged and expresses environmental concerns regarding this technology. The impact of the shale gas revolution on the economic and environmental aspects of the US until now is detailed in the next subsection in order to understand the context in which interest groups have formed and advocate for or against hydraulic fracturing.

1.2.1. Impact on the Economy

The government policies that were taken decades ago have led to a favorable environment for companies to create jobs and develop technologies to extract unconventional gas in the US. This slow revolution has significant implications on the US energy market, and, in turn, on the international market as well. Indeed, due to technology innovations, shale gas production has soared and is expected to increase dramatically in the next decades (see Appendix 2). This surge had consequences on gas prices and energy independence.

First, the surge of shale gas production had an impact on natural gas prices and, consequently, electricity prices. As the natural gas supply rose, the overall energy supply rose as well, which contributed to a decrease in energy prices in the last 15 years. Reports suggest the US has benefitted substantially from this cheap energy with the creation of 600 000 jobs in 2010 for instance.[28] The sectors that benefitted the most are the ones that are heavily depending on energy such as the manufacturing, the refining, and the petrochemical industries.

Second, the abundant availability of shale gas reserves has led the US to improve their security of supply and to reduce their dependence on oil imports from external countries. This also has geostrategic implications. Energy independence has been a long-standing goal of the US started by Richard Nixon in 1973 after the oil shock and followed by Jimmy Carter who described the energy crisis as the *moral equivalent of war* (Stevens, 2012). The issue of energy independence has been pushed back onto the political agenda recently with events including major producers such as the Arab springs in 2011 and the renegotiations of the Iranian deal in 2018.

1.2.2. Impact on the Environment

Despite the positive impacts on the US economy, growing concerns have emerged regarding the risks of the hydraulic fracturing technology (Peduzzi & Harding Rohr Reis, 2013). This subsection looks at the different controversies, considering that the scientific community is far from reaching a consensus on them. The objective is to explain these controversies rather than to take a stance. These explanations help understanding why hydraulic fracturing is a polarizing issue, and offer insights for the analysis of interest groups that are in favor or opposed to the technology.

The United States has favorable geological features in terms of shale gas potential (see Appendix 3). The most notable basins are the Barnett play, the cradle of hydraulic fracturing with Mitchell Energy (Wang and Krupnick, 2013), and the Marcellus play, one of the largest basins located closely to the East Coast. However, different environmental threats have been

[28] Data from IHS Global Insight, The Economic and employment contributions of shale gas in the United States, December 2011. Retrieved May 3, 2018 from http://www.ihs.com/info/ecc/a/shale-gas-jobs-report.aspx

underlined by opponents to hydraulic fracturing: climate change, effects of chemicals on public health and land use, high volume of water necessary to the process, and seismicity around the wells.

First, the issue of the impact of shale gas on climate change is divisive. Some studies suggest that exploring shale gas would emit less CO_2 in the atmosphere than coal or oil (Burnham et al., 2011). Other studies tend to show that the greenhouse gas (GHG) footprint of the whole process of exploring shale gas is actually higher than for conventional gas or coal.[29] These differences come from the methodology used for assessing the impact of shale gas on climate change. Some take methane emissions into account, and others do not. Methane is a powerful GHG, and the specificity of hydraulic fracturing is associated with a fugitive emission of methane during the process. When this methane leakage is taken into consideration, results show that shale gas produces more emissions than coal. Moreover, the International Energy Agency highlights that the attractiveness of shale gas due to its low price can lead the US government to disregard investments in renewable energy. These claims are also supported by Jacoby, O'Sullivan, and Paltsev (2012) who evaluated the future of the US energy mix with or without shale gas. The projections show that the supply brought by shale gas would be done at the expense of renewables and not coal or oil.

Second, the concerns over the injection of chemicals in the ground are twofold. Even though the mix including chemicals has evolved and contains less carcinogenic products (Baylocq, 2015), leakage of chemicals in the air or in the drinking water is a threat. Furthermore, leakages of chemical substances could be detrimental to groundwater. As it was the case for the impact on climate change, studies on the impact of the chemicals used in the hydraulic fracturing process are contradictory depending on who sponsored the research.

Third, the hydraulic fracturing technology requires a high volume of water. Studies show that 8 to 20 million liters of water are required for the first fracturing (Baylocq, 2015). This reliance on water could have an impact on the water supply in regions that are dry and arid, and especially during heatwaves.

[29] For more information on these studies, see https://ec.europa.eu/clima/sites/clima/files/eccp/docs/120815_final_report_en.pdf

Fourth and last, the seismicity of regions where hydraulic fracturing is taking place is under scrutiny. During the process, rocks are subject to compression and decompression due to the injection and the fracturing mix. This could trigger earthquake swarms in the areas near the drilling zone (Horton, 2012).

The impact of the shale gas revolution in the US is complex. Though economic indicators show the impact on the energy mix and energy prices over the years, the genuine environmental impact of hydraulic fracturing is hard to assess. One of the reasons behind this difficulty is the contradictory studies that are produced and in which slight changes in the methodology can have major consequences in the results and the interpretation of the results.

This scientific controversy also translates into public controversy. Since there is scientific evidence to either support or oppose hydraulic fracturing, the public is left in doubt. One objective of interest groups active on the debate is to convince the public and rally individuals to share their worldviews. In light of these aspects, the next section presents the different interest groups that are involved in the debates surrounding shale gas in the US, and whose positions will be studied later on.

2. Identification of Interest Groups

Now that the issue has been defined, the second step of the analytical process is to identify the interest groups that are active in the debate on hydraulic fracturing. The method to identify them and the criteria to select them are explained first, before an overview of the whole selection is presented.

2.1. Selection Process

The process of selecting the interest groups that will be analyzed is important for the results to be representative. This second step is preliminary to assemble a corpus of texts that will be analyzed subsequently.

Three different sources of information have been used for the identification of interest groups. First, http://www.opensecrets.org is a website created by the Center for Responsible Politics whose mission is "to produce and disseminate peerless data and analysis on money in politics to inform and engage Americans, champion transparency, and expose disproportionate or undue influence on public policy."[30] This tool is interesting to identify interest groups with financial power. The second source of information is the news media. As explained in the literature review on lobbying tactics and lobbying success, money is not the only factor for the purpose of exerting influence. For that reason, a regular press review of the articles mentioning shale gas and hydraulic fracturing is useful in identifying groups that may not have considerable financial resources, but that are nonetheless successful in having their views conveyed by news media. Finally, the academic literature offers articles that look at the issue of shale gas in the US. It is interesting to compare the list of interest groups identified with the ones from other authors to make sure that no major player has been overlooked in the process.

Following that method, 82 interest groups have been identified (see the complete list in Appendix 4). According to how they present themselves on their websites, two major types have emerged: the ones representing business or professional interests and the ones that are nonprofits. Different labels have been used by researchers to mark the differentiation between the two. Some prefer to separate groups with *specific interests* or with *diffused*

[30] Retrieved June 23, 2018 from https://www.opensecrets.org/about/

interests (Gais & Walker Jr, 1991; Kollman, 1998; Schlozman & Tierney, 1986). Others rather distinguish *sectional groups* from *cause groups* (Klüver, 2011; Stewart, 1958). Finally, Binderkrantz (2005) differentiates *business groups* and *public interest groups*. All these dichotomies refer to similar realities with slight semantic changes. As this study looks at astroturfing and the problematic of faking citizen participation, the classification to describe interest groups in this dissertation distinguishes *business groups* and *grassroots groups*. These terms allow emphasizing the differentiation between groups that are defending corporate interests and the ones having a bottom-up approach with the spontaneous implication of citizens.

2.2. Business Groups

This category encompasses groups representing sectoral interests and whose purpose is to influence policymakers in order to protect their business. The objectives for interest groups are usually to influence the outcome of policies that would fit their specific agenda. In the case of business groups, the purpose revolves around removing the barriers to conduct business such as asking for tax breaks for their sector. This category thus refers to in-house lobbyists, trade associations, or professional associations. In the case of the hydraulic fracturing issue in the US, 36 business groups have been identified.

In-house lobbyists refer to employees conducting lobbying activities for their own companies. Most companies related to oil and gas exploration in the US hire their own lobbyists: BP, Chesapeake Energy, Chevron, Koch industries, or Shell to name a few. The financial resources of these companies are substantial, and that translates into large lobbying expenditures, according to the Center for Responsive Politics. This money is used for in-house lobbyists but also trade associations.

Trade associations refer to groups funded and financed by companies sharing similar activities. The objective of trade associations is to bring together companies in order to speak with one voice to the policymakers. In the field of oil and gas, the trade associations with the most substantial lobbying expenditures operate at the national level, but others organize at local or state level, such as the New Mexico Oil & Gas Association. In addition to conducting lobbying activities on their own, companies are thus also members of larger associations

such as the American Gas Association, the American Petroleum Institute, the Marcellus Shale Coalition, or the Natural Gas Supply Association.

2.3. Grassroots Groups

This category encompasses groups that have been created by citizens in an effort to defend diffused interests. These groups are non-profits, which means that citizens decide to spend their time and sometimes their money for a cause they believe in. These groups also aim to influence the outcome of policies in their favor, but usually rely on voice tactics, as explained in the first chapter. Among all interest groups, 46 groups presenting themselves as grassroots have been identified as active in the hydraulic fracturing issue, with two different kinds.

The first type of grassroots groups is the institutionalized ones that have become permanent even after their first purpose. Groups like Greenpeace, Friends of the Earth or Sierra Club now have secured a large membership and have substantial financial resources to be active on various environmental or societal issues at international level.

Second, grassroots movements have spontaneously emerged across the United States. Some are active at the federal level, such as American Against Fracking, Frack Action, or Shale Test, and others have sprouted in local areas to lead advocacy campaigns in specific zones: the Athens County Fracking Action Network, Ban Michigan Fracking, or Don't Frack Maryland, for instance.

3. Identification of Interest Group Frames

The third step of the analytical process is the framing analysis per se. First, the research design is explained, including the selection process of the data and the operationalization of the method used for the analysis. Second, a cluster analysis is performed on the corpus to see the different frames invoked by the interest groups.

3.1. Research Design

Given the high number of interest groups under scrutiny in this study, the framing analysis of the documents is based on quantitative text analysis. The criteria used to make up the corpus are listed first, before the coding and the operationalization are explained.

3.1.1. Data Selection

The data selection process is based on two important concepts that have been presented in the previous chapters: *issue* and *framing*. The concept of issue refers to a problematic where two or more groups have conflicting views on how to proceed with a public matter. The case study of this chapter focuses on the issue of exploring shale gas in the United States, and more precisely on the controversial technology of hydraulic fracturing. As detailed earlier, groups have different views on the use of this technology. They express their views by framing the issue. Framing is here considered as Entman defined it, that is as defining a particular problem, interpreting a cause, suggesting a moral evaluation, and recommending a solution to the problem. In other words, interest groups assess the benefits and the disadvantages of hydraulic fracturing and take a position on the current policy.

To make up a corpus of relevant documents, the websites of the identified interest groups are scrutinized in order to find a page presenting the issue and suggesting a solution. It means that the selected data are still online in 2018, but might have been published a few years ago. The criteria for selecting the documents making up the corpus are thus that an interest group must have a website and must have a specific section on its website where it addresses the issue of shale gas and hydraulic fracturing.

Based on these criteria, 72 interest groups have been kept for making up the corpus (30 business groups and 42 grassroots groups). Two main reasons explain the exclusion of 10

interest groups from the initial 82 identified groups. First, some groups do not have a website. It is mostly the case for grassroots movements such as Farmers Against Fracking or Frack OFF who relied exclusively on social networks such as Facebook and Twitter. Creating a website requires IT skills and time to keep it updated. For theoretical and methodological reasons explained in chapter 2, this study does not look at the use of social networks for lobbying purpose.[31] Indeed, the quantitative text analysis method requires to analyze comparable documents. It is thus not valid to compare a position paper taken from a website with tweets or posts mined from Facebook. Second, groups might not have a specific webpage presenting the issue. It was mostly the case for companies. Even though they hire in-house lobbyists, their website is devoted to informing stakeholders and investors. Surprisingly, a large group such as WWF does not communicate on the issue of shale gas in the US. The group has taken a public position on the issue in Europe or South Africa but prefers to focus on other issues in the US such as preserving endangered animals.

3.1.2. Operationalization

The software package that is used to perform the framing analysis is KH Coder, which processes data using R.[32] It requires that the data are prepared and formatted in a specific way. For this purpose, rigorous steps have been followed to assure the validity of the results. First, the website of each interest group has been visited with the objective to identify a section presenting the issue. It usually takes the form of pages entitled "What is hydraulic fracturing?", "What are the advantages of hydraulic fracturing?", "What are the dangers of fracking?". These sections are relevant to identify how an interest group perceives the issue and in what terms it frames it. Once the sections have been identified, the text is copy-pasted into a text file (.txt). The images, videos, and other visual artifacts are, therefore, not taken into account. All the texts from interest groups are copy-pasted in a single document according to their group type: business group or grassroots group. Header tags are used to differentiate the different groups under different variables. The first header tag is the group type (h1) and the second is used for the interest groups (h2). This permits to analyze the frames at the individual level (h2) but also at the group level (h1). Once all the texts have

[31] Those interested in this topic can find information on the website of the Oxford Internet Institute (https://www.oii.ox.ac.uk/)
[32] R is a programming language and a software environment for statistical computing and graphics: More information on https://www.r-project.org/

been added, the data are cleaned in order to have texts that are as comparable as possible: correcting the typos, deleting the boilerplates, or replacing symbols such as % by *percent*. After these steps have been followed, the text file is ready to be processed by KH Coder.

One of the first options with KH Coder is the lemmatization or the stemming of the text. The purpose of these processes is to remove inflectional endings as to use words in a common base form. While stemming means to cut the ends of words in order to find a common root (i.e., easy => eas, easily => eas), lemmatization seeks to return to a dictionary form, known as the lemma (i.e., am, are, is => be). Lemmatization takes more time to process the data but offers more reliable results. For that reason, the lemmatization process has been opted for this case study.

A second important preliminary option is to remove the common words that are occurring in all kinds of sentences. These words are referred to as *stop words*. KH Coder provides a default list of stop words that are used for this analysis. These words are omitted from the analysis. After these options are selected, the corpus is ready to be processed.

3.2. Cluster Analysis

Interest groups are *framers*. They emphasize certain aspects of an issue in their messages while omitting others. In order to identify the frames used by the interest groups in this case study, a cluster analysis is performed on the corpus. As Klüver et al. (2015) explain, the underlying argument is that "words that co-occur in similar contexts tend to have similar meaning and documents that contain similar word patterns tend to have similar topics" (p. 488). By looking at the words forming a cluster, it is thus possible to interpret the clusters as frames (Bailey and Schonhardt-Bailey, 2018). Indeed, the lexical fields of a cluster offer the information that is necessary to the definition of a frame as Entman defined it. This subsection looks at the different clusters that are present in the documents and the different frames that can be drawn from them.

3.2.1. Identification of Clusters and Frames

In order to identify the clusters of words, KH Coder relies on a quantitative text analysis technique. In practice, the interest groups' documents are first converted into a document-

word-matrix, and then, KH Coder identifies clusters of documents that use the same vocabulary based on bisecting K-means clustering algorithm. The purpose of K-means clustering is to partition *n* observations into *k* clusters (see MacQueen, 1967). The matrix is made up of the most frequent words in the corpus, with the exception of stop words. The minimum frequency for a word to be considered in the document-word-matrix has been set at 55 occurrences. The total number of words taken into account for the cluster analysis is 74, which falls into the ideal scope suggested by Koichi Higuchi, the developer of the software. As shown in Table 4, the most used term is *gas*, whose term frequency amounts to 939. The complete list of words can be found in Appendix 5.

Word	**TF**	**Word**	**TF**	**Word**	**TF**	**Word**	**TF**
gas	939	hydraulic	277	new	156	year	125
natural	571	state	251	drilling	152	environmental	120
water	359	use	206	percent	148	job	116
energy	339	fracking	195	shale	146	resource	112
fracturing	303	industry	174	health	144	shale	108
frack	295	production	171	development	135	make	107
oil	286	chemical	165	process	134	community	102

Table 4 Most frequent terms for the US corpus

Based on the document-word-matrix, KH Coder finds and analyzes which groups of words have similar appearance patterns. This function identifies clusters as they appeared through all documents and based on the targeted words of the matrix. Importantly, is assigns the interest groups documents to a single cluster. It means that the quantitative text analysis automatically identifies the frames invoked by the interest groups and mention which frames have been most used by each interest group. Three clusters have been identified through this process. Table 5 shows a list of the 20 words that are likely to appear in an interest group document based on the frame that is has invoked.

Cluster 1	Cluster 2	Cluster 3
contaminate	require	economy
fracking	sand	job
frack	size	reduce
dangerous	casing	america
health	fluid	energy
toxic	percent	economic
climate	public	fuel
community	drill	emission
problem	formation	manufacturing
air	drilling	use
cause	area	benefit
ban	begin	development
stop	fracture	resource
wastewater	typically	natural
ban	bear	nation
chemical	steel	source
water	completion	support
pollution	cement	percent
harm	ground	provide
waste	protection	u.s.

Table 5 Most prominent words distinguishing clusters in the US hydraulic fracturing debate

Cluster 1 contains words that refer mostly to the risks of hydraulic fracturing, or *fracking*, as the latter term is indeed highly prominent in the definition of this cluster. The words used by the interest groups show concerns regarding the technology: *contaminate, dangerous, health, toxic, pollution, harm*, and the list goes on. In light of this, it can be deduced that the interest groups relying on this cluster of words are invoking an environment frame. Cluster 2 comprises terms referring to the technology of hydraulic fracturing. These words are used to describe the process involved in exploiting gas: *drilling, fluid, sand, fracture, ground, cement*. This cluster of words can be interpreted as a technical frame used by interest groups to explain how hydraulic fracturing works from a scientific perspective. Cluster 3 is made up words that revolve around the economic benefits of exploring shale gas in the US. Indeed, specific interest groups highlight the economic consequences that hydraulic fracturing can have on the American society. Terms like *economy, job, benefit*, and *development* are prominent in that cluster, which can be interpreted as an economic frame.

The environment and economic frames were expected to emerge in the discourse brought forward by different interest groups as it is the bone of contention of the issue. As explained in the issue definition in the first section of this chapter, camps are forming between interest groups who perceive shale gas as a *modern-day gold rush*, which includes clean energy, energy independence, and lower energy prices (Metze and Dodge, 2015), and others who frame the issue in terms of environmental risks, and a fight between David and Goliath (Bomberg, 2017). More information regarding the construction of these frames is provided the following subsections.

3.2.1. Environment Frame

The cluster of words from which frames have been inferred is useful in explaining the worldview of interest groups on the issue of hydraulic fracturing in the United States. For the environment frame, for instance, Figure 6 shows the co-occurrence of significant words inside the cluster. This graph shows the most frequent words used by the interest groups invoking the environment frame and displays them as a network. The words tending to occur in the same sentences are linked together. Even though it is not surprising to see usual combinations of words such as *climate* and *change*, *hydraulic* and *fracturing*, *public* and *health*, or *drinking* and *water*, it is more revealing to see other combinations such as *threat* and *ignore* or *inject* and *contamination*. This visualization of data also provides a way to see the words that are at the core of the environment frame. In this case, the term *fracking* is clearly in the center of the cluster, as well as the terms *chemical*, *health*, and *water*, which are also important nodes in the environment network.

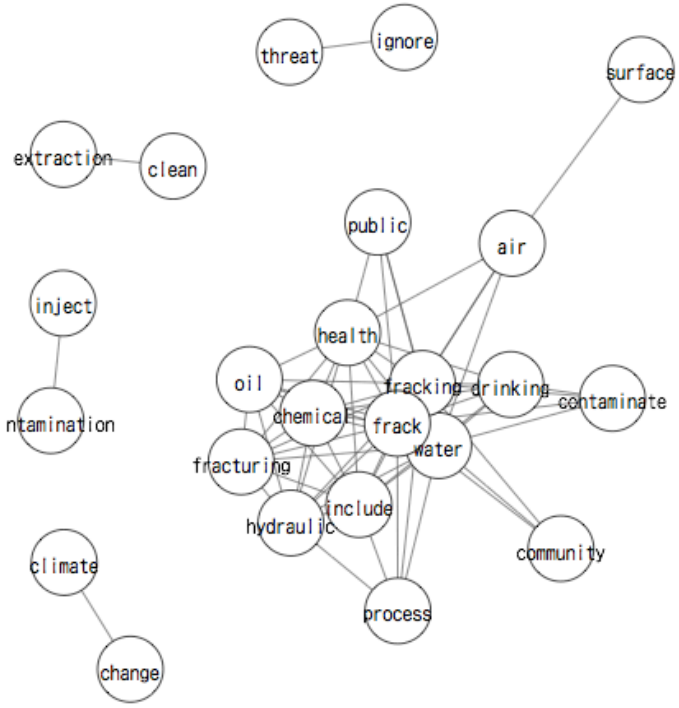

Figure 6 Co-occurrence of words for the environment frame in the US

Put together, this network of words composing the cluster offers a clear storyline of how interest groups envisage the issue. The concept of *storyline* is understood as Gamson and Modigliani (1989) used it and refers to the construction of meaning over time. Put together, the network of words tells the story of how fracking could be harmful to the environment and public health. This storyline fits Entman's (1993) definition of a frame:

- Problem definition: *Hydraulic fracturing* is a *problem* for *climate change* and is *dangerous* for *public health*.
- Causal interpretation: To *extract oil*, the *process includes injecting chemical fluids* into the *ground*, with the threat of *contaminating drinking water*, or *polluting* the *air* and causing *earthquakes*.
- Moral evaluation: *Fracking* pauses a *threat* and a *risk* to the *community* that should not be *ignored*.

- Treatment recommendation: There should be a *ban* on *fracking*. *Fracking* should be *stopped*.[33]

Without reading the interest groups' document on hydraulic fracturing and only by looking at the cluster of words, it is possible to infer a frame of reference common to these interest groups. They present the issue of hydraulic fracturing, which they clearly name *fracking*, in terms of environmental risk. These interest groups omit to mention the potential benefits of exploring shale gas and solely highlight the damage it can cause to the environment. The objective of these interest groups is thus to emphasize the shared concerns regarding the threats of this technology to the environment and public health and the necessity to stop it.

This worldview is reminiscent of the study of Gamson and Modigliani (1989) on the framing of the nuclear energy issue. When analyzing how nuclear energy was framed by the media, one of the most prominent packages was labeled *runaway*. This package has a clear antinuclear flavor and refers to the fatalism and resignation of relying on such energy. The shadow of the Chernobyl accident had lasting consequences, and the runaway frame described nuclear power as a time bomb. Similarities can be observed with fracking. As this technology is already used across the US, many voices express concerns and resignation about the dangers of fracking, such as polluted water and earthquakes.

Given the words that comprise this cluster and the way that they co-occur throughout the documents invoking the environment frame, it is fair to assume that this cluster brings together a network of anti-fracking organizations, and quite possibly grassroots movements. This assumption will be discussed and addressed further on.

3.2.2. Technical Frame

The second cluster of words can be interpreted as a technical frame. Figure 7 shows a network of words used to describe the process of exploiting shale gas and shale oil. Unsurprisingly, the central node connects the words *hydraulic* and *fracturing*. Revolving around them are the terms that are usually used to answer the question of how hydraulic fracturing works. The co-occurrence graph almost reads itself as a definition explaining that

[33] In italics are the words extracted from the cluster

hydraulic fracturing is a process that requires drilling and injecting a fluid of water and chemicals in order to fracture the shale rock.

Contrarily to the environment frame, the technical frame encompasses terms that are descriptive of the hydraulic fracturing process and less prescriptive about how people should think about it and what decisions the politicians should make about the issue. From the framing theory perspective, the technical frame seeks to answer the scientific challenge that consists in exploring shale gas. However, no real moral evaluation is suggested, as long as the technological prowess is performed safely.

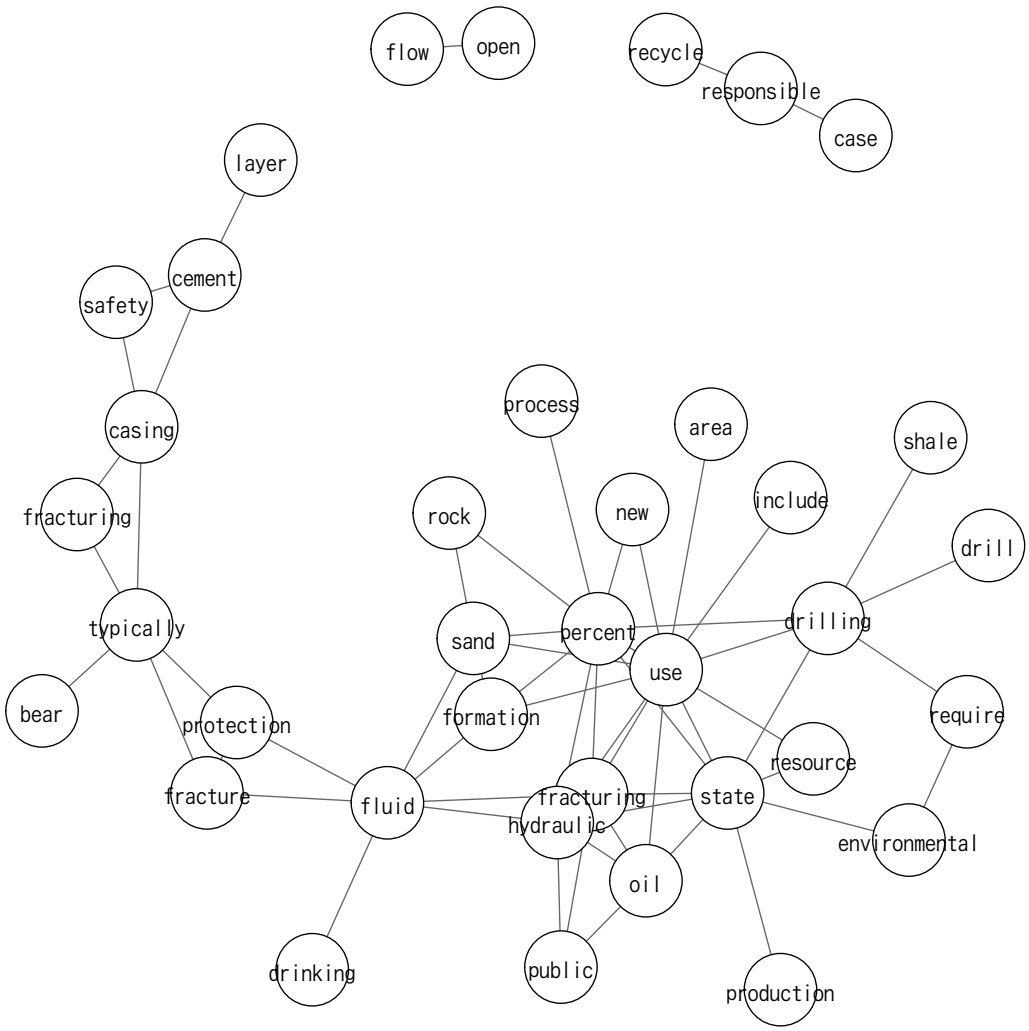

Figure 7 Co-occurrence of words for the technical frame in the US

- Problem definition: How to access the *gas* and *oil* trapped in *shale formations*?
- Causal interpretation: Need for a *new technology* to *ensure operations*.
- Moral evaluation: *Operations* on the *site* must be done with *safety*.
- Treatment recommendation: *Vertical* and *horizontal drilling*, *injection* of *water*, *sand*, and *chemical* to *fracture* the *rock* and open a *flow* of *gas*.

To frame an energy issue in technical terms is not new, especially in the American context. Already in the aforementioned study of Gamson and Modigliani (1989) on the framing of the nuclear energy issue, one of the main ways to discuss it was in terms of *progress*. Indeed, next to the *runaway* package, which would best describe the environment framing from the first cluster, the *progress* package "frames the nuclear power issue in terms of the society's commitment to technological development and economic growth" (p. 4). In this cluster of words, the emphasis is clearly put on the technological prowess of producing cheap energy with hydraulic fracturing.

3.2.3. Economic Frame

The third cluster encompasses terms referring to the benefits of exploring shale gas on the US economy. It is thus not surprising that the most frequent terms used by the interest groups invoking this frame are *economy*, *industry*, *benefit*, *production*, or *energy*. As shown in Figure 8, an important co-occurrence is the link between the words *create* and *job*. Another essential node of the network of words is at one extremity with a triangle linking *security*, *American*, and *abundant*. More than creating jobs, exploring shale gas, whose reserves are abundant, would assure the United States with a security of supply of energy. Energy independence has indeed always been an objective of the different governments over the years.

If the second cluster offered the technical aspects of the *progress* package described by Gamson and Modigliani (1989), this third cluster offers the economic aspects of it. In their study, the authors showed how nuclear energy could be framed as a safe technology based on American know-how, but more importantly as participating in economic growth and creating jobs. This central theme of focusing on a cheap and abundant source of energy resonates with the debate surrounding shale gas. In this cluster of words, the environmental risks are minimized, not to say overlooked, and the emphasis is put on the boost it could provide to the American society.

In terms of framing, the issue definition does not revolve around the environmental risks of exploring shale gas but seeks to find the cheapest route to economic growth.

- Problem definition: How to *support economic growth*?
- Causal interpretation: *Abundant natural gas provides affordable energy*.
- Moral evaluation: /
- Treatment recommendation: The *development* of *hydraulic fracturing* would *create jobs* and *benefits* the *US economy*.

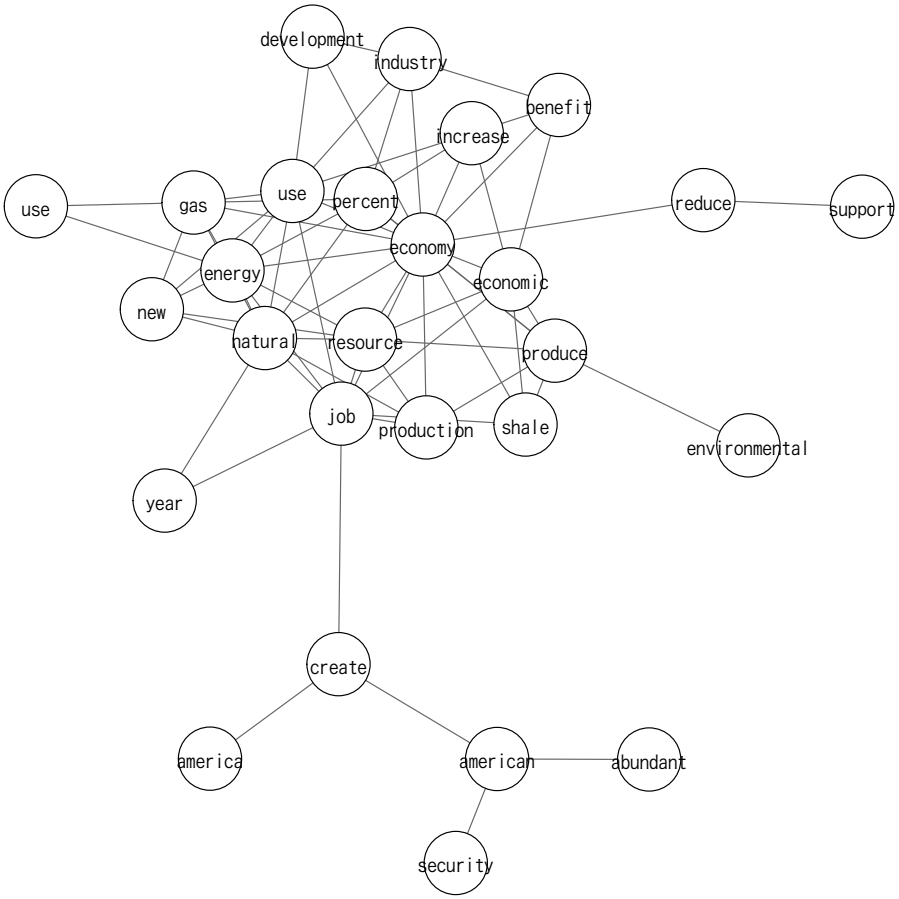

Figure 8 Co-occurrence of words for the economic frame in the US

3.2.4. Interest Group Frames

The cluster analysis performed by KH Coder enables to find which documents contain similar words. In other words, for each cluster of words identified by the software, interest groups are automatically assigned to one of them. Table 6 shows the lists of interest groups for each cluster: 25 interest groups have been assigned to the environment frame, 17 to the technical frame, and 30 to the economic frame. All groups invoking an environment frame are grassroots groups (25). The 30 business groups identified previously are employing either the economic frame (19) or the technical frame (11). Interestingly, they do not have the monopoly of these frames since grassroots groups also invoke them, with 11 grassroots group using an economic frame, and 6 a technical one.

These results are interesting on different levels. First, as one could expect, the environmental arguments highlighting the risks of fracking are brought to light by grassroots organizations. This echoes Kollman's observations on outside lobbying and grassroots mobilization. Spontaneous movements are set up to signal and expand conflict. In this case, the risks of fracking on public health are deemed concerning by citizen groups such as American Against Fracking or Greenpeace who call up for a ban on fracking.

The variety of interest groups using a technical frame can be understood from the data selection process of this study. Indeed, the documents were selected because they defined the issue of shale gas. However, hydraulic fracturing is a technical issue in essence. Therefore, an interest group, be it an NGO or a trade association, has to explain the technical process to communicate to their public. Moreover, the professionalization of interest representation has led non-profits organizations to develop their competencies on highly technical matters. The scientific debate of an issue is not the prerogative of the industry anymore. There is thus a certain logic to see grassroots and business groups framing the issue in terms of technical arguments.

The most surprising results come from the third cluster. Stressing the economic benefits of hydraulic fracturing in terms of jobs and growth is expected from business groups, as profits are their rationale. On the other hand, to see grassroots invoking economic reasons in the debate sounds paradoxical, or at least suspicious. The next section focuses on these groups to see whether they could actually be backed up by the industry and act as astroturf groups.

Environment Frame	Technical Frame	Economic Frame
350.org	Anadarko Petroleum Corp.	American Clean Skies Foundation
American Against Fracking	Athens Country Fracking Action Network	America's Energy Forum
Breast Cancer Action	American Petroleum Institute	American Fuel and Petrochemical Manufacturers
Center for Health, Environment & Justice	Antero Resources Corp.	American Gas Association
Center for Biological Diversity	Big Green Radicals	America's Natural Gas Alliance
CREDO	BHP Billiton	American Public Gas Association
De Smog Blog	Ban Michigan Fracking	Big Green Radicals
Don't Frack Maryland	Conoco Phillips	BP
Environmental Action	Energy in Depth	Business Roundtable
Earth Justice	EOG Resources	Consumer Energy Alliance
Environmental Working Group	EQT Corp.	Chesapeake Energy
Frack Action	Marcellus Shale Coalition	Chevron
Friends of the Earth	New Mexico Oil & Gas Assn	Climate Mama
Food & Water Watch	Shale Country	CONSOL Energy
Green America	Shale Test	Energy Citizens
Greenpeace	United for Action	Environmental Defense Funds
MoveOn.org	US Oil & Gas Association	Environmental Policy Alliance
National Nurses United	Western Energy Alliance	Energy Tomorrow
Organic Consumers Association		ExxonMobil
Oil Change International		Interstate Natural Gas Association
Penn Environment		Independent Petroleum Association of America
Rainforest Action Network		Natural Gas Supply Association
Sierra Club		Natural Gas Vehicles for America
Waterkeeper Alliance		Phillips 66
What the Frack? Colorado		Pennsylvania Independent Oil & Gas Association
		Repsol
		Shell
		Statoil
		United Shale Advocates
		Your Energy Virginia

Table 6 List of US interest groups classified by frames

4. Identification of Astroturf Groups

In this section, the objective is to identify astroturf groups by conducting a correspondence analysis. This method allows mapping the interest groups on a graph according to the frames they employ. First, the results of the correspondence analysis are presented. Second, closer attention is paid to the groups presenting astroturf features.

4.1. Correspondence Analysis

Following the cluster analysis, a correspondence analysis is conducted to assess the dimensionality of the issue. As explained earlier, policy debates usually encompass different dimensions. In the case of the hydraulic fracturing debate in the US, three main clusters of words have been identified and make up three frames: environmental, technical, and economic. Correspondence analysis is a multidimensional scaling technique permitting to represent spatially and visually the relationship between the frames on a two-dimension graph (Greenacre, 1984). To put it simply, KH Coder creates a matrix of words from the same text corpus as for the cluster analysis and provides a measure for each word depending on their frequency and their variance. Based on these data, KH Coder provides a two-axis graph presenting the most frequent words, excluding stop-words (Figure 9).

In such a graph, words that tend to appear together in documents are placed near to each other, and the words that are rarely co-occurring are placed far away from each other. Also, the words that are close to the origin were not significant in defining clusters. It means that words like *state*, *emissions*, *new*, or, *work* were used by most interest groups, regardless of their type. On the other hand, words like *cost*, *fracking*, or *fluid* were highly significant in defining clusters.

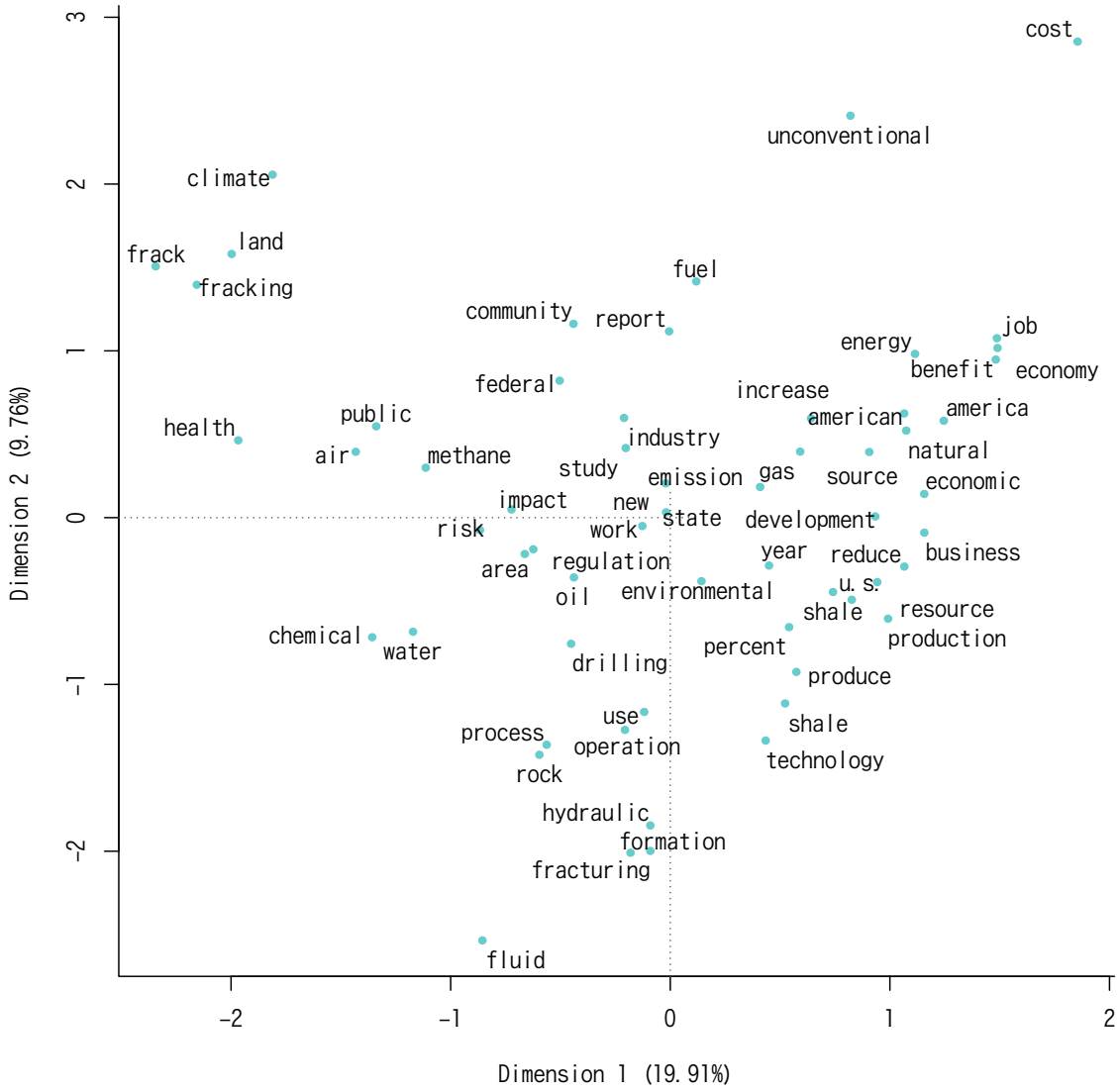

Figure 9 Correspondence analysis presenting the most frequent words in the US hydraulic fracturing debate

The results of the correspondence analysis are displayed on a two-dimension graph. KH Coder tries to find a number of features that explain the existence or absence of words. These features are called *dimensions*. Dimension 1 means that it is the first feature found by the software that explains the distinctiveness of words. The percentages can be considered as proportions of explained variance. Dimension 1 (19,91%) is the most significant from the two. It means that the horizontal axis is the most significant in terms of co-occurrence. In other words, it is especially the divide between the left-hand side and the right-hand side of the graph that explains the difference of clusters and words used by the interest groups.

Dimension 2 shows less variance in terms of words used (9,76%) but represents another dimension of the debate nonetheless.

Figure 10 offers a different representation of the most frequent words of the corpus by emphasizing their frequency. The size of the bubbles varies according to the frequency of the word. This graph helps to perceive the three frames that have been identified with the cluster analysis. Indeed, three poles are emerging. On the left-hand side, it is the environmental frame with words such as *fracking, land, climate, air, public,* or *health*. At the bottom, it is the technical frame (*process, operation, technology*). The third one on the right-hand side illustrates the economic frame (*energy, benefit, job, economy*).

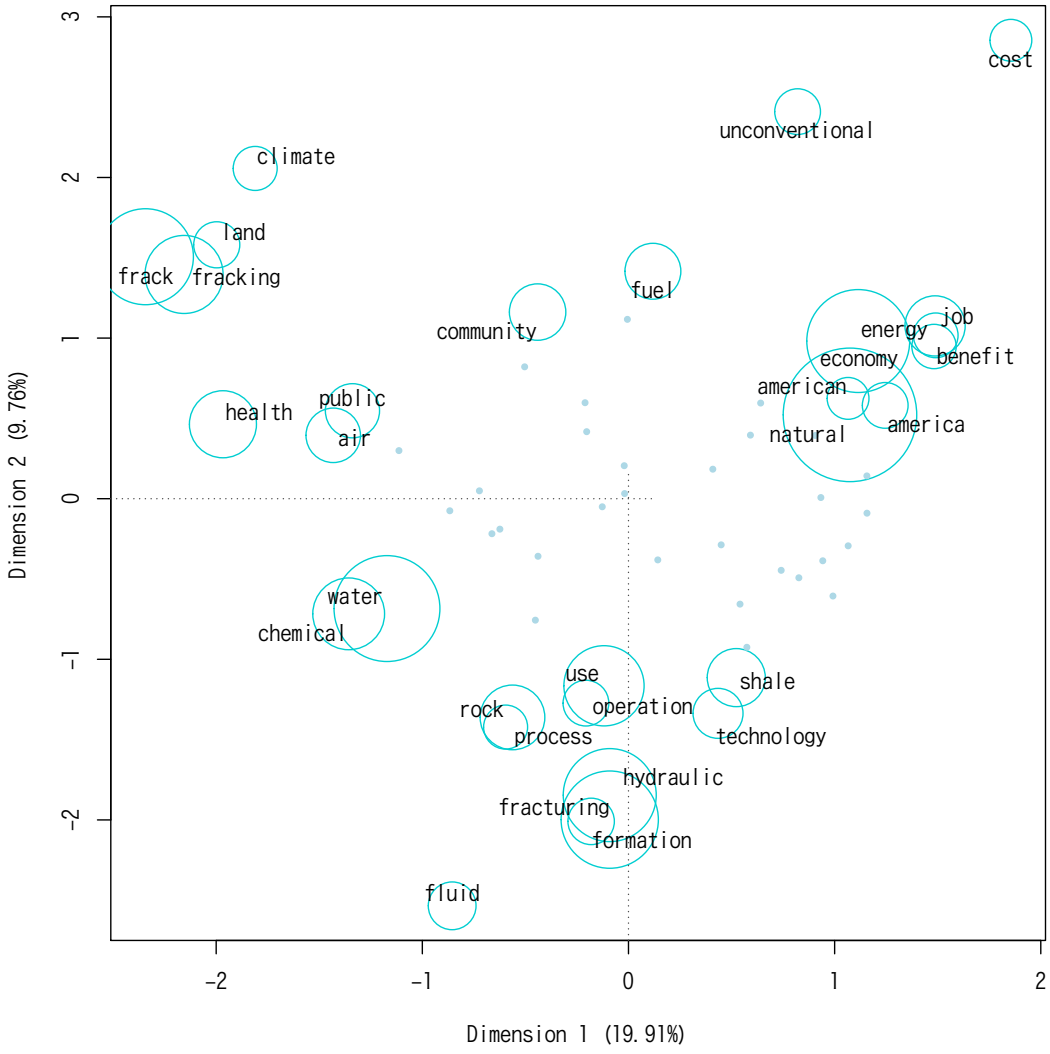

Figure 10 Correspondence analysis presenting the three frames of the US hydraulic fracturing debate

One of the reasons for selecting the issue of shale gas in the US was that it was expected to be a polarizing issue. Indeed, the news coverage of the issue in US newspapers appeared to be controversial between proponents and opponents of the technology (Metze & Dodge, 2016). The results of the correspondence analysis confirm this trend as three main poles emerged, keeping in mind that the most significant variance in words occur on the horizontal axis, which means that the two most distinctive frames used by interest groups are the environmental frame (on the left-hand side) and the economic frame (on the right-hand side).

This polarization is noticeable in Figure 11, showing the position of the interest groups on the hydraulic debate in the US depending on the frame they invoke. Each square represents an interest group (with the acronym or the short version of their name), and the circles represent the most frequent words identified previously in Figure 9. It is thus possible to observe the proximity between interest groups in terms of framing. The closer interest groups are in the graph, the more similarities can be found between the words that they are using to frame the issue of hydraulic fracturing.

Overall, it is possible to see that the interest groups are attracted to three poles: the three frames identified previously. This polarization is crystallizing the fact that disagreements over the framing of an issue are often at the heart of any policy controversies (Fischer, 2003). In the case of hydraulic fracturing in the US, the frames observed in this study are comparable with the ones identified in similar studies (Bomberg, 2017; Metze & Dodge, 2016). Jenifer Dodge and Jeongyoon Lee (2017) explains that a *framing contest* takes place between different coalitions. By analyzing over 3759 newspaper articles on the topic, they show how coalitions are "fiercely competing to frame the issue to structure the conversation in favorable terms" (p. 2).

This competition appears to take place on the horizontal axis of Figure 11. On the left-hand side, a group of grassroots groups express their concerns, which include "the carcinogenic chemicals used in fracking fluids, wastewater and fracking fluid spills, the threat of methane migrating into water supplies, truck traffic to and from well pads, the amount of water used throughout the process, air pollution from well pads and processing sites, and the high noise level associated with natural gas and oil operations" (Matz & Renfrew, 2015: 295).

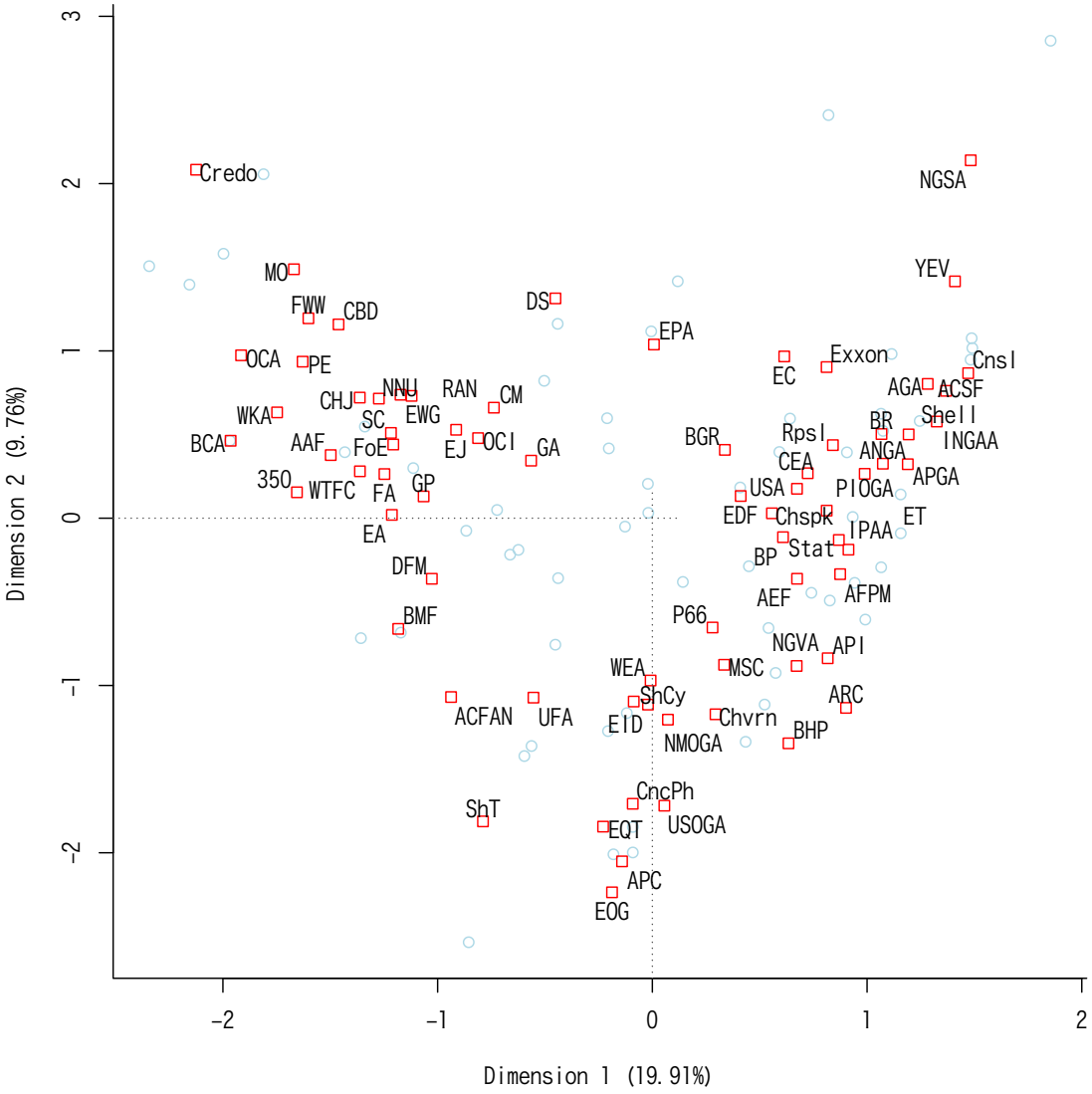

Figure 11 Mapping of the interest groups on the US hydraulic fracturing debate

On the right-hand side of the graph, interest groups are more scattered and form a crescent linking the economic and the technical poles. The economic benefits have already been presented and bring together many business groups. They frame shale gas as being abundant, clean, and natural and that it will create jobs and allow economic growth. Some of these interest groups also invoke the technical dimension in their framing. John Gaventa (1982) already have identified this technical frame and coined it *extraction frame*.

4.2. Detecting Astroturf Groups

The objective is now to use the information from the correspondence analysis to help in the detection of astroturf groups. The assumption is that astroturf groups, which by definition pretend to be grassroots groups, would use a different frame from genuine grassroots groups. This is explained by the logic of membership (Schmitter and Streeck, 1999; Klüver and Mahoney, 2015), which postulates that interest groups frame an issue in accordance with the members they represent. In the case of astroturf groups, the real interests they represent are private. Therefore, it is expected that astroturf groups invoke a framing closing to the ones from business groups. It is in that sense that a correspondence analysis can help to identify potential astroturf groups.

A caveat that must be expressed at this stage is that the correspondence analysis does not allow to automatically identify a group as astroturf. In other words, the quantitative analysis provides results giving indications about where to look, but it is up to the researcher to conduct a subsequent analysis to say whether a group presents astroturf features or not. On this topic, it is important to define specific criteria before labeling a group as astroturf. In this study, the two criteria that are considered are the ones enunciated by Boulay (2015):

- The group pretends to emanate from a citizen's initiative;
- The real identity of the sponsor is concealed.

Moreover, it is understood in this study that astroturfing must not be apprehended on a binary basis. In the contingency model for assessing astroturfing developed in the first chapter, it is explained how groups can be hybrid, in the sense that they might present features from both grassroots and astroturf movements. It might start as a bogus campaign that attracts support from real citizens, or it might start as a genuine political communication campaign that is boosted by hiring actors for a demonstration for instance. The term astroturf is used in this study to describe the groups that are not entirely genuine grassroots.

The first step in the process is to identify the groups that are more likely to present astroturf features. For that purpose, a schematic representation of the correspondence analysis shows the interest groups according to their group types (Figure 12). The green circles represent the

groups presenting themselves as grassroots, and the blue diamonds represent the business groups.

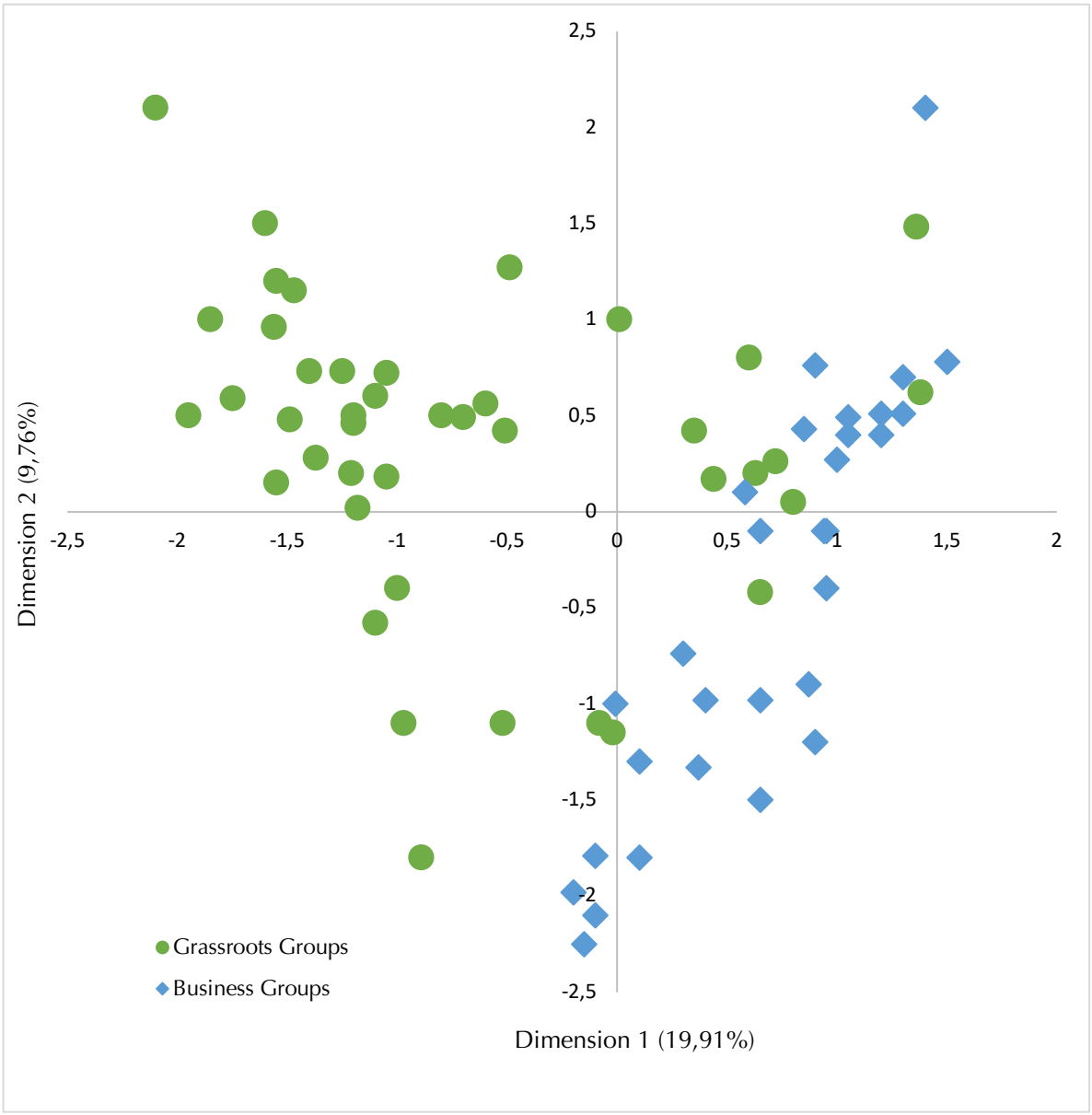

Figure 12 Mapping of the US interest groups according to their type

Based on that figure, different grassroots groups seem to frame the issue differently from the core on the left-hand side and their environmental frame. Ten grassroots groups are indeed positioned in the economic cluster and five in the technical cluster. It is thus these fifteen

groups that are investigated in order to see if they are astroturf or not. The investigation aims to confirm the two criteria that would qualify them as astroturf.

The process of confirming that these groups present themselves as emerging from a citizen initiative was already performed during the second step of the analytical process of this case study. Indeed, during the identification of the interest groups involved in the issue of hydraulic fracturing in the US, the website of each group has been scrutinized in order to categorize them between business or grassroots groups. The fifteen grassroots groups that are outliers from the others thus fit the criterion of presenting themselves as such.

The method for confirming the second criterion involves an investigation from the researcher. The objective is to see if the group is actually financed by other interests than grassroots and if that sponsorship is hidden or concealed. For this purpose, the method that has proven more fruitful was to look at the financing sources of the groups. The process was helped by the previous work of investigative journalists and watchdog groups. As one can imagine, data on group funding is difficult to track down. For this purpose, a website such as https://www.opensecrets.org/ offers much data about money in US politics. Their work substantiated the investigation as they provided more evidence about certain groups for which conclusions were circumstantial at first.

The results from this investigation were outstanding as no less than twelve interest groups presenting themselves as grassroots movements were actually linked to private interests to a certain extent. Figure 13 shows the results on a graph, and it is apparent that all the grassroots who were on the right-hand side of the graph are actually astroturf groups. Namely, the astroturf groups are American Clean Skies Foundation, America's Energy Forum, Big Greens Radicals, Consumer Energy Alliance, Energy Citizens, Environmental Defense Fund, Energy in Depth, Environmental Policy Alliance, Energy Tomorrow, Shale Country, United Shale Advocates, and Your Energy Virginia.

The position of these astroturf groups on the graph is therefore not coincidental, and it demonstrates an emphasis framing analysis can be helpful in detecting astroturf movements.

The next section focuses on these groups with more depth by looking at their roles in the broader lobbying strategie from the business coalition who advocated for the exploration of shale gas in the US.

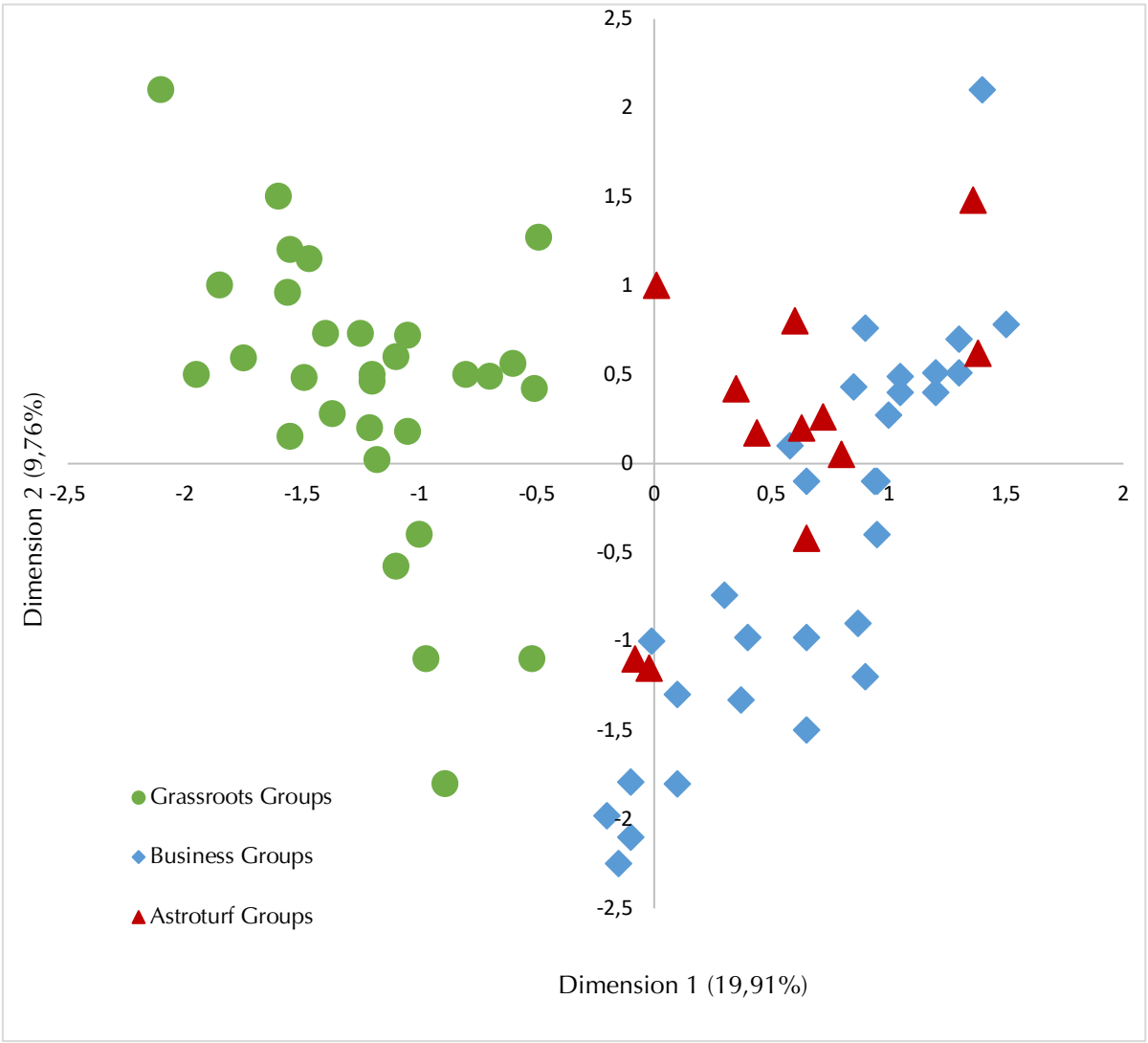

Figure 13 Astroturf groups in the US hydraulic fracturing debate

5. Results Interpretation

The results presented in the previous section shows that the method mixing a cluster and a correspondence analysis can be useful in uncovering astroturf movements. As their framing differs significantly from other genuine movements, it is possible to identify the outliers and to investigate their real sponsors. This section goes further in the analysis and looks more closely at the astroturf groups that have been unearthed. Attention is paid about how they emerged, who was behind them, and what was their role in a broader lobbying strategy. Four different purposes have been identified regarding how astroturfing is used in light of the usual lobbying tactics described in the first chapter.

5.1. Different Astroturf Groups for Different Purposes

Following the identification of astroturf groups, the next step consisted in investigating the real sponsors of these groups. During that process, a closer look has been taken on the content of the messages disseminated by the astroturf groups. What came out of this analysis is that astroturf efforts were used for different purposes and with different targets. Four main purposes have been identified:

- Participation in the framing of the issue;
- Capture of the scientific debate of the issue;
- Competition in alternative policy venues;
- Exposure in the media.

The twelve astroturf groups that have been identified were all used to serve one or more of these purposes. Table 7 shows the purposes for which each astroturf group has been created. Each of the purposes is explained in detail and illustrated with concrete examples from the corpus.

Framing Contest	**Science Capture**	**Venue Shopping**	**Media**
Big Green Radicals	American Clean Skies Foundation	Consumer Energy Alliance	Big Green Radicals
Consumer Energy Alliance	America's Energy Forum	Energy Citizens	Energy in Depth
Energy Citizens	Energy in Depth	Your Energy Virginia	Energy Tomorrow
Environmental Defense Fund	Environmental Policy Alliance		United Shale Advocates
	Shale Country		

Table 7 Purposes of identified astroturf groups

5.2. Framing Contest

One of the key elements to take away from the cluster analysis is to see how different frames were employed by different coalitions to influence policymakers and public opinion about hydraulic fracturing. This observation draws back to the very fundamentals of the framing theory by which Goffman explains how frames help people to make sense of the world. By providing environmental, economic, or technical frames, interest groups aim to offer ready-made opinions on framing. In that view, the semantic, the metaphors, and the figures of speech used by the organizations are fundamental (Lakoff & Johnson, 2008).

One of the significant results from the cluster analysis was how the term *fracking* was used exclusively by the genuine grassroots movements and never by business groups. The reason behind this is the apparent connection with a curse word. Citizen movements have even chosen their names based on wordplays with that curse word such as *Frack Off* in the UK or *What the Frack?* in Colorado. By emphasizing that word, grassroots movements tried to qualify the technology as something taboo, something a community would not want to happen in their backyards. One of the advantages of the term *fracking* is its simplicity to refer to the technology in comparison to *hydraulic fracturing*. This short word spread out and was

notably used by the media on many occasions. The willingness for business groups to systematically ban the word *fracking* was evident and could be seen in the communication materials of their astroturf groups, which all use the locution hydraulic fracturing on a permanent basis. This strategy can be interpreted as an objective to counterweight the use of the word *fracking* by showing that other grassroots movements do not share that semantic.

This aspect is reminiscent of the dichotomy of voice and access. Historically, citizen movements were often associated with voice strategies to influence the media, the political, or the public agenda while business groups were more linked with access tactics and face-to-face meetings with policymakers. Relying on astroturf groups opens the door for business groups to broaden their lobbying strategy by making their voices heard via new channels. As Berry (1993) explained, business groups do not have the same legitimacy as citizen movements to convey messages on specific topics such as the environment. In this case, creating bogus NGOs is a way to promote the corporate agenda by looking like a grassroots movement.

A telling example is Energy Citizens (EC). This group is actually a front group of the American Petroleum Institute (API). The objective of EC is to portray hydraulic fracturing in a positive light by insisting on how shale gas is natural, clean, and abundant. Whereas these arguments would not sound credible coming from the industry, it gains more credibility coming from a group that presents itself as a nonprofit, with a misleading name including the word *citizens*, and which hides its connection with the industry.

The same can be said about the Consumer Energy Alliance (CEA). Once again, the group clearly hides its links with the industry, in this case, HBW Resources, and advances the hydraulic fracturing agenda posing as "the voice of the energy consumer that provides consumers with sound, unbiased information on U.S. and global energy issues."[34] In this case, the reliance on a misleading name is evident to sway the public on the benefits of fracking and to underplay the risks associated with it.

The most aggressive example of the framing contest between the proponents and the opponents of hydraulic fracturing is the astroturf group Big Green Radicals (BGR). This front

[34] Text retrieved July 23, 2018 from https://consumerenergyalliance.org/about/

group was set up by Rick Berman, who was dubbed *Dr. Evil* by activists regarding his previous work for tobacco companies.[35] BGR presents itself as an environmental activist group and has the purpose of attacking other environmental NGOs such as Greenpeace or Sierra Club by describing them as *radical*. To spread their views, BGR bought a full-page ad in the Wall Street Journal and a 90-second commercial online. The objective of these campaigns was to diminish the credibility of the opponents of fracking and to show that environmental groups, or supposedly so, could weigh in favor of shale gas exploitation. Nonetheless, genuine NGOs defended themselves and counter-attacked by labeling BGR and similar astroturf groups as *gasroots* movements.

In terms of framing, it becomes apparent that the classification of interest groups by frames in Table 6 is misleading without the uncovering of the astroturf groups. The first results suggested that the environmental frame was used by grassroots only, and the technical and economic frames by business and grassroots altogether. With more in-depth analysis and the detection of astroturf groups, it appeared that the grassroots who were originally using the economic frame are astroturf and should, therefore, be considered as representing private interests. The revealing of astroturf groups paints a picture that is far more different than the appearances suggest. There is thus a clear divide in terms of frames used between grassroots, who rely heavily on the ecological arguments, and business focusing on economic arguments. In an attempt to avoid this Manichean view of the issue, the industry tried to manufacture an alternative grassroots voice advocating for the exploration of shale gas.

5.3. Science Capture

An interesting outcome from the cluster analysis is to see that the technical frame is invoked by business groups as well as nonprofits. It is a testament to the contest that emerges between groups regarding the scientific debate of the issue. Indeed, in order to explain the elaboration of a new policy, politicians often rely on scientific evidence. To help decision-makers establish evidence base policy, interest groups are eager to share their expert knowledge with them, and by doing so, try to influence the decision-making process.

[35] Suzanne Goldenberg. The Guardian (February 23, 2015). Lobbyist dubbed Dr Evil behind front groups attacking Obama power rules. Retrieved July 23, 2018 from https://www.theguardian.com/environment/2015/feb/23/lobbyist-dubbed-dr-evil-behind-front-groups-attacking-obama-power-rules

The objective of capturing the scientific debate is shared by many interest groups active in the debate, without differentiation based on their group type. On the one hand, business groups claim they have the expertise of the technology of hydraulic fracturing. They have the experience of conducting such activities, and they have the engineers to back up their considerations. On the other hand, grassroots movements explain that they have first-hand knowledge as they can observe the risks of fracking from their own eyes in their backyard. This contest has seen both sides of the debate cherry-pick the studies that reinforce their preexisting views but seem to overlook key elements of the global picture. This tactic has been described as *science capture* or more pejoratively *merchants of doubts* (David Miller & Dinan, 2015).

Three examples demonstrate how astroturfing can be used to capture the scientific debate. First, there is the American Clean Skies Foundation (ACSF) and the case of *ghostwriting*. This term refers to the process of paying scholars in order to publish scientific studies propounding a particular view. ACSF, who presents itself as "an independent nonprofit working for cleaner energy in the U.S. transportation and power sectors",[36] funded academic studies to prove that hydraulic fracturing was safe – a practice known as *frackademia*.[37] A case under scrutiny is the 2011 MIT study, *The Future of Natural Gas,* which is highly controversial given the different positions occupied by the author Ernest Moniz. This case actually shows the interplay of many unethical lobbying strategies: the use of a front group, the science capture of the debate, and the revolving door phenomenon.

The second example is the Center for Sustainable Shale Development (CSSD).[38] This case is more symptomatic of a hybrid case of astroturfing. Indeed, the organization presents itself as "non-profit organization whose vision is to bring together environmental and gas industry leaders committed to driving continuous innovation and improvement of shale development

[36] Retrieved July 25, 2018 from http://www.cleanskies.org/about/
[37] Richard Schiffman. The Guardian (January 9, 2013). 'Frackademia': how Big Gas bought research on hydraulic fracturing. Retrieved July 25, 2018 from https://www.theguardian.com/commentisfree/2013/jan/09/fracking-big-gas-university-research
[38] The organization changed its name to The Center for Responsible Shale Development during the writing of this dissertation.

practices".[39] They recognize that the gas industry is among their stakeholders, but they claim that environmental associations too, which is misleading. Indeed, this Center has a pro-fracking narrative and participates in painting a safe picture of this technology. Notably, they emit guiding principles such as *performance standards* and *independent third-party certification programs*, which have been welcomed with skepticism by civil society organizations, who see that as further evidence of a science capture attempt.

The third example is the American Council on Science and Health (ACSH). Contrarily to the two previous examples, this interest group was not in the corpus. The reason is that this group did not fit the criteria of presenting a webpage with a clear framing of what hydraulic fracturing is. However, the strategy of this group fits with the broader strategy of capturing the scientific debate surrounding fracking. Indeed, this organization describes itself as a nonprofit and "a pro-science consumer advocacy organization."[40] Moreover, it clearly refutes the claims of having links with the industry:

> The Council was founded in 1978 by a group of scientists with a singular focus: to publicly support evidence-based science and medicine. We are not a trade association. We do not represent any industry. We were created to be the science alternative to "news" that is often little more than hype based on exaggerated findings.[41]

However, reports led by investigative journalists demonstrated the close ties that the ACSH has with industries.[42] In terms of scientific capture of the debate on hydraulic fracturing, ACSH uses a *facts vs. fictions* approach in a book.[43] This publication systematically downplays the risks of hydraulic fracturing and bases the arguments on studies they sponsored themselves or from other groups from their networks such as the MIT report previously mentioned. The interconnection between all these front groups and their links with the industry are not incidental. Despite the haze surrounding their funding, different names seem to be at the center of all these operations, making it a clear network of

[39] Retrieved July 25, 2018 from http://www.responsibleshaledevelopment.org/who-we-are/vision/
[40] Retrieved July 25, 2018 from https://www.acsh.org/about-acsh-0
[41] Ibid.
[42] More information on the report available at http://scienceblogs.com/denialism/2017/03/09/acsh-is-astroturf-heres-why/
[43] Retrieved July 28, 2018 from https://www.acsh.org/news/2014/06/12/hydraulic-fracturing-marcellus-shale-water-health-facts-vs-fiction

organizations having all their specific objectives: discrediting opponents with BGR, advancing scientific arguments with ACSH, or targeting local residents with Energy Citizens.

5.4. Venue Shopping

An interesting perspective is to analyze astroturfing in light of the venue shopping theory. As explained in the first chapter, venue shopping refers to choosing the venue that offers the best opportunity for an interest group to influence public policy debates. The case of hydraulic fracturing is especially relevant in this case because it behooves to the States to authorize or ban fracking on their territory. However, the main business groups identified in the corpus of this study usually act at the federal level. It is thus interesting to see how they adapt their strategies to *shop* at these venues and how astroturfing can help them to do that.

When analyzing the frames mobilized by business groups, the results showed that they mostly focus on an economic frame to a great extent and a technical frame to a lesser extent. The economic arguments brought forward all point to the benefits that hydraulic fracturing can bring to the United States as a country. The co-occurrence network showed strong links between terms like *create, jobs, growth, American,* and *economy*. The narrative is that hydraulic fracturing is an industry with specific American know-how, and which will help the American citizens to get jobs.

Even though these arguments are used to resonate at an individual level, the overall semantic describes the stakes at a Federal level rather than State or local levels. Some exceptions can be mentioned such as oil and gas trade associations acting at State level (New Mexico Oil & Gas Association and Pennsylvania Independent Oil & Gas Association) or coalition formed around a specific shale basin (Marcellus Shale Coalition).

On the other side, grassroots movements are historically rooted in a local tradition. NGOs often rely on volunteers and members that they have across regions, countries, and continents. One of their strengths is the possibility to gather a high number of supporters at the same place as a way to protest against a new policy for instance. This can take the form of demonstrations, sit-ins, or blockades. Such direct actions are usually used to get the attention from the media and to get a seat at the table of the negotiations with the lawmakers. In the case of hydraulic fracturing, local communities are vital as shale gas reserves can be

trapped in the backyards of citizens. In exchange for allowing drilling in their lands, these citizens are paid by the industry. These citizens are thus directly faced with the framing contests of whether considering environmental interests or direct financial incentives.

Astroturfing is a way for private interests to engage and connect with citizens at a local level. Two front groups are of particular interest on this topic. The first is the Consumer Energy Alliance (CEA), which focuses its communication on the consumers. Aside from misrepresenting the risks of hydraulic fracturing, this front group also launched PR campaigns at local level. A notable example is the defeat of a fracking ban ordinance in Pennsylvania, where CEA communicated intensively.[44]

The second front group is Energy Citizens (EC). On its website, the organization presents its mission as "to identify, recruit, educate, engage, and mobilize citizens to voice support, participate in the energy-policy debate, and affect change at all levels of governments". [45] This vision illustrates how astroturfing is used and designed to recruit citizens locally and to try to influence the policy *at all levels of governments*. This last part of the citation is symptomatic of the willingness to use astroturfing for venue shopping. Business groups realize they do not own the credibility of local grassroots movements and a front group can be used as a mouthpiece to spread their messages.

The importance of being present at a local level is illustrated by a typical astroturf tactic consisting in remunerating actors to be present at city council meetings. That is what happened in October 2017 when actors were paid to support Entergy's power plant in New Orleans.[46] No less than 50 people were paid 60$ to appear at meetings while wearing an orange shirt reading *Clean Energy. Good Jobs. Reliable Power* (see Appendix 6). The price climbed up to 200$ for actors who had a speaking role and conveyed the message of Entergy. After the story broke in the news, the energy company acknowledged that a PR firm working

[44] More detail on the campaign available at https://consumerenergyalliance.org/campaign-for-americas-energy/pennsylvania/pennsylvania-news/
[45] The website was not accessible during the writing of this dissertation. The quote was retrieved via http://archive.org/
[46] Michael Isaac Stein. The Lens (May 4, 2018). Actors were paid to support Entergy's power plant at New Orleans City Council meetings. Retrieved July 28, 2018 from https://thelensnola.org/2018/05/04/actors-were-paid-to-support-entergys-power-plant-at-new-orleans-city-council-meetings

on its behalf was responsible for that astroturf campaign.[47] This case is reminiscent of Walker's (2015) concept of *Grassroots for Hire*. As the sociologist explains, business groups willing to have an influence at local level can efficiently manufacture citizen support, as it was the case in New Orleans.

5.5. Media and Entertainment

The issue of hydraulic fracturing has been highly salient in the media and the entertainment industry in recent years. Along these lines, two astroturf groups have been especially active in the production of TV advertisements. The content of Big Green Radicals (BGR) advertisements are directed at genuine grassroots movements by coining them *radicals*. The second astroturf group is Energy Tomorrow (ET). This group is actually backed by the American Petroleum Institute (API) and has invested heavily in TV ads. In order to gain credibility and influence TV watchers, it is Brooke Alexander – a former soap opera actress, beauty queen, and a former FOX correspondent[48] – who explains the benefits of shale gas. Opposition has mounted against ET's ads for their misleading approach as they never mention the backing of the API. A petition has even seen the light of day in order to stop CNN to run these ads.[49]

Asides from TV advertising, a real contest took place between the proponents and the opponents of hydraulic fracturing in the entertainment industry. This interest from personalities notably led to the creation of the group *Artists Against Fracking*. It brings together artists such as Yoko Ono, Conor Oberst, Richard Gere, or Paul McCartney who advocate for a ban on fracking in the State of New York. The popular dimension of the issue led filmmakers from that network to direct movies about fracking. In reaction, proponents of hydraulic fracturing also got involved and produced their own films. The themes of these movies are however very polarized and, usually, vehicle one of the frames identified earlier.

[47] Michael Isaac Stein and Charles Maldonado. The Lens (May 10, 2018). Entergy acknowledges astroturfing campaign for power plant, but says it didn't know about it. Retrieved July 28, 2018 from https://thelensnola.org/2018/05/10/entergy-says-a-public-relations-firm-hired-people-to-speak-on-behalf-of-its-new-power-plant/
[48] See http://www.nofrackingway.us/2013/07/25/the-stepford-shale-blonde/
[49] See https://www.change.org/p/cnn-stop-running-ads-for-energytomorrow

The first one getting notoriety was *Gasland* (2011), written and directed by Josh Fox. The movie depicts the impact of hydraulic fracturing on communities living near a fracked well. This documentary had a strong impact on the American citizens at local and national levels. First, Vasi, Walker, Johnson, and Tan (2015) have found that "*Gasland* contributed not only to greater online searching about fracking but also increased social media chatter and heightened mass media coverage" (p. 934). The documentary became notorious across the United States following the nationwide release on HBO and the nomination for an Oscar Award. The authors also found that "local screenings of Gasland contributed to anti-fracking mobilizations, which in turn, affected the passage of local fracking moratoria in the Marcellus Shale states" (p. 934). In terms of framing, there is a scene that had a significant impact on perceiving the threats of hydraulic fracturing on the everyday life of citizens and participated in the spreading of the use of the word *fracking*. The scene shows residents living near shale gas wells lighting their tap water on fire (see Appendix 7). The image of flames coming out of the tap has become symbolic of the risks of fracking and has been used in different TV shows such as *The Simpsons* (2014), *Family Guy* (2014), or more recently in an episode of *Last Week Tonight with John Oliver* dedicated to the phenomenon of astroturfing (2018).

In response to that documentary, Energy in Depth (EID), an astroturf group set up by the Independent Petroleum Association of America (IPAA), launched a short film titled *Truthland* (2012). This documentary was designed to deconstruct the arguments from the *Gasland* movie. One of the most cogent arguments made is that it is not the technology of hydraulic fracturing that causes problems in the natural gas area but that it is because of the poor construction of wells. The writers of *Truthland* claim that fracking itself is safe but that it is the way the wells are constructed that has led to some problems.

The chess game continues as Josh Fox directed a sequel to his first documentary, *Gasland II* (2013), in which his objective is to expose the role of oil and gas lobby groups and their ties with American politicians in the making of hydraulic fracturing policy. The response from the proponents took the form of *Fracknation* (2013), yet another documentary downplaying the risks of hydraulic fracturing in the United States. The filmmakers claim that they are independent, that they have gathered funds thanks to a fundraising campaign, and that they have not received any funding from the industry. However, it appeared that it was the group

Energy in Depth and the Marcellus Shale Coalition who launched the fundraising, which questions the independence of the filmmakers.

In the category of fictional movies, *Promised Land* (2012) is a rare one taking hydraulic fracturing as its main topic. Directed by Gus Van Sant and starred by Matt Damon and John Krasinski, the movie presents the strategies of two corporate salespeople who try to convince local residents to drill in their backyard. One of their tactics is precisely the use of astroturfing to discredit the local environmental movements and to convince the community of the safety of fracking. This movie is yet another example of the involvement of showbusiness personalities on the issue of hydraulic fracturing.

A key strategy from the coalition of interest groups against fracking is to influence public opinion through media tactics and grassroots mobilization, or in other words: *voice* tactics. To do so, they rely on impactful images such as taps on fire. To convey these powerful images, the work of an extensive network of artists in the US was helpful in reaching citizens across the country. With the spreading of negative images of hydraulic fracturing, the industry found itself in an uncomfortable position. Buying advertisements in the media or producing movies under their own name would produce little impacts on the public. Indeed, as Cho et al. (2011) have demonstrated, citizens are more likely to be convinced by environmental arguments that are communicated by NGOs rather than companies or trade associations. For these reasons, the coalition in favor of hydraulic fracturing engaged in astroturf efforts. A multi-front public relations campaign was designed to undermine the arguments from the opponents. It led to a chess game between the two coalitions that took the form of documentaries being released every other year. Astroturfing is thus used to create a *voice* tactic that would not have the same credibility and the same impact if it was signed under the real names of oil and gas companies or trade associations.

Conclusion

The objective of this chapter was to elaborate a method based on the framing theory to detect astroturf groups. The case study selected for this purpose was the issue of hydraulic fracturing in the United States. The reason behind this choice is that the literature tends to show that the US is the cradle of astroturfing and that environmental issues are deemed a breeding ground for astroturf efforts, thus improving the likelihood of encountering them. The outcome of the analysis confirms this assumption as among the 72 interest groups identified as active on the shale gas debate, 12 groups have been detected as astroturf. These results have implications on the understanding of the astroturfing phenomenon, and more globally on a theoretical and methodological perspective too.

First, the interpretation of the results produced with the framing analysis sheds light on the reasons why private interests set up astroturf groups in their lobbying strategies. The question of legitimacy and credibility is essential for an interest group to communicate and to persuade the public about their arguments. Genuine grassroots movements capitalize on this legitimacy as their network of volunteers defend public causes (i.e., the environment, human rights, …) by dedicating their own time and energy (Boulay, 2013). Private interests do not enjoy such credibility when communicating on a topic like hydraulic fracturing. Therefore, they create front groups that appear as NGOs to disseminate their messages. By so doing, these new voices are competing with the ones from genuine grassroots in the public sphere.

In this case study, the framing analysis shows the type of messages sent by the astroturf groups. On the one hand, groups like Energy Citizens (EC), United Shale America (USA), or Your Energy Virginia (YEV) highlighted the economic benefits of exploring shale gas. The co-occurrence of words such as *economy, creating jobs, growth, U.S.,* or *benefits* clearly shows an economic frame. Using astroturf to communicate this way can be perceived as a strategy by the industry to simulate a consensus about the benefits of hydraulic fracturing. They tried to make their coalition look bigger and more diverse, as to say that both the industry and environmental groups had agreed on that topic and shared a common position. On the other hand, groups like Energy in Depth (EID) and Shale Country (ShCy) aimed to downplay the risks assimilated with hydraulic fracturing by mobilizing a technical frame. Those groups represented another channel through which the industry could spread the studies

corroborating their worldview and by so doing, trying to capture the scientific debate surrounding the issue.

Second, the results have important theoretical and methodological implications. Research on astroturfing is still at a nascent stage. One of the main obstacles lies in the collection of data. Interviewing astroturfers proves to be difficult, notwithstanding potential biases. This is why the method elaborated in this dissertation could prove helpful in collecting data on astroturf efforts on a larger scale. The results of the correspondence analysis were significant to raise a red flag on potential astroturf groups. The replication of this model could be interesting to study astroturfing across sectors and to theorize about the phenomenon. From a theoretical perspective, this study shows how a seminal theory such as framing can be revitalized and used in the neighboring field of lobbying and interest group studies.

Chapter Four: Measuring Astroturf Lobbying Success

Introduction

This fourth and last chapter aims to attain the second research objective: to measure the lobbying success of astroturf groups on public policy. For this purpose, this chapter follows the same analytical process as in the third chapter in an attempt to replicate and validate the method that has been designed to detect astroturf movements, but two more steps are added in order to explain how lobbying success can be measured in this case.

The first section of this chapter presents the issue that was selected for this case study. In this chapter, it is the same topic of shale gas exploration and hydraulic fracturing, but within another political context: the European Union. As the objective is to measure the influence of interest groups on public policy, closer attention is paid to the evolution of legislation set in place to regulate – or not – shale gas activities in the EU. The second section focuses on the identification of the interest groups that have sought to influence the outcome of a specific vote on two reports led by the European Parliament. The third section looks at the identification of frames used by interest groups. The cluster analysis paves the ways for the fourth section whose objective is to identify astroturf groups.

The fifth section presents the method used to measure lobbying success. For this purpose, an analysis of the coalitions that have formed during the lobbying and the policy debates is conducted, and a collective framing analysis is performed in order to identify the coalitions and assess their influence. The sixth and last section provides interpretations of the results and offers a theoretical and methodological look back at the two research objectives of this dissertation and the methods that have been developed to detect astroturf groups and to assess their lobbying success on public policy initiatives.

1. A European Shale Gas Revolution?

This section presents the issue of shale gas in the European Union. As the technical aspects of hydraulic fracturing have already been described in Chapter 3, this section focuses on the particularities that the EU presents in terms of shale gas exploration. First, the promises and obstacles of exploring unconventional gas are described. Even though the promises echo the ones emitted in the US during their golden age of shale gas, the obstacles faced by some Member States in the EU differ significantly. These obstacles can be structural, such as the difficulty of accessing the shale basins located in Europe, or political. Second, the decision-making process set in place to regulate hydraulic fracturing is detailed as to see whether a European shale gas revolution is to be expected or not.

1.1. The Hydraulic Fracturing Issue in the EU

Witnessing the success of the shale gas revolution in the US, the EU has started to envisage the potential of its own shale basins. This reflection is conducted in the context of a European Energy Union, which aims to "ensure that Europe has secure, affordable and sustainable energy."[50] It is along these lines that proponents of shale gas exploration see this resource as a silver bullet for the European energy policy (Kefferpütz, 2010). The arguments that are usually brought forward for unlocking shale potential are reminiscent of the ones observed in the US debates, yet some remain specific to the European context.

First, proponents are enthusiastic that shale gas could solve Europe's energy problems. According to the European Commission, the EU imports more than half of all the energy it consumes, and its import dependency is particularly high for crude oil (90%) and natural gas (69%).[51] Even more problematic, many EU countries are heavily reliant on a single supplier, namely Russia. Shale advocates propound the view that exploiting shale gas could give a strategic and geopolitical edge in terms of energy security.

Taking the US as an example, many believe that tapping the EU shale resources will boost the European economy. Access to oil and gas from shale would reduce the price of energy,

[50] Retrieved August 4, 2018 from https://ec.europa.eu/commission/priorities/energy-union-and-climate_en

[51] Data retrieved August 4, 2018 from https://ec.europa.eu/energy/en/topics/energy-strategy-and-energy-union/energy-security-strategy

which will, in turn, enhance competitiveness, create jobs, and participate in overall economic growth. An explanation that could strengthen this view is the fact that in the EU, developments are led by major oil and gas companies who have a vast experience and substantial R&D funds. If the shale revolution was a success in the US despite being led by *momma and poppa companies* that were small and entrepreneurial (Stevens, 2012), having large and powerful firms behind the developments could be a driving force in the potential success of shale exploitation.[52]

The argument of shale gas being natural and clean finds an echo in the environmental objectives of the EU. In the context of the Paris Agreement notably, the EU aims for a transition to a lower-carbon economy. Proponents are thus eager to present shale gas as a transition energy that could provide a steady supply of a fuel that is more climate-friendly than other fossil fuels such as coal and perceived as safer than nuclear power, which had been seen negatively in the eyes of several Member States such as Germany in the aftermath of the Fukushima accident in 2011 (Kefferpütz, 2010).

These three main factors (energy security, economic growth, and transition energy) lead many to believe that the EU can have its own shale gas revolution and reap the same kind of benefits that the US did in the past decades. However, many obstacles can hinder such progress on that matter as the issue of shale gas in the EU differs significantly for a variety of reasons.

First, there are structural differences explaining why shale gas exploration has boomed in the US while it has been a very slow process in the EU so far. The geology plays an important role in terms of potential resources. On the one hand, the US has large shale *plays,* or areas where companies can target exploration activity. On the other hand, those plays are smaller and deeper in the EU, which means that the gas is less abundant and more difficult to extract (Stevens, 2012). Moreover, concrete geological data about shale potential is still in its infancy in the EU and estimates about recoverable gas vary significantly from one study to the other (Kefferpütz, 2010). In this regard, the US were much more advanced in terms of technology and were quick to realize the potential they had under their feet. Consequently, they have

[52] *Momma and poppa* is an American idiom describing a small, independent, and usually family-owned business. See Boyd (1997).

benefitted from a long tradition and an evolution of specific drilling techniques, which in turn have reduced the cost of hydraulic fracturing. For these reasons, it is hard to imagine a game-changing rush toward shale gas in the EU as it happened in the US.

In addition to the structural features that make the EU a less attractive territory in terms of basins and recoverable gas, there are agency impediments voicing their opposition to shale gas activities in Europe. Unsurprisingly, environmentalists express their concerns regarding the dangers of hydraulic fracturing on the environment and public health.

Another aspect that differs from the US is the difficulty in convincing local residents to accept drilling and constructing wells in their backyard. The EU is densely populated, and the number of residents who would be impacted by hydraulic fracturing operations is much more elevated than in the US. Moreover, local residents in the US have the opportunity to make money in these operations because they own the minerals that are buried in their land. They thus have a direct financial incentive in supporting shale gas and in accepting operations on their land. In the EU, it is usually the States that own these rights. It means that EU citizens could not enjoy any direct benefits from drilling in their backyard and could, therefore, develop a NIMBY syndrome and even strengthen local opposition movements. [53]

The question of whether the shale gas revolution of the US can be replicated in the EU depends on different factors. The main facilitating factors that led to the boom in the US were that:

- The geology offers larger plays with considerable recoverable resources;
- The regulation set in place by the Government created a favorable economic environment for companies to develop the technology;
- Local residents had an incentive to give the green light for hydraulic fracturing operations in their backyards.

The EU does not provide the same conditions since:

- The geology offers smaller plays in more densely populated areas;

[53] NIMBY is an acronym for *Not in my backyard* and refers to the opposition by local residents to developments in their areas. They might consider those developments but elsewhere. See Dear (1992) for more information.

- Limited data are available and sound on the actual shale potential;
- There are no incentives for landowners to open their backyard for wells constructions;
- There is arguably a greater environmental awareness and opposition from civil society (Kefferpütz, 2010);
- There is a fractured regulation environment with no harmonized legislation across countries.

On a methodological level, these geological, technological, social, and political differences make it hard to compare the EU and the US cases, and it explains why it could be misleading to try to compare lobbying strategies and astroturf tactics on the shale gas issue. It is in that sense that chapters three and four focus on different political systems albeit on the same issue.

1.2. Political Context

As the objective of this chapter is to measure the influence of astroturf groups on a specific public policy debate, it is important to describe and to retrace the evolution of the regulation on the shale gas issue at the EU level and to identify key moments that can be used as milestones for the evaluation of lobbying campaigns.

1.2.1. A Fractured Regulation Environment

The exploration of unconventional gas with horizontal drilling and high-volume hydraulic fracturing represents a new technological process in the EU and, therefore, no specific regulatory policy for shale gas extraction has been set up at the EU level. According to the principle of permanent sovereignty over natural resources, it is the Members States which have authority in issuing permits and authorizing shale gas activities on their territory (Tawonezvi, 2017). This principle was established by the United Nations General Assembly in 1958 before being translated into EU law under Article 1 of the Directive 94/22/EC.[54][55] This directive empowers Member States as the owners of natural resources that are present within their geographical jurisdictions, contrarily to the US, where landowners have the

[54] The United Nations, General Assembly resolution 1314(XIII) of 12 December 1958.
[55] Directive 94/22/EC of the European Parliament and the Council of 30 May 1994 on the conditions for granting and using authorizations for the prospection, exploration and production of hydrocarbons (1994) OJ L164/3.

ownership over these resources. As long as there is no EU legislation harmonizing the procedure across countries, Member States have the right to choose and exploit any energy within their sovereign states and to take into account all public health and environmental considerations (Fleming & Reins, 2016; Maican, 2013).

This principle has important implications as EU Member States have varying interests in the pursuit of shale gas exploration. There are fourteen countries in the EU with access to shale basins (see appendix 8). However, not all are positively disposed toward exploitation of shale gas resources, with some deciding to ban hydraulic fracturing on their territory. Poland can be considered as the sole *early adopter,* the UK, the Netherlands, and some German states can be considered as *contemplators,* while France and Bulgaria were clear *opponents* from the start (Boersma & Johnson, 2012).

The national legislation on shale gas explorations has evolved at different speeds in the countries that have emitted the idea of exploring unconventional gas. The first strong signal came from France which decided to ban hydraulic fracturing for the exploration of shale oil and gas in July 2011.[56] This moratorium was a massive blow for oil and gas companies as France is believed to be a European country with some of the most plentiful underground reserves of shale gas.[57]

Not long after, it was Bulgaria's turn to ban exploratory drilling for shale gas using hydraulic fracturing following the overwhelming vote in 2012 in favor of the ban by the Members of the Bulgarian Parliament. Moreover, they decided to revoke the permit previously granted to Chevron the previous year.[58] The same year, Denmark also imposed a moratorium on hydraulic fracturing while two permits granted to Total before the ban remained valid.[59] In 2013, the Netherlands placed a temporary moratorium that became de facto permanent

[56] Le Monde (June 30, 2011). Gaz de schiste : le Parlement interdit l'utilisation de la fracturation hydraulique. Retrieved August 11, 2018 from http://www.lemonde.fr/planete/article/2011/06/30/gaz-de-schiste-le-parlement-interdit-lutilisation-de-la-fracturation-hydraulique_1543252_3244.html

[57] Information retrieved August 11, 2018 from http://earthlawyers.org/wp-content/uploads/2018/04/APPENDIX-2-Legal-Status-of-UOGE-across-the-world-31.03.18.pdf

[58] BBC (January 19, 2012). Bulgaria bans shale gas drilling with 'fracking' method. Retrieved August 11, 2018 from http://www.bbc.com/news/world-europe-16626580

[59] Information from Vinson & Elkins. Retrieved August 11, 2018 from https://www.velaw.com/Shale---Fracking-Tracker/Global-Fracking-Resources/Denmark

following the decision of the Minister of Economic Affairs who stated that shale gas was no longer an option in the Netherlands.[60]

The case of the United Kingdom has been highly controversial. England has always been a keen observer of shale gas potential on their territory. However, following two earthquakes in the area of exploratory drillings, a temporary moratorium was set in place in 2011, which lasted only one year as the ban was lifted in 2012 already.[61] Exploration is thus still occurring in 2018 with numerous permits granted to companies to conduct operations. This enthusiasm was not shared by the other members of the UK since Scotland[62], Wales[63], and Northern Ireland[64] all announced temporary moratoria on hydraulic fracturing.

More recently, in 2017, two additional countries have set new regulations on shale gas. First, Ireland has decided to prohibit hydraulic fracturing for onshore petroleum.[65] Second, Germany has banned hydraulic fracturing for the extraction of unconventional gas, while conventional gas extraction remains lawful.[66] Estonia, Latvia, Lithuania, Poland, Portugal, Romania, Spain, Sweden, and Ukraine are the other main countries were shale basins could be accessed. No moratoria are placed in these countries, and they show varying degrees of

[60] Dutch News (June 23, 2013). Dutch Minister confirms ban on drilling shale gas is not an option. Retrieved August 11, 2018 from http://www.dutchnews.nl/news/archives/2018/02/dutch-minister-confirms-ban-on-drilling-shalegas-not-an-option

[61] Emily Gosden. The Telegraph (December 17, 2015). Fracking: plans to drill 68 new shale gas wells unveiled. Retrieved August 11, 2018 from https://www.telegraph.co.uk/news/earth/energy/fracking/ 12056209/Fracking-plans-to-drill-forshale-gas-at-68-new-sites-unveiled.html

[62] The Guardian (October 3, 2017). Scottish Government bans fracking. Retrieved August 11, 2018 from https://www.theguardian.com/uk-news/2017/oct/03/scottish-government-bans-fracking-scotland-paulwheelhouse

[63] Rachel Flint. BBC (October 3, 2017). Fracking ban: What is the situation in Wales? Retrieved August 11, 2018 from http://www.bbc.com/news/uk-wales-politics-41489253

[64] RT (August 12, 2014). N. Ireland fracking: minister rejects global energy firm's drilling proposal. Retrieved August 11, 2018 from https://www.rt.com/uk/179784-fracking-proposal-rejected-protest

[65] The Irish Times (June 23, 2017). Bill banning onshore fracking passed by. Retrieved August 11, 2018 from https://www.irishtimes.com/news/politics/oireachtas/bill-banning-onshore-fracking-passed-by-d%C3%A1il1.3103027

[66] Umwelt Bundesamt (April 17, 2018). Fracking ist umstritten: Risiken bestehen vor allem für das Grundwasser. Retrieved August 11, 2018 from https://www.umweltbundesamt.de/themen/wasser/ gewaesser/grundwasser/nutzung-belastungen/fracking

willingness to pursue shale exploration given the difficulty to assess the possibility of extracting shale gas to commercial levels.

1.2.2. Regulating Shale Gas Exploration at EU Level

In the meantime, the European institutions have started to scrutinize the existing pieces of legislation that could be applied to the exploration of shale gas and assess whether additional regulations are necessary or not. From a theoretical perspective, the shale gas issue in the EU is thus in the first two stages of the issue-attention cycle, that is the pre-problem stage and the discovery stage (Downs, 1972). This period is often considered as crucial in terms of lobbying as it is during those stages that interest groups are organizing and are believed to exert a decisive influence on potential subsequent pieces of legislation (Obradovic, 2009).

First institutional attention came from the European Parliament in 2010. The EP is arguably the institution that has shown the greater interest regarding the issue of shale gas. The first signal appeared when the EP had adopted a resolution on the European Commission's document entitled "Towards a new Energy Strategy for Europe 2011-2020."[67] In this resolution adopted on November 25, 2010, the EP called the Commission to:

> – draft an analysis before the end of 2011 regarding the future of the world and European gas markets, including the influence of shale gas on the gas market in the U.S. and the interaction between the potential development of the shale-gas market in the EU and the security of supply and gas prices in the future;
> – promote and support environment-friendly pilot projects about the usage of unconventional local energy sources;
> – support member states in geological research aimed at assessing the amount of available reserves of shale gas in Europe;
> – support and evaluate the profitability of the national production of shale-gas resources and how they affect the environment; and,
> – include the findings in the future long-term EU strategy.[68]

[67] Document available at https://ec.europa.eu/energy/en/consultations/towards-new-energy-strategy-europe-2011-%E2%80%93-2020
[68] Text retrieved August 19, 2018 from http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//TEXT+TA+ P7-TA-2010-0441+0+DOC+XML+V0//EN

Along with this resolution, shale gas exploration became officially an item on the EU political agenda following the statements of the European Council and the Council of the EU. The former highlighted the importance of looking at unconventional gas deposits located in the European territory during a meeting devoted to energy issues in February 2011.[69] The latter also brought the issue of unconventional gas to the EU agenda, under the impetus of Poland which had the Presidency of the Council in the second part of 2011.

Following the request from the EP, and more specifically from Matthias Groote, Chair of the Committee on the Environment, Public Health, and Food Safety (ENVI), the Commission issued in 2011 an assessment of the legal framework applicable to shale gas projects under the direction of Janez Potocnik, Commissioner for the Environment. The legal assessment concluded that "the existing EU environmental legislations applies to practices required for unconventional hydrocarbons exploration and production from planning to cessation."[70] In other words, the Commission came to the conclusion that sufficient regulations were available and applicable. The Commission then provided *guidance* on the application of the Environmental Impact Assessment (EIA) Directive, which is a central piece regarding regulating shale gas projects. Indeed, "this directive ensures the permitting process include environmental issues with potential significant environmental effects, how public should be involved in decision making in granting permissions" (Tawonezvi, 2017: 11). Moreover, the Commission confirmed in a note in 2012 that chemicals used in the process of hydraulic fracturing should be registered under REACH.[71]

The conclusions reached by the Commission did not satisfy the EP which was adamant that specific legislation should be drafted to ensure that all aspects of shale gas exploration would be clearly defined in the law. The most vivid contestations came from a group of MEPs who expressed their concerns with a written declaration in June 2011 that called for a European-

[69] European Council. Conclusions, 4 February 2011, EUCO 2/1/11.
[70] Retrieved August 26, 2018 from http://ec.europa.eu/environment/integration/energy/unconventional_en.htm
[71] REACH is the European Regulation on Registration, Evaluation, Authorisation and Restriction of Chemicals. More information can be found at http://ec.europa.eu/environment/chemicals/reach/reach_en.htm

wide moratorium on shale gas exploration and production. The declaration ceased on October 2011 as the number of required signatures had not been reached.[72]

Nonetheless, the EP continued to keep interest regarding shale gas exploration and decided to invoke its power of own-initiative (INI):

> Own-initiative (INI) reports are an important working tool and political instrument for the European Parliament. INI reports often pave the way for new legislative proposals, exploring diverse topics of interest to Members, responding to Commission communications, and expressing Parliament's position on different aspects of European integration. They are thus important tools in the early phase of the legislative cycle trying to shape the agenda.[73]

The EP decided to launch two own-initiative reports in 2012. The first one was under the impetus of the committee on Industry, Research and Energy (ITRE) and was entitled "Industrial, energy and other aspects of shale gas and oil" (2011/2309(INI)).[74] The rapporteur for the report was Niki Tzavela from the Europe of Freedom and Democracy (EFD) political party. The second report was directed by the Committee on Environment, Public Health, and Food Safety (ENVI) and was entitled "Environmental impacts of shale gas and shale oil extraction activities" (2011/2308(INI)) with Boguslaw Sonik, from the European People's Party (EPP), being the rapporteur.[75]

These two reports had different purposes. The one drafted by the ITRE committee aimed to "call for robust regulatory regimes and the application of environmentally friendly processes and best available techniques (BAT) in order to achieve the highest safety standards".[76] The report from the ENVI committee, on the other hand, proposed "a thorough analysis of existing EU regulations applicable to shale gas and calls for special plans for water use, recycling of

[72] Written declaration available at http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//NONSGML+WDECL+P7-DCL-2011-0032+0+DOC+PDF+V0//EN&language=EN
[73] Retrieved August 26, 2018 from http://www.europarl.europa.eu/the-secretary-general/resource/static/ files/Documents%20section/SPforEP/Own-Initiative_reports.pdf
[74] Information regarding the report can be found at https://oeil.secure.europarl.europa.eu/oeil/popups/ficheprocedure.do?reference=2011/2309(INI)
[75] Information regarding the report can be found at https://oeil.secure.europarl.europa.eu/oeil/popups/ficheprocedure.do?reference=2011/2308(INI)
[76] Retrieved August 26, 2018 from http://www.europarl.europa.eu/sides/getDoc.do?type=TA&reference=P7-TA-2012-0444&language=EN

water, and disclosure of chemicals in fracking fluids."[77] However, these reports are non-binding pieces of legislation. They detail the position of the EP on the issue and calls the Commission to take action on the matter.

The action taken by the Commission took the form of a Recommendation (2014). As it was the case for the EP reports, recommendations are without legal force and are thus non-legal binding acts. This recommendation, which was preceded by a Public Consultation in 2013, covered most items that were discussed in the two EP reports but failed to include key aspects of shale gas regulation, namely mandatory environmental impact assessments.[78] The Recommendation complements the existing legislation and invites Member States to "follow minimum principles when applying or adapting their legislation applicable to hydrocarbons exploration or production using high volume hydraulic fracturing."[79] The Recommendation has since then been subject to evaluations, which are sent to the European Parliament, but no further regulation is expected regarding the exploration of shale gas and hydraulic fracturing at EU level. In summary, Table 8 shows the evolution of EU regulations on the issue of shale gas and hydraulic fracturing.

1.2.3. Selection of the Policymaking Process for Analysis

The primary research objective of this chapter is to measure the influence of interest groups on the shale gas debates and more precisely the role of astroturfing for that very purpose. This objective necessitates making methodological choices regarding the issue selection. As illustrated in the previous subsection, different institutions intervene at different levels of the decision-making process. For this case study, the policy that is under scrutiny is the two reports that were drafted by the European Parliament. This choice is explained by three reasons: political reasons, methodological concerns, and theoretical assumptions.

[77]Retrieved August 26, 2018 from http://www.europarl.europa.eu/sides/getDoc.do?type=TA&reference=P7-TA-2012-0444&language=EN

[78] Results of the Public Consultation can be accessed at http://ec.europa.eu/environment/consultations/uff_en.htm

[79] Retrieved August 26, 2018 from http://ec.europa.eu/environment/integration/energy/unconventional_en.htm

Year	Involvement of EU Institutions
2010	Resolution by the EP to ask the Commission.
2011	Conclusions by the Council to ask the Commission.
2011	Legal assessment by the Commission. Guidance on the application of the EIA Directive (2011/92/EU) and REACH.
2012	Own-Initiative Procedure by the EP. Two reports conducted by ITRE and ENVI committees.
2013	Public consultation by the Commission.
2014	Recommendation and Communication by the Commission.
2016	Evaluation of the Recommendation by the Commission, sent to the EP.

Table 8 Evolution of EU regulations regarding shale gas

First, it is interesting to look at the lobbying campaigns that were aimed at the EP because it is the institution that pushed the most to put the issue on the political agenda. Whereas the Commission downplayed the issue and repeatedly expressed that existing legislations were sufficient, the EP deemed otherwise and used its initiative power to start a political process. It is under the impetus of the EP that shale gas and hydraulic fracturing became a salient item on the EU political agenda with the direct consequence that interest groups would organize and start exerting their influence as soon as possible. It is in that sense that mobilization would grow and that many position papers of interest groups were published in 2012, once the EP declared that two reports would see the light of day. With the aim to influence the policymaking process as early as possible, it thus makes sense to look at the evolution of the two reports of the EP.

The second reason refers to the methodological apparatus that can be set in place to measure influence. The research design involves quantitative text analysis. First, position papers of interest groups are analyzed, and a mapping of the groups can be drawn based on the words and frames they are using. Second, legislative texts are added to the corpus. In order to see the evolution of the legislation, it is essential to collect documents at the beginning and the end of the policymaking process. The transparency rules of the European Union are helpful for that purpose, and the legislative observatory of the EP offers valuable information on each policy, including all the texts that are discussed and voted in committees and plenary

sessions.[80] This platform allows the collection of the initial draft of the two EP reports as well as the final versions voted in plenary.

Third and last, the choice of the EP rather than the Commission is based on a theoretical assumption. Research has shown that depending on group type, access is more easily granted to certain venues. In the EU, it appeared that the Commission is more likely to listen to business groups, and the EP to NGOs and civil society organizations (Bernhagen et al., 2015; Beyers, 2004; Bouwen, 2004; De Bruycker & Beyers, 2018). With the attempt to assess the potential influence of astroturf movements, it could be expected that private interests, which theoretically enjoy a closer relationship with the Commission, could rely on astroturf efforts to sway the EP. Selecting the EP for the case study thus theoretically improves the odds of detecting astroturf movements in the debates.

[80] See https://oeil.secure.europarl.europa.eu

2. Identification of the Interest Groups

The second step of the analytical process is to identify the interest groups that were active on the debate of hydraulic fracturing in the EU, but that also engaged in lobbying the European Parliament during the decision-making process that led to the adoption of the two reports on shale gas. First, the method to identify the groups is explained, before an overview of the whole selection is presented.

2.1. Selection Process

The method to identify the interest groups for this case study differs from the first one for three reasons. First and foremost, the political context is different, which means that the sources to find the information change. The tools that have been used for the US case study were specific to that context (national watchdog associations, national databases, and national press). In the case of the European Union, the transparency regarding the access to documents is arguably more developed than in the US, which means that the websites of the EU institutions provide a plethora of information. There is, of course, the Transparency Register. Albeit designed on a voluntary basis, the Register accounts a high number of the key players active on different issues at the EU level. Since 2014, high-level employees of the Commission have to divulge their meetings with interest representatives online. Also, from an institutional source, the list of all participants to the Public Consultation launched by the Commission was also examined. Another source that was useful in identifying interest groups was the media. There are a few media that are specializing in covering EU affairs: Politico, EURACTIV, EU Observer, to name a few. Following the news regarding shale gas was thus essential in observing the frames that were sent by interest groups and invoked by the journalists. Finally, the last source entailed queries on search engines including terms such as *position papers, shale gas, hydraulic fracturing,* in order to find the position from interest groups directly from their websites.

The second difference with the US is the nature of the documents that were analyzed. Whereas the first case study looked at the framing used by interest groups on their website, this case study focuses on analyzing position papers. The nature of the research question that aims at measuring lobbying efficiency explains why looking at position papers is more logical for this purpose. Position papers are indeed documents that are specifically written with the objective to explain a position on an issue and to make recommendations on specific

policies. Their phrasing is thus usually closer to actual policy documents than press releases for instance, which are written for journalists and the general public indirectly.

Finally, the third change concerns the timeline. In this case study, the choice has been made to look at the evolution of two reports that were written by the EP in 2012. This means that only position papers that have been published before the adoption of the reports in November 2012 can be considered for the corpus.

Following that method, 31 position papers have been collected and make up the corpus. This number of interest groups concur with the ones from similar studies (Klüver & Mahoney, 2015). Even though this number might seem low, it is a testimony of the way lobbying is conducted at EU level. Indeed, whereas the US see many individual players conducting lobbying campaigns individually, EU interest groups have a long tradition of organizing with umbrella associations. The 31 interest groups identified actually have a vast *coverage* (Baron, 2013). A business group like CEFIC represents 670 organizations by itself[81] and an NGO like Friends of the Earth Europe brings together 30 national associations and unites "some 5,000 local activist groups, and over two million supporters around the world."[82]

Additional interest groups have been identified through the selection process but have not been selected because they did not comply with the chosen criteria defined for this method. It is indeed essential to compare similar documents. Therefore, even though interest groups participated in expert meetings, demonstrated in front of the institutions, communicated on social media, or even had a website but failed to propose a position paper, they would not be considered for the analysis. The 31 interest groups have been divided according to the categorization used in Chapter 3, with 20 business association and 11 NGOs. The categorization was made easier thanks to the categories already identified in the Transparency Register (see Table 1).

2.2. Business Groups

Twenty business groups have been identified following this method (see Table 9). Among them, major trade associations with substantial financial and human resources have

[81] Data retrieved September 23, 2018 from http://www.cefic.org/About-us/About-Cefic/
[82] Text retrieved September 23, 2018 from http://www.foeeurope.org/about

published a position paper on the exploration of shale gas in the EU. They represent different sectors that could be impacted by the shale revolution such as the oil and gas sector (IOGP, Eurogas), the chemicals industry (CEFIC), the paper industry (CEPI), or the bottled water business (EFBW). Even though trade associations have a long tradition of representing various sectors at the EU level, companies also organized campaigns by themselves, such as Exxon or PGNiG, a polish oil and gas company.

Also, it is not surprising that American interests also took part in the debates and that the American Chamber of Commerce to the EU drafted a position paper on the topic. Having witnessed the shale revolution in the US, AmCham EU positions itself as an expert on the issue of shale gas and keeps track of the potential shale gas could represent for their companies in the EU.

Finally, it is interesting to mention two interest groups that have formed in 2011 and 2012 specifically around the issue of shale gas (Shale Gas Europe and Shale Information Platform). It demonstrates that this period symbolized the first stages of the issue lifecycle with the appearance of the issue on the political agenda and interest groups organizing consequently (Cobb & Elder, 1971).

#	**Interest Group Type**	**Short**	**Organization**
1	Business Group	AmCham	American Chamber of Commerce to the EU
2	Business Group	BE	BusinessEurope
3	Business Group	CEFIC	European Chemical Industry Council
4	Business Group	CEPI	Confederation of European Paper Industries
5	Business Group	EEF	European Energy Forum
6	Business Group	EFBW	European Federation Bottled Water
7	Business Group	EGAF	European Gas Forum
8	Business Group	ENeRG	European Network for Research in Geo-Energy
9	Business Group	EPSU	European Public Service Union
10	Business Group	Eureau	EurEau
11	Business Group	EuCh	Eurochambres
12	Business Group	Eurogas	Eurogas
13	Business Group	Euromines	Euromines
14	Business Group	Exxon	ExxonMobil
15	Business Group	IFIEC	Internation Federation of Industrial Energy Consumers
16	Business Group	InsightE	INSIGHT-E
17	Business Group	IOGP	International Oil&Gas Producers

18	Business Group	PGNiG	PGNiG
19	Business Group	SGE	Shale Gas Europe
20	Business Group	SHIP	Shale Gas Information Platform

Table 9 List of business groups selected for the corpus

2.3. Grassroots Groups

Eleven grassroots groups have been identified (see Table 10). Most of them are environmental NGOs with a long presence in Brussels and which have a long experience in interest representation at the EU level (CHEMTrust, Friends of the Earth, World Wildlife Fund). Others either act at the national level (Water UK) or address other issues than the environment (Corporate Europe Observatory). Two observations can be made regarding the selection. The first one is the absence of Greenpeace. This absence from the list is explained by the fact that Greenpeace was in the driving seat of a broader coalition of environmental association. The second is the presence of two grassroots movements that were created for the issue (Frack Free Europe and Responsible Energy Citizen Coalition).

#	**Interest Group Type**	**Short**	**Organization**
1	Grassroots Group	CEO	Corporate Europe Observatory
2	Grassroots Group	CHEMT	CHEM Trust
3	Grassroots Group	FFE	Frack Free Europe
4	Grassroots Group	FOE	Friends of the Earth
5	Grassroots Group	F&W	Food and Water
6	Grassroots Group	NGOCoalition	Coalition of NGOs led by Greenpeace
7	Grassroots Group	HEAL	Health and Environment Alliance
8	Grassroots Group	NF	NatureFriends
9	Grassroots Group	RECC	Responsible Energy Citizen Coalition
10	Grassroots Group	Water UK	Water UK
11	Grassroots Group	WWF	World Wildlife Fund

Table 10 List of grassroots groups selected for the corpus

3. Identification of Interest Group Frames

The third step of the analytical process is the framing analysis of the position papers published by the interest groups identified in the second section. Following the same quantitative method as for the first case study, the objective is to identify the clusters of words – or frames – that have been brought forward by interest groups individually. This cluster analysis is helpful in understanding the issue and the stakes that a potential new piece of legislation represents. This cluster analysis will pave the way for the correspondence analysis in the next section aiming to identify astroturf groups.

3.1. Research Design

The research design that is set up for the framing analysis it the same as the one used for the first case study. For that reason, fewer methodological explanations are detailed in this section, and greater attention has been granted to the results themselves. The only difference with the research design used for the US case is the different corpus that has been studied. The type of documents analyzed for this case study is position papers, which are a traditional tool for lobbying in Brussels, as detailed in the first chapter. A position paper is used by an interest group to present its position on an issue and has to do so by invoking frames. By selecting and highlighting certain aspects of the issue, the objective of an interest group is that its arguments and frames will be accepted by policymakers and be translated in the final policy document.

Thirty-one position papers have been gathered from the interest group websites. They were all published before November 2012, the date when the European Parliament voted on the two reports under scrutiny in this chapter. The position papers then all have been put together in a single text document, which was subsequently prepared for analysis in KH Coder. The same rules have been applied than for the first corpus, which include lemmatization, definition of stop-words, and harmonization of the terms (i.e., replacing % by *percent* throughout the corpus).

3.2. Cluster Analysis

The cluster analysis follows the same process as for the first corpus. First, the main clusters are extracted with quantitative text analysis. Second, the frames invoked by the interest

groups are studied individually in order to understand the storyline and the strategy on the shale gas issue.

3.2.1. Identification of Clusters and Frames

The first step of the framing analysis is to identify the clusters of words that are present throughout the corpus. In this corpus of 31 documents, the minimum frequency for a word to be considered in the document-word-matrix analyzed with KH Coder has been set to 55 occurrences. The total number of words taken into account for the cluster analysis is thus 70, which falls within the ideal scope for such studies. Table 11 shows the most frequent words used in the corpus. As it was the case for the US corpus, the word *gas* is overwhelmingly the most frequent with 1179 occurrences. The other most frequent words are mostly similar to the ones observed for the US case, with the exceptions of the particularities of the political system and words such as *Europe, EU, European, Commission,* and so forth. Interestingly, the term *US* is very frequent throughout the corpus and served as a point of comparison for the potential European shale revolution.

Words	**TF**	**Words**	**TF**	**Words**	**TF**	**Words**	**TF**
gas	1179	production	165	risk	136	technology	99
energy	417	development	158	exploration	134	hydraulic	95
shale	400	impact	153	price	134	new	95
Europe	303	US	153	Commission	117	emission	92
water	298	environmental	146	use	116	extraction	90
EU	263	percent	145	include	115	drilling	89
industry	243	resource	143	oil	115	fracking	89
shale	240	frack	141	fuel	108	supply	88
natural	238	unconventional	140	fracturing	106	public	87
european	210	chemical	138	source	101	process	86

Table 11 Most frequent terms for the EU corpus

By observing the co-occurrence of words in the different position papers, KH Coder provides a function to extract the main clusters of words from the documents automatically. Table 12 shows the two different clusters that have been extracted and the words that are most frequently used within them. The first cluster is topped with words related to trade and economics: *price, market, competitive, trade, negotiate*. Interestingly, a second theme seems to emerge and refers to energy security: *provide, security, secure*. The second cluster is more

technical and encompasses terms echoing the dangers of fracking on the environment: *environmental, fracking, chemical, water, health*.

Cluster 1	**Cluster 2**
price	process
market	use
lower	hydraulic
competitive	fracturing
trade	area
negotiate	environmental
beneficial	place
power	use
Europe	exploration
EU	public
States	extraction
business	resource
argument	fracking
provide	chemical
security	environment
secure	water
competitiveness	regulation
member	health
strengthen	time
range	impact

Table 12 Most prominent words distinguishing clusters in the EU hydraulic fracturing debate

3.2.2. Economic and Energy Security Frame

The first cluster of words is particularly interesting to observe given the two themes that seem to emerge. The first one is reminiscent from the US case and highlights the potential economic advantages of exploring shale gas in the EU. On the other hand, a recurring theme in this cluster is the reference to energy security. The co-occurrence of words for this cluster (Figure 14) is enlightening on that matter. On the left-hand side, a tight network of words is referring to the economic aspect of shale gas exploration in the EU. On the right-hand side, the network is more scattered and links the theme of energy security and energy independence. Interestingly, the term *Russia* is present in this cluster and embodies the

geopolitical role of energy. As explained earlier, the EU is heavily dependent on Russian gas. Developing shale gas exploration in the EU is here used as an argument for energy independence and strengthening the position of the EU on the international stage.

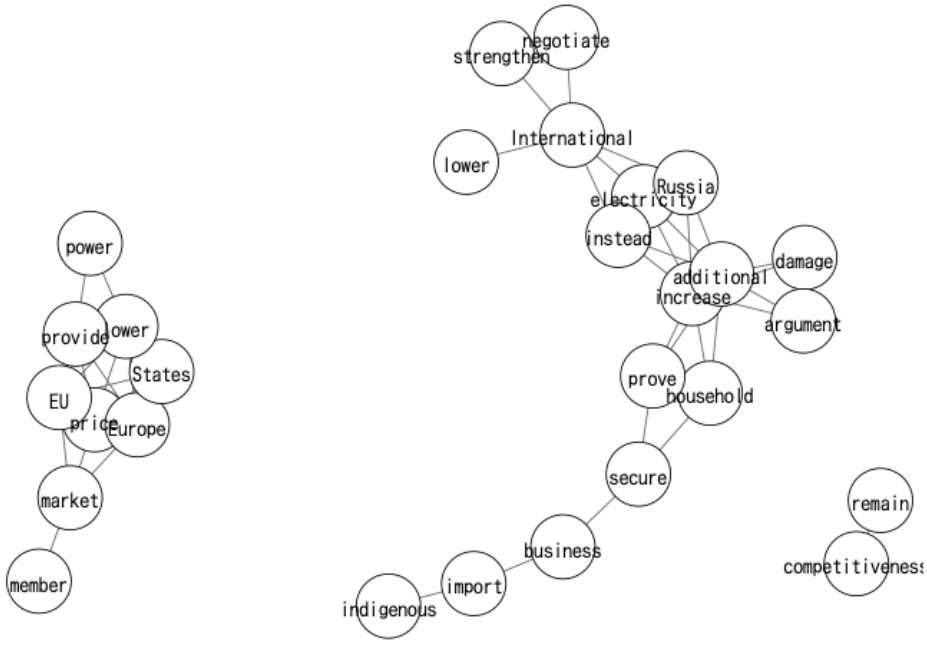

Figure 14 Co-occurrence of words for the first cluster of the EU corpus

The proximity of the arguments of economic nature and energy security is illustrated in the position paper of the International Oil and Gas Producers (IOGP). In it, they are advocating against more regulation in order to stay competitive, to keep jobs in Europe, and to secure energy supply at an affordable price. The recent success of shale gas exploration for the US economy is often taken as an example:

> Europe holds significant shale gas potential. Even without development of the scale that has transformed the US economy, European shale gas could contribute a wide range of benefits including:
> 1. More jobs: as many as 1.1 million by 2050 – in addition to those created by other sectors. Greater energy independence, cutting imports to as little as 62% down from an otherwise predicted 89% of demand in 2035
> 2. More growth: adding as much as 3.8 trillion euros to the collective EU economy between 2020 and 2050
> 3. More Secure energy: shale gas could reduce the EU energy dependence by as low as 62% from an otherwise predicted 89% in 2035

That is why it is worth exploring for European shale gas.[83]

In terms of framing, the most frequent words and the way they co-occur offer an interesting perspective from which to understand the position of interest groups advocating in favor of shale gas exploration in the EU and in favor of using high-volume hydraulic fracturing:

- Problem definition: The *EU* is *dependent* from *Russian gas*, which threatens *energy security*.
- Causal interpretation: The *EU* does not *produce* enough *energy* itself.
- Moral evaluation: /
- Treatment recommendation: The *development* of *hydraulic fracturing* would *secure energy security*, *create jobs* and *benefits* the *EU economy*.

3.2.3. Environmental Frame

In contrast to the economic and energy security frame, the environmental frame brings together terms that refer to the potential threat of hydraulic fracturing on the environment, the climate, the community, and public health more globally. Following the frames classification suggested by Semetko and Valkenburg (2000), the framing is here of human interest and presents the risks faced by European citizens. Figure 15 shows the network of words and how they co-occur in the interest groups' position papers relying on the environment frame. An active node can be identified on the right-hand side and summarizes the usual complaints addressed about hydraulic fracturing: *water contamination, public concerns,* as well as the use of the term *fracking*.

[83] Retrieved September 23, 2018 from https://www.iogp.org/policy-and-issues/#shale-gas

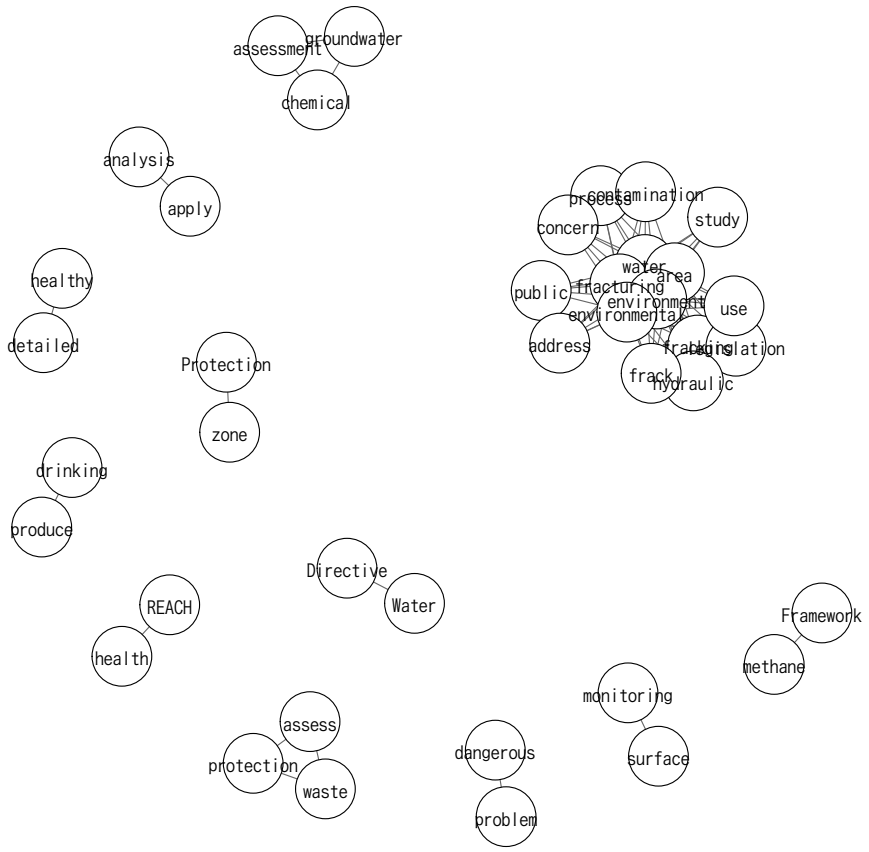

Figure 15 Co-occurrence of words for the second cluster of the EU corpus

For instance, this is the case of Friends of the Earth which explains that:

> Shale gas and other unconventional oil and gas pose a serious threat to the climate, the environment and local communities. The extraction of these fuels, like shale gas, leads to ground-water contamination, serious health impacts, and significantly higher carbon emissions than other fossil fuels.[84]

The rest of the network is much more scattered and seems to indicate arguments that are specific and used solely by certain interest groups. The connection between certain terms is indeed specific, such as the reference to the REACH program or to the Water Directive. A

[84] Retrieved September 23, 2018 from http://foeeurope.org/shale-gas-in-depth

hypothesis to explain such scattering is that these interest groups had specific positions regarding the regulation of shale gas and, depending on the interests they defend, decided to highlight specific aspects of the issue.

Regarding the framing process, the storyline fitting Entman's (1993) definition of a frame is similar to the ones used by the interest groups who invoked the environmental frame in the US context:

- Problem definition: *Hydraulic fracturing* is a *threat* to *climate change* and is *dangerous* for *public health*.
- Causal interpretation: The *process* of *extracting oil* includes *injecting chemical fluids* into the *ground*, with the *threat* of *contaminating groundwater* and *drinking water*, or *polluting* the *air*.
- Moral evaluation: *Fracking* pauses a *threat* and a *risk* to the *community* that should not be *ignored*.
- Treatment recommendation: There should be a *ban* on *fracking*. *Fracking* should be *stopped*.

3.2.4. Two Clusters for Two Reports

To see an economical frame and an environmental frame emerge is not surprising, for three different reasons. First, the results from the US case study already demonstrated the polarization of the debate regarding shale gas. Even though the political system is different, it is not surprising to observe that the same arguments are used in the EU context. On the one hand, opponents voicing their concerns regarding the impact hydraulic fracturing, and on the other hand, proponents claiming that shale gas will benefit the overall European economy. It is worth noting that proponents seem to add the energy security to their discourse more than the US interest groups, due to the geopolitical ties the EU has with Russia notably.

The second reason is that the results from this cluster analysis echo with the ones from studies conducted previously on the topic. Few researchers have focused on the framing of shale gas as a European issue (Bomberg, 2017; Metze & Dodge, 2016). More attention has been devoted to studying the issue of shale gas exploration in specific Member States such as the Netherlands (Metze, 2014), Poland (Lis & Stankiewicz, 2016), Spain (Alvarez, Herranz de la

Casa, & Mercado Saez, 2014), and the UK (Bomberg, 2015; Hilson, 2015; Whitton, Brasier, Charnley-Parry, & Cotton, 2017; Williams, Macnaghten, Davies, & Curtis, 2017).

Nonetheless, the results from these studies all point in the same direction when it comes to framing. The proponents of hydraulic fracturing use a dominant frame, which is economic growth. Energy security and reassurance regarding the technology are also predominant in the pro-fracking network. On the other side, the dominant frame invoked by the opponents to hydraulic fracturing is the risks. Risks to human health, to the climate, to the environment, and to water are found systemically in all the studies aforementioned.

The third reason arises from the issue selection itself. The focus has been set on the evolution of two reports of the European Parliament. One of this report was conducted by the ITRE committee while the other by the ENVI committee. The topics of the two reports were distinct. One was looking at the industrial aspects of shale gas on the one hand, and the second was devoted to the environmental impact of unconventional gas including hydraulic fracturing on the other hand. From that perspective, it is not surprising to see the two frames arise. The institutional demand configured the interest supply in terms of framing. By publishing position papers, the interest groups aim to influence policy in order to defend their interests. Their objective is thus to amend the initial text and to suggest recommendations. To use economic and environmental frames is thus perfectly coherent given the objectives of the interest groups seeking to lobby the MEPs on that particular issue.

4. Identification of Astroturf Groups

The fourth step of the analytical process is to identify astroturf groups. For that purpose, a correspondence analysis is performed in order to map the interest groups based on the words they used in their position papers. Then, attention is drawn to outliers, that is groups whose position differs significantly from the others sharing their group type. This section is also interesting in the sense that it represents a replication of the method used for detecting astroturf groups in the third chapter. By applying it to another political context, this method is thus tested to ensure its robustness.

4.1. Correspondence Analysis and Individual Framing Analysis

In order to detect and isolate astroturf groups, the method relies on a framing analysis of the interest groups' position papers on an individual level. A correspondence analysis provides a means to map all the interest groups individually depending on how they frame the issue of shale gas in the EU. In such a graph, words that are found across the whole corpus and that are thus used by a majority of interest groups are placed near the origin of the graph. These words are not distinctive and they do not define a cluster. As shown in Figure 16, the words like *gas, shale, fracturing,* or *use* are used by most, if not all, interest groups and therefore do not participate in the identification of a specific framing by an organization. Conversely, the words that are situated far from the origin are very distinctive of clusters. It means that these words are used very commonly by certain groups and are omitted by others. In this case, the terms *fracking, water, price, and market* are poles that are the base of clusters and frames.

The distance between words is also relevant in such graph. Words that tend to appear together in position papers are placed near each other on the graph, and the words that are rarely co-occurring are placed far away from each other. This helps in interpreting the graph in different ways. First, the proximity between several words permits to distinguish clusters of words and thus frames. On the right-hand side of the graph, it is thus possible to observe the economic frame with the proximity of the words *price, market,* and *cost*. On the other hand, it also helps to understand why and how specific terms are used in a frame. Whereas the presence of the term *UK* could have different meanings, when its position is next to words like *health* and *fracking*, it is possible to interpret it as a means of reference to the two earthquakes that shook the UK in 2011 and that led to a temporary ban. The term UK is

therefore likely used by opponents to hydraulic fracturing willing to use past catastrophes to illustrate the dangers of the technology.

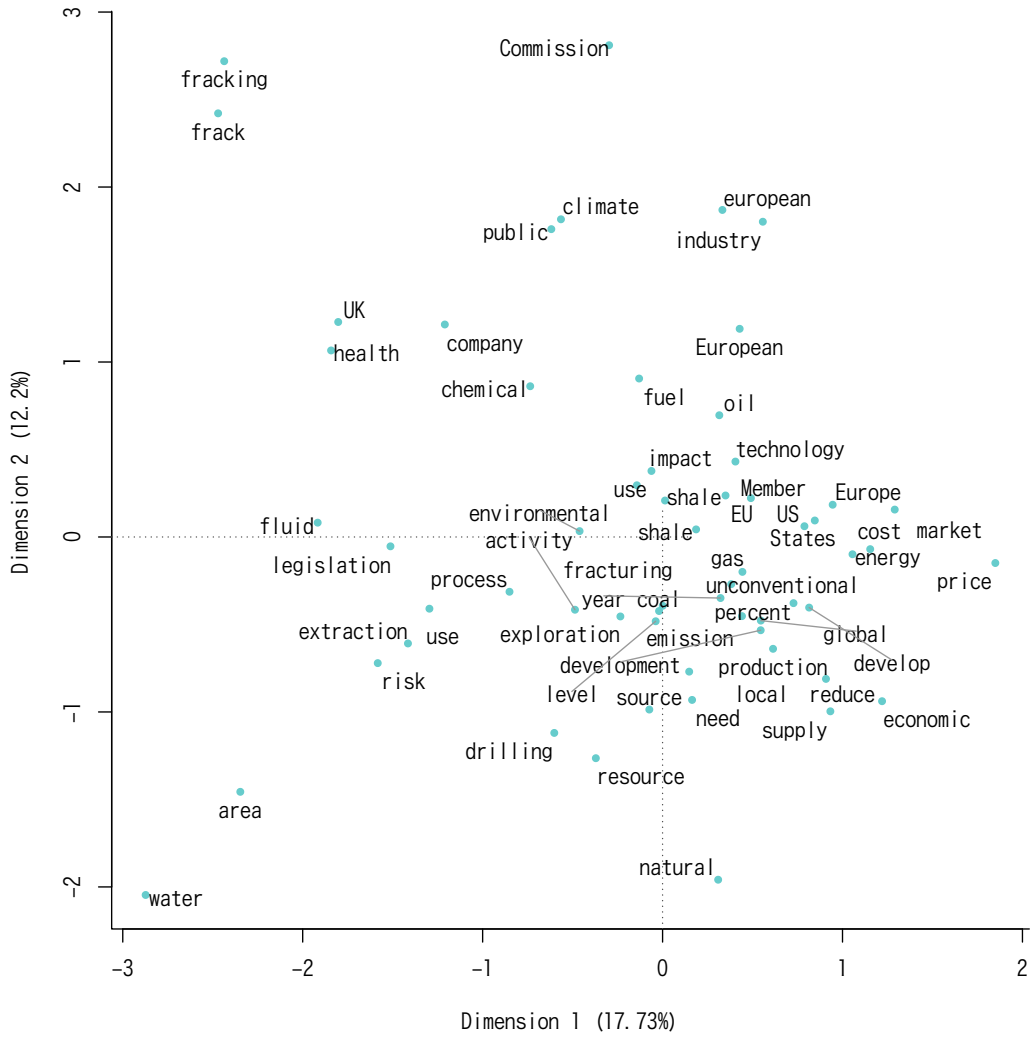

Figure 16 Correspondence analysis presenting the most frequent words in the EU hydraulic fracturing debate

The similarities with the US corpus are numerous. There is again a clear divide occurring on the x-axis between an environmental frame on the left-hand side and the economic frame on the right-hand side. One notable difference is the technical frame that was a clear cluster in the US case and seems to be more scattered across the dominant frames of the EU case. Given the specificity of the documents selected for the corpus, political terms are also more present than in the US case, and it is not uncommon to read words like *legislation, commission,* or *directive* in the position papers.

Figure 17 shows the position of the interest groups in light of the mapping of words from the previous graph. For visual comfort, the choice of data visualization has been to opt for two different graphs. However, Figure 16 and 17 could be superposed as the position of the interest groups is defined by the words that they are using most frequently.

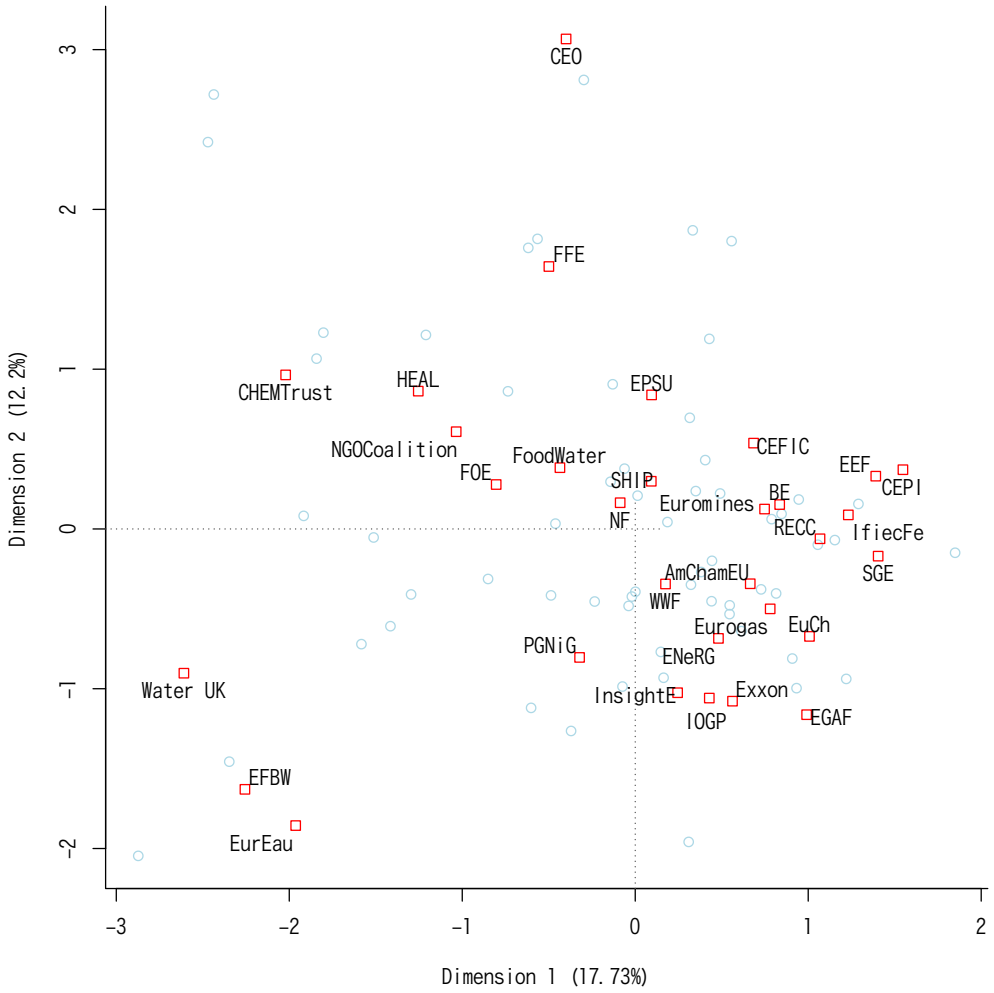

Figure 17 Mapping of the interest groups on the EU hydraulic fracturing debate

For example, the position of Corporate Europe Observatory is significantly defined by the word *Commission,* and, without surprise, Water UK, EurEau, and the European Federation of Bottled Water are located close to the term *water*.

The overall disposition of interest groups is coherent with the disposition of words. An intense concentration of organizations is using similar frames on the right-hand side of the graph. The same cannot be said about the organizations on the left-hand side of the graph, which

are distant and spread across the axis. This difference in terms of positioning can be interpreted as coalitions having organized to speak with one voice or, on the contrary, deciding to all address the issue individually. This could have an impact on the lobbying success of a coalition (Junk & Rasmussen, 2018). This hypothesis is addressed in the next section of this chapter.

4.2. Detecting Astroturf Groups

The second step in order to detect astroturf movements is to display the interest groups on the graph according to their group type: business group or grassroots group. The objective then is to identify outliers: groups that have framed the issue very differently from the others sharing their group type. On that matter, the results shown in Figure 18 are interesting. There are three grassroots groups who are close to, if not among, business groups and there are two business groups very remote from the others.

Regarding the latter, it is EurEau, the European Federation of National Water Services, and EFBW, the European Federation of Bottled Water. Their position on the graph is explained by their reliance on the word *water*. Even though those two groups are trade associations and therefore considered as business groups in this study, the interests they represent could be jeopardized by shale gas exploration. One of the main threats that are regularly expressed by opponents to hydraulic fracturing is the contamination of water areas, which is a risk that could threaten the core operations of EurEau and EFBW. For that reason, it is thus not surprising to see them advocate against shale gas exploration in the EU and to adopt a framing closer to grassroots groups while omitting the economic framing usually adopted by business groups.

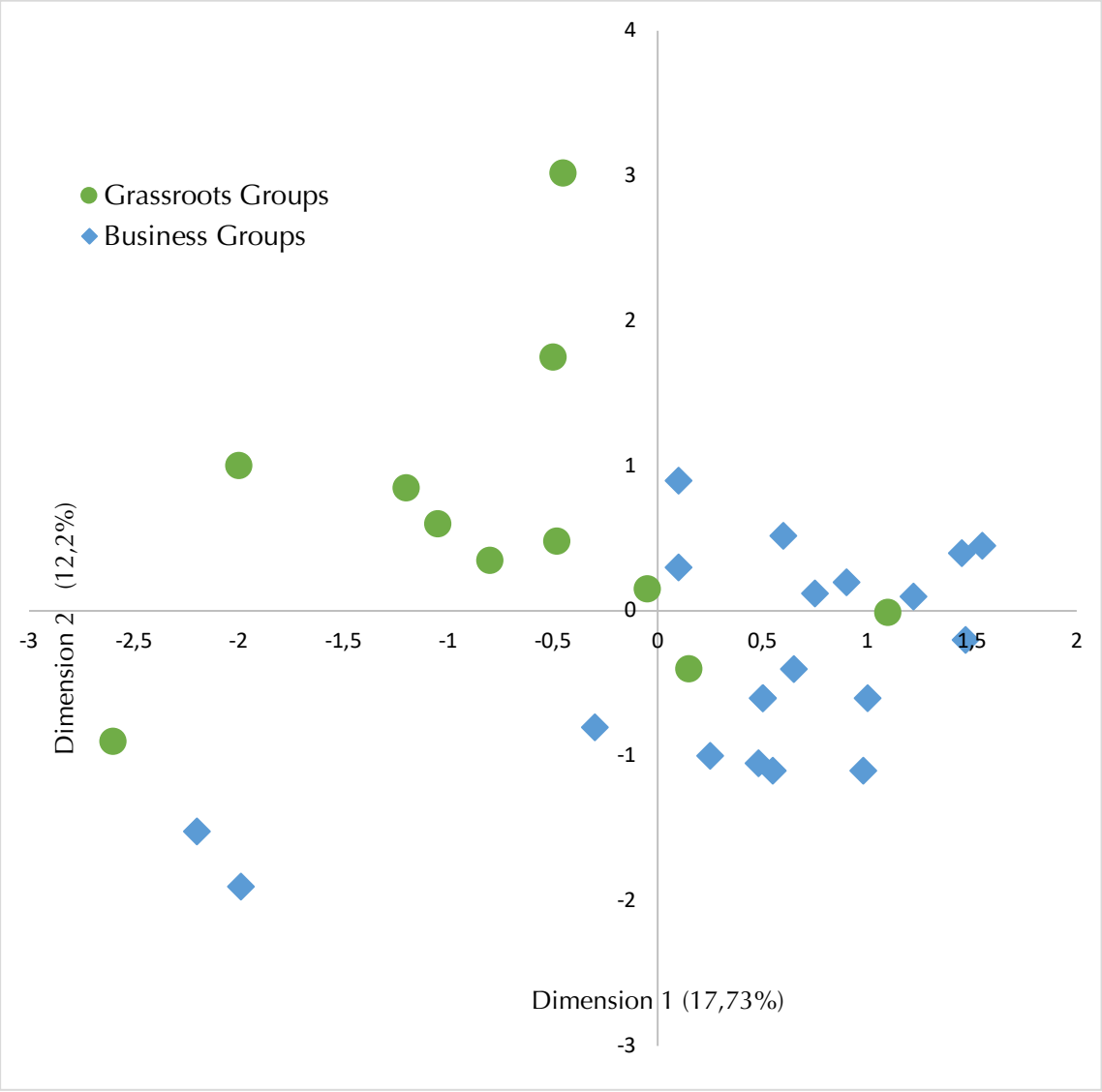

Figure 18 Mapping of the EU interest groups according to their type

Regarding the three grassroots groups that are positioned close to the core of business groups, different explanations can shed light on their positioning. As expressed earlier, a caveat to take under consideration when using correspondence analysis for the detection of astroturf groups is that the graph itself does not automatically label a group as astroturf. It solely provides useful information to detect groups that might present astroturf features. Again, astroturfing should not be envisioned on a binary basis, and groups might present only some features of it. It is thus the role of the researcher to investigate and verify that a group presenting itself as grassroots is indeed a gathering of concerned citizens organizing themselves on a voluntary basis, without concealed backing or financing of private interests.

The first group under scrutiny is Naturefriends. Some investigations demonstrate that Naturefriends is a genuine environmental organization with transparency regarding their funding. It is thus not an astroturf group. A closer look at its position paper allows understanding why their position is adjacent to business groups. Throughout their document, Naturefriends strives to question the arguments favorable to shale gas exploration. The position paper asks clearly for a ban on hydraulic fracturing and does so by putting economic, environmental, and political arguments in doubts. An example is when Naturefriends denies the energy dependence that could arise from using this technology:

> The extraction of "unconventional" gas and oil is no bridge technology! Some countries hope to become less dependent on Russia's gas deposits and refer to shale gas extraction as a transition technology on the way to the climate-neutral energy generation of the future. This argument is clearly questionable.[85]

The second group presenting a framing close to business groups is WWF. As one of the largest environmental movements in the world, WWF does not show signs of astroturfing. Since its creation in 1961, the association has enjoyed a large network of volunteers and a worldwide notoriety to make it one of the NGOs with the largest financial resources. Even though WWF is a genuine grassroots movement, their framing of the shale gas issue seems to differ from other grassroots movements. The explanation is similar to the one given for Naturefriends, by which WWF tries to counter the arguments from the business groups. In terms of framing, WWF calls for a ban on shale gas but does so by invoking the same frames as business groups. The objective here is thus to counter-frame the issue and make the economic aspect of shale gas a reason to abandon its development. In order to gain credibility, WWF notably quotes studies from the International Energy Agency (IEA) and from the Deutsche Bank:

> The economic benefits and low-price potential of shale gas have been overstated. It is unlikely that the low prices in the United States will last (indeed, prices have nearly doubled since the low in 2012) or that they will be duplicated in Europe. A study by Deutsche Bank suggested that "those waiting for a shale-gas "revolution" outside the US will likely be disappointed, in terms of both price and the speed at which high-volume production can be achieved." The IEA published the indicative costs of shale

[85] Retrieved September 25, 2018 from https://www.nf-int.org/en?option=com_content&task=view&id=598&Itemid =34

gas developments in Europe and suggested that the costs will be up to three times higher per unit of gas than in the US and similar to those of conventional gas.[86]

Last but not least is the Responsible Energy Citizen Coalition (RECC). This organization is arguably less renown than the two previous outliers, and their framing seems to be even closer to the ones of business groups. In order to gain more information on that association, an attempt was made to access their website, but it appeared that it closed in 2013. For that reason, the website http://www.archive.org/ has been used. This website takes screenshots of millions of pages on the Internet each day. This method allowed to access all pages of RECC website in 2012, the year of the EP vote on the two reports.

This organization presents itself as an association of "natural persons, representatives of self-governments and local authorities as well as social organizations".[87] This definition thus fulfills the first criterion for being considered as an astroturf group. The second is that an anonymous source is behind the organization and provides it with resources, be it human, logistical, or financial. On that regard, no information regarding their funding is available on their website.

Finding information about that matter gets even more complicated as RECC is not registered on the European Transparency Register. This observation is essential for two reasons. First, the absence from the register raises a red flag on the true nature of RECC. Second, it illustrates the limits of a transparency register that is based on a voluntary basis. A mandatory transparency register could provide an excellent tool to counter astroturf efforts. Either the astroturf group would have to register and therefore share information regarding their funding, or it would limit its influence, notably by having its access denied to certain venues or certain policymakers.

It is after further investigation that an actual link between RECC and industries has been made. During the lobbying campaign, RECC organized an event within the premises of the European Parliament entitled "How shale gas will transform Europe?". The representative of RECC was Henryk Doering, mayor of Krokowa, a Polish municipality of 3,550 inhabitants.

[86] Retrieved September 25, 2018 from http://awsassets.panda.org/downloads/wwf_shale_gas_position.pdf
[87] Text retrieved September 25, 2018 from http://re-cc.eu/about/ via http://archive.org/

However, the investigation led in this study showed that Henryk Doering had close ties with PGNiG, Poland's largest oil and gas company, which holds most permits for shale exploration in the county.[88] The connection between Henryk Doering and the industry is thus questionable, and the lexical analysis performed in this study confirms this trend.

Further investigation left no doubt regarding the fact that RECC is a front group for the industry. Under the impetus of watchdog NGOs, it appeared that this movement was actually funded by PGNiG, KGHM, and LOTOS, three companies active in the exploration of shale gas in Poland and in Lithuania, two countries presenting high potential of natural gas resources. Given the anonymity with which the three companies created this campaign and the fact that it presented itself as a citizen movement, it can thus be clearly stated that RECC is an astroturf group.

Regarding their framing, the arguments brought forward by RECC are coherent with the ones employed by the other business groups and rely heavily on economic arguments. However, an important part of the position paper is devoted to the technological prowess of hydraulic fracturing and often refers to successful cases of exploration that had happened in Poland:

> The experience and assumption from the already executed exploration works in Poland unambiguously prove that the unconditional observance of the provisions of the obligatory law along with technological regime practically eliminates any influence of executed works upon the natural environment.[89]

One aspect of the position paper that draws attention is the technical wording throughout the document. The above excerpt illustrates that fact and denotes with the traditional rhetoric used by genuine grassroots movements.

Following the analysis, it thus appeared that one astroturf group took part in the debate on the shale gas issue before the vote of the EP on the two reports. As shown in Figure 19, RECC appeared as a clear outlier from other genuine grassroots movements, and an investigation

[88] Information retrieved October 5, 2018 from http://pgnig.pl/dzialania-spoleczne/odpowiedzialna-energia/konferencja-2012/prelegenci#357503-15
[89] Text retrieved October 5, 2018 from http://re-cc.eu/about/ via http://archive.org/

demonstrated that it was actually a front group used by the industry to advance its political agenda.

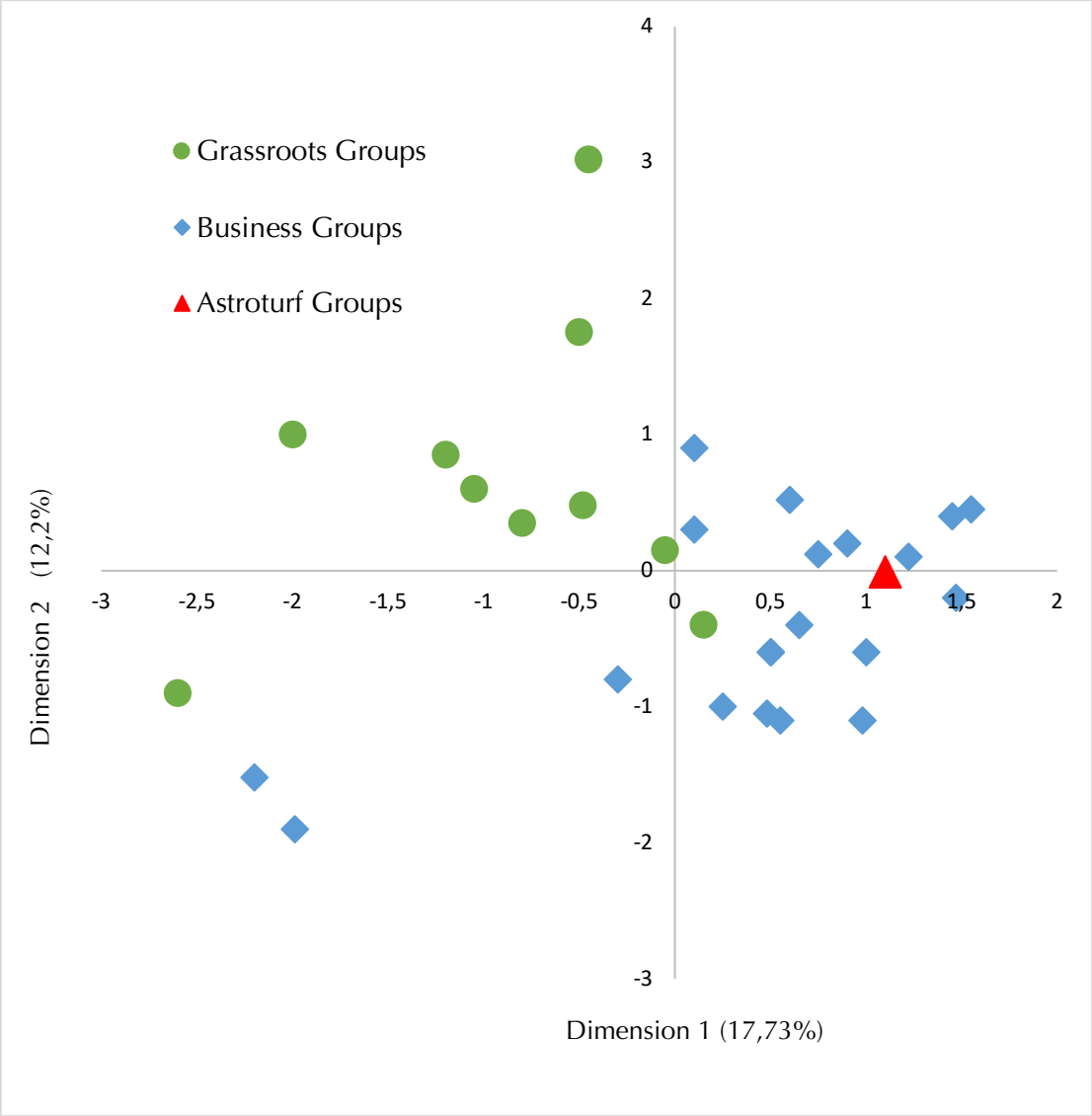

Figure 19 Astroturf groups in the EU hydraulic fracturing debate

5. Measuring Lobbying Success

The fifth step of the analytical process addresses the daunting task of developing a method to measure the lobbying success of interest groups, and astroturf groups in particular, on the issue of shale gas in the EU, and more precisely the influence that interest groups have exerted on the MEPs on the vote on two reports initiated by the European Parliament. The first subsection presents the theoretical aspects of the concept of lobbying success. The second subsection details the reason for choosing to look at the lobbying success of coalitions, and the conceptual implications of studying collective framing. The third subsection presents the results of the framing analysis and the measurement of influence by interest groups. The last subsection presents the limits of the method and provides recommendations for further research on the topic.

5.1. How to Measure Lobbying Success?

When detailing the research questions in the second chapter, the review of the literature showed that the question of measuring lobbying success is an arduous task. There are already numerous obstacles to assess the influence of interest groups on public policy scientifically, let alone assessing the influence of astroturf groups. Indeed, while studying the influence of legitimate interest groups on policymakers already presents many caveats, adding groups that operate underground makes it even more difficult from a methodological perspective.

This claim can be illustrated by the literature review on lobbying success that was made in the second chapter. In brief, first scholarly research on the topic decided to assess the influence of lobbyists on policies by conducting semi-structured interviews with them (Baumgartner et al., 2009; Heinz et al., 1993; Mahoney, 2007a). This method has limits as it relies on the honesty of the interviewees. However, the first rationale for a lobby group is to survive (Lowery, 2007). This survival often depends on securing the contributions from their members. Therefore, lobbyists can be tempted to overstate their influence on the policymaking process to convince their members to continue paying their membership fees. Considering semi-structured interviews with astroturfers presents even more caveats. Gaining access would prove extremely difficult, and an interview would require for the astroturfers to admit that they participated in non-ethical activities.

In contrast with these qualitative methods, researchers have conducted quantitative analysis called preference attainment (Bernhagen et al., 2014; Dür & Bièvre, 2007; Klüver & Mahoney, 2015). As the name suggests, this method consists in looking at the initial preference of interest groups and comparing them with the outcome of a policy proposal. This method is well-suited for studying lobbying success in the US given its winner-takes-all environment. The policymaking process in the EU is much different and is based on compromises and amendments. The objective for an interest group at EU level is not to solely support or oppose a policy proposal, but also to try to introduce amendments in the final piece of legislation.

It is in that sense that interest groups frame issues in a specific way, to convey their worldviews and insist on the specific items that should be amended or not. In light of this, the equation of Ajzen and Fishbein (1980) about opinion-making is particularly enlightening (see Figure 20). The authors explain that opinion is a result of the sum of considerations factored by their weights. In other words, politicians attribute a certain degree of importance to certain issues.

$$\text{opinion} = \sum_{i=1}^{I} \text{consideration}_i \times \text{weight}_i$$

Figure 20 Opinion-making equation (Ajzen and Fishbein, 1980)

This model has been applied to the theory of framing effects by Leeper and Slothuus (2015). Their findings show that emphasis framing is useful to make considerations more critical, or in other words, to give them more weight. Framing is not considered to be a successful tool in bringing new considerations, or putting new items on the political agenda, but could prove valuable in making these considerations more or less important. Put simply, successful frames brought by interest groups can be mobilized by policymakers and could be symbolized by changes in a policy document or by the adding of new amendments. In the case of EU lobbying, small changes in the weights (through amendments for instance) can have significant consequences for an interest group.

The choice of selecting quantitative text analysis is relevant for this case study as well, as it is a method that allows understanding the role of framing on public policy and that magnifies the changes of amendments in a piece of legislation. For that purpose, the draft versions and the final versions of the two reports of the ENVI and ITRE committees are incorporated into the corpus. By performing a correspondence analysis, the evolution of the two reports can be observed in terms of framing. The evolution of the position of a report on the graph would significate a change in the words and the frames that are used. The direction that a report has taken would thus be interpreted as a successful outcome for the coalition towards which the report has evolved.

The decision to focus on coalitions rather than individual lobbying success has been explained in the second chapter. To sum it up, it could prove arduous and misleading to try to isolate the influence of a single interest group on a public policy debate. It is preferable to understand the political arena as a place where interest groups showing similar frames form a coalition sharing a dominant camp frame (Junk & Rasmussen, 2018).

5.2. The Influence on the Reports

The method to measure the lobbying success consists in a correspondence analysis. Four documents have been added to the existing corpus made up by the 31 position papers from interest groups. These four documents are the initial ITRE committee draft report published on March 30, 2012, the initial ENVI committee draft report published on April 11, 2012, and the two final reports on the "Industrial, energy and other aspects of shale gas and oil " and on the "environmental impacts of shale gas and shale oil extraction activities" adopted by the European Parliament on first reading on November 21, 2012.[90]

As demonstrated by Klüver and Mahoney (2015) in the issues of CO_2 emissions and on passenger rights, this method permits to observe the evolution of framing from the initial position of an institution towards the final text. As interest groups sharing the same frames are de facto positioned closely to each other with a correspondence analysis, the direction that the report took on the graph can be interpreted as a lobbying success by the coalition towards which the report has moved.

[90] All documents have been retrieved October 5, 2018 from the Legislative Observatory website of the European Parliament: https://oeil.secure.europarl.europa.eu/oeil/home/home.do

The inclusion of new documents in the corpus has consequences. In order to generate the graph, KH Coder first identifies the most frequent and significant words, that is by excluding stop words. The software then generates a document-word-matrix from which the positions of words and interest groups are deducted. The addition of new documents in the corpus means that this matrix of words changes. Certain words become more significant, while others become less relevant. As a consequence, the overall position of interest groups can slightly differ from the first framing analysis.

Figure 21 shows the results of the correspondence analysis with the addition of the four institutional documents. Even though the position of certain interest groups slightly moves, the overall interpretation stays the same. On the right-hand side, a coalition of business groups are inextricably linked and is joined by the astroturf group RECC. Bottom left, three outliers from grassroots and business groups are isolated and defined by their reliance on the water aspect of the issue. The remaining grassroots groups are more scattered, with a core on the left-hand side of the graph, a couple situated closer to the business coalition, and two clear outliers who have invoked personal frames. On that topic, these unusual positions are explained later on in the last subsection of this chapter. On the graph, the institutional documents are marked with an X and are linked with an arrow. At the origin of an arrow is the committee draft report and at the end is the final text adopted by the EP.

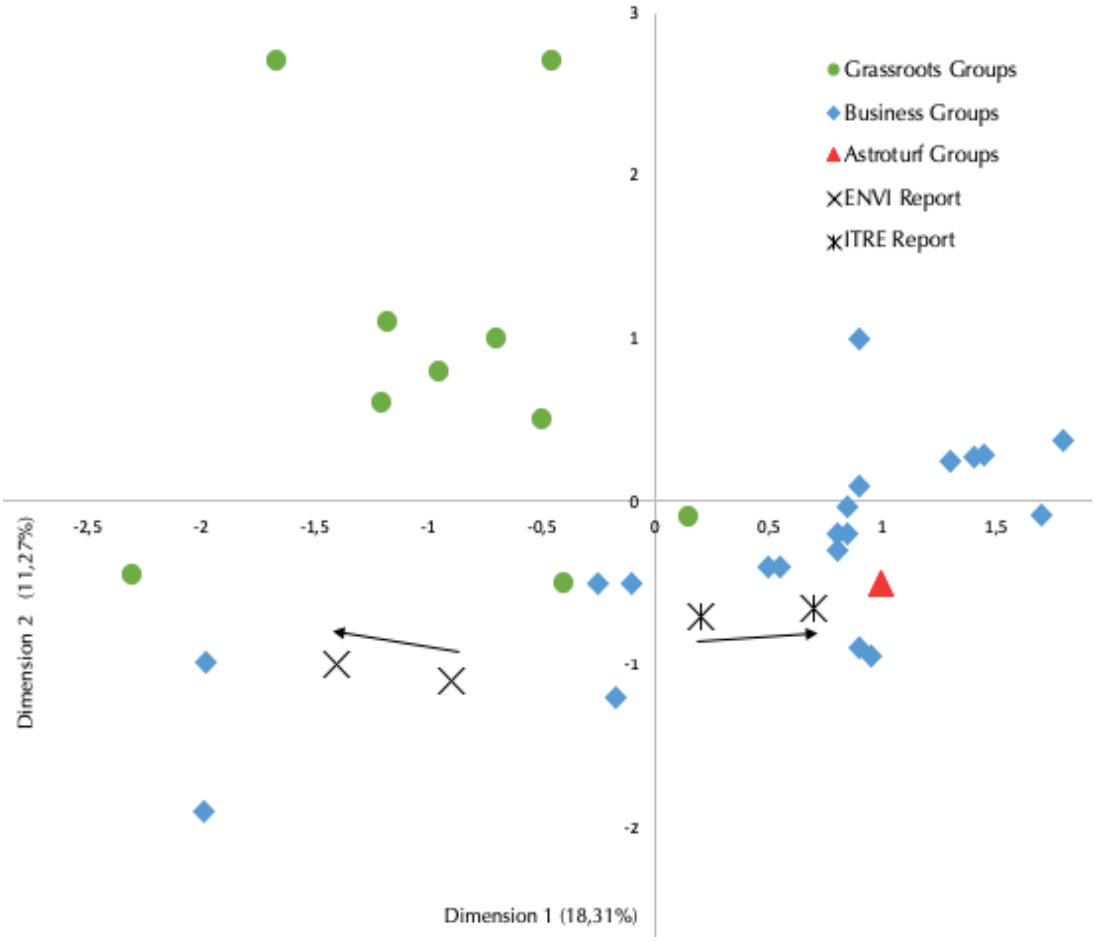

Figure 21 Evolution of the two EP reports

The first observation from Figure 21 concerns the initial position of the committee reports. Logically, the ITRE draft report is located on the right-hand side of the graph, and its position is justified by the use of words from the economic cluster. It is not surprising given the title of the report and the fact it was led by the ITRE committee. Parallelly, the ENVI draft report is positioned on the left-hand side, further away from the economic cluster and using terms linked with the environmental cluster. However, its initial position is isolated from a distinct coalition and is in a zone between the *water coalition* and the core of grassroots groups.

Regarding the evolution of the reports, the final version of the ITRE report has a framing that has moved to the right. This means the adopted text has been modified and comprises more significant words from the economic frame, and therefore sharing a position more similar to the ones of the interest groups positioned in the right-hand side of the graph, including the

astroturf group. For the ENVI report, the evolution of the document also moves away from the center of the graph and goes to the left-hand side. Interestingly, the direction that the report takes is not going to the core of grassroots groups using the environment and risk frame, but more towards the three interest groups that have made water a priority. As the final text adopted by the EP moved significantly towards that pole, it means that the word *water* is preponderant in defining the frame of the document and can thus be considered as a success from that small coalition.

Such considerations are interpretations from the correspondence analysis. In order to validate them, closer attention has been paid to the evolution of the content of the two reports under scrutiny. The objective is to look at the text directly and observe the evolutions in terms of framing. The idea is to look at the emphasis that is put on certain aspects of the issue and to assess whether a difference can be observed between the draft documents and the final texts adopted in plenary.

The initial ITRE draft report counted 33 items falling under three categories: the *energy aspects*, the *industrial and economic aspects*, and the *public opinion and best practices*. Each item presents a clear and single aspect of unconventional gas. The final text has been amended and counted 48 items. Fifteen items have thus been added and other considerably amended. A move towards the economic frame is noticeable, which confirms the results interpretation from the correspondence analysis, by which the business associations has managed to lobby the ITRE committee to include changes and amendments in the final text. For instance, the final text shows the addition of items that embody clear concerns from the industry such as the issue of competitiveness, which was absent in the initial draft:

> [The European Parliament] … Notes that gas prices in the US are still falling, which poses additional competitiveness challenges for the EU.

The ENVI report has encountered even more changes. The initial report counted 23 items under three themes: a *general framework*, the *environmental aspects of hydraulic fracturing* and the *public participation and local conditions*. The final report, on the other hand, counted 68 items, almost three times as many. The emphasis on the water issue is indeed perceivable in the amended texts with addenda such as:

> [The European Parliament…]
> Stresses the need for scientific studies regarding the long-term impact on human health of fracking-related air pollution and water contamination;
>
> Recognises the relatively high-water volumes involved in hydraulic fracturing given that water is a particularly sensitive resource in the EU; highlights the need for advance water provision plans based on local hydrology with consideration for local water resources, the needs of other local water users and capacities for wastewater treatment
>
> Calls on the industry, in transparent collaboration with national regulatory bodies, environmental groups and communities, to take the measures needed to prevent the status of relevant bodies of groundwater from deteriorating, and thereby maintain good groundwater status as defined in the Water Framework Directive and the Groundwater Directive.

The concerns regarding the environment are patent as well as the shadow of the water industry willing to preserve a key aspect of their business: the preservation of the groundwater.

In light of the reading of the reports, the interpretations that have been inferred from the correspondence analysis are coherent and tends to validate the method used here to measure lobbying success. Analyzing the evolutions of frames of pieces of legislation is helpful in understanding the context and in enlightening about the evolutions of the debates over an issue, but crossing the framing evolution of the legislative documents with the frames from interest groups allows a better understanding of the interests that have been taken into account during the policymaking process.

The objective of this chapter is to assess the role of astroturfing in policy debate and to measure its influence. Isolating the influence of a single interest group is hard to demonstrate. The only cases where such individual influence has been demonstrated are when politicians directly copy-paste amendments suggested by interest groups.[91] Nonetheless, the method used in this study allows observing the interests that have been taken into account by the EP in terms of coalitions. The results show that the coalition in which the astroturf group took

[91] A recent case was brought to light by Belgian media Canvas, which demonstrated how Louis Michel, a Belgian MEP, had copy-pasted tens of amendments from industries on data protection issues.

part has been successful in shaping the ITRE report closer to their position, which relies on highlighting the economic benefits of exploring shale gas. On the other hand, this coalition was not successful in influencing the ENVI report, which moved away from the business-oriented coalition and shifted towards a smaller coalition made up of interest groups interested in the preservation of water. In-depth analyzes of these results are detailed in the last subsection of this chapter.

5.3. Limits to the Method

In addition to the methodological obstacles of studying astroturfing as a research object and the discussions that have sparked between researchers regarding the validity of quantitative text analysis to measure lobbying success, which is explained at the end of the second chapter (Bunea & Ibenskas, 2015; Klüver, 2015; Klüver & Mahoney, 2015), two additional limits regarding the methodology used in this chapter can be expressed.

First, quantitative text analysis should be used as a way to identify trends and not to offer an accurate statistical measure of influence. Figures 19 and 21 are illustrative in that regard. The difference between the two graphs is explained by the addition of four documents in the corpus of texts analyzed. This addition had an impact on the position of interest groups on the graph. This means that changes in the corpus, even slight ones, can have an impact on the results. However, it should be noted that the changes were small as well. The position of certain interest groups had slightly deviated, but the overall interpretation of the results was still the same, with the same clusters of words still identifiable. This means that a correspondence analysis is a tool that offers results that needs a reflexive and an analytical interpretation by the researcher, just as it is the case when the method is used to identify astroturf groups. The results of correspondence analysis must, therefore, be interpreted carefully as they do not always give definitive answers. They allow to raise red flags and give elements of answers that must be consequently confirmed by the researcher.

The second limit is the choice to focus on position papers. As explained in the first chapter, position papers are only one tool among a more extensive action repertoire. Such a study of influence measurement does not take into account other actions that could have had an influence on the debate, such as demonstrations, face-to-face meetings, or political advertising. However, in terms of preference attainment, position papers remain an

interesting document to analyze given the fact that it summarizes the position of an interest group and the outcome that is preferred for a specific public policy initiative. Moreover, position papers offer similarities with legislative documents such as the reports studied here and thus provide a ground for comparison. The study of position papers in the framework of quantitative text analysis is not a silver bullet for the study of lobbying success but is extremely useful in giving insight and trends about which interests have been taken into account.

6. Results Interpretation

Following the presentation of the results, this section offers an interpretation of them in light of the research objective that was established in this chapter, that is to design a method to measure the lobbying success of astroturf lobbying on public policy. The emphasis is thus put on the only astroturf group that was detected in this case study: Responsible Energy Citizens Coalition. A comprehensive presentation of the lobbying and communications of this organization is presented before its role and influence within a broader coalition are explained.

6.1. The Case of Responsible Energy Citizens Coalition

Following the detection of Responsible Energy Citizens Coalition as an astroturf group, an analysis of their overall communication and lobbying campaign has been performed in order to understand its role in the shale gas debate.

In addition to the position paper that was published, RECC sent a letter to all Members of the European Parliament explaining the benefits of hydraulic fracturing. This practice is of course completely democratic, and citizens, as well as organizations have the right to contact their MEPs to express concerns on an issue. It is one of the roots of lobbying in democracy. However, two problems emerged regarding the sending of emails in the case of the vote on the two reports. First, RECC did not mention the real sponsor that was behind that campaign. Not a single mention of the industries that are funding the organization was mentioned in the emails. Second, even though "it is true that as MEPs we receive thousands of emails" as Corinne Lepage said during the debate in plenary, it appeared that an unusual number of emails were directed to MEPs to advocate for shale gas exploration. More precisely, it is especially the ITRE committee that was targeted by the emails rather than the ENVI committee. When looking back at Figure 21, it seems indeed that the coalition advocating for hydraulic fracturing had for objective to influence the ITRE report, and the results show that the framing of the final report ended up with more similarities with the frames from that coalition.

Along with the position paper and the email campaigning, a major part of the lobbying campaign took actually place in the premises of the European Parliament. On Wednesday November 21, 2012, MEPs were asked to vote in plenary session in Strasbourg on the two

different reports on shale gas. The issue of hydraulic fracturing is controversial and has seen many interest groups trying to influence the debate. Corinne Lepage, MEP for the ALDE political party, defined the situation as intense when she said that "I have been an MEP for three and a half years and I can honestly say I have never seen such intense lobbying as there has been around this report."[92]

One of the lobbying actions Corinne Lepage was referring to was notably an event that took place within the premises of the European Parliament the day before the vote. The event, entitled *How Shale Gas Will Transform Europe?* (see the poster in Appendix 9), was sponsored by three conservative MEPs who gave the authorization to RECC to hold the event inside the Parliament, in the hallway in front of the plenary room. This organization presented itself as an association of "natural persons, representatives of self-governments and local authorities as well as social organizations".[93] Their objective was to convene different speakers in order to inform MEPs about the implications of shale gas exploration in Europe. The event was organized with professional public relations tools such as flat screens, impressive sceneries, posters, interactive games, and was followed by a fancy cocktail reception (See pictures in Appendix 10). However, nowhere on the posters or on their website did they explain who was funding the event and the organization itself. This raised concerns from politicians such as Carl Schlyter, who explained on behalf of the Verts/ALE Group:

> I would firstly like to remind people about Ms Harms's request for the Conference of Presidents to quickly reach a decision on the exhibition outside. Our rules for lobbyists state that it must be clearly stated who the sender is. If a lobbyist claims to represent the citizen yet is in reality a company, then this is not in line with our guidelines. I hope you are able to reach a decision quickly.[94]

The literature review on astroturfing has shown that one of the objectives for an astroturf group is to keep its real identity secret for as long as possible. Being uncovered could indeed

[92] Retrieved October 5, 2018 from the debate transcript from the plenary session: http://www.europarl.europa.eu/sides/getDoc.do?type=CRE&reference=20121120&secondRef=ITEM-011&language=EN
[93] Text retrieved October 5, 2018 from http://re-cc.eu/about/ via http://archive.org/
[94] Retrieved October 20, 2018 from the debate transcript from the plenary session: http://www.europarl.europa.eu/sides/getDoc.do?type=CRE&reference=20121120&secondRef=ITEM-011&language=EN

damage the reputation of the instigator of such practices and the results could be counter-productive. In this case, the declaration from some MEPs tends to show that concerns were emitted towards the identity of the true sponsors of the exhibition. A reason that explains the debunking of RECC is the difference between the public relations campaigns they have set in place and the ones usually organized by genuine grassroots movements. A telling example is the exhibition. Demonstrations led by NGOs and activists usually also take place in symbolic places, but usually outside of the institutions. Such grassroots mobilization is used to attract media attention and put pressure on the policymakers. In the case of the event *How Shale Gas Will Transform Europe?,* the pictures show that it actually looked like a corporate event. The event is organized professionally, with hostesses welcoming guests, drinks, video animations, flat screens, organizers wearing suits and ties, and the list goes on.

The visible differences between this exhibition and usual grassroots mobilization found an echo in the communication material as well. Whereas NGOs often rely on public frames and include call-to-actions in their communications, the position paper from RECC is highly technical and clashes with the communication of grassroots movements. This observation confirms the underlying assumption that led to focus on a methodology based on framing to detect astroturf groups. They are cornered in relaying the frames of private interests and can therefore not communicate like genuine grassroots movements.

6.2. Coalition Building

One of the factors explaining why private interests see astroturfing as a way of improving their likelihood to influence the making of a policy is the fact that it can strengthen a coalition of like-minded interest groups. From a historical perspective, different periods can be identified in the way coalitions were perceived as a way to conduct lobbying activities (Guéguen, 2007). In the 70s and the 80s, sectoral associations were a classic spearhead of lobbying, which translated in the creation of numerous trade associations. Between 1990 and 2000 was the decade of concentric coalitions. It means that interest groups would not only join forces with industries from the same sectors but would enlarge their circles to suppliers to look as big as possible. In recent years, successful coalitions are considered as transversal. It means that interest groups should not only cooperate with similar organizations but should be part of broader coalitions mixing business interests and civil society movements.

It is not always easy to conciliate the differences between business and civil society, which means that creating transversal coalition can be arduous. This is in that sense that private interests might see the appeal of manufacturing their own grassroots support. By so doing, they present a front that supposedly takes into account private and public interests, with the advantage of controlling the communications from their astroturf group.

To speak with one voice as a coalition is essential. This observation is supported by theoretical and empirical evidence (Junk & Rasmussen, 2018). A coalition is more likely to achieve lobbying success if they share the same frames. Conversely, individual frames have smaller chances to be taken into account by policymakers. In this case study, these observations are confirmed. The coalition led by business groups relied on similar economic frames, and this proximity is evidenced in Figures 19 and 21. Their lobbying success can be confirmed in terms of preference since no moratorium was voted across the EU, and since there was no new binding regulation on hydraulic fracturing.

On the other side, the opponents to hydraulic fracturing have experienced mixed success. The ENVI report has arguably taken into consideration the interests from groups who lobbied on the water issue. However, the results for the other grassroots groups are underwhelming. One of the reasons that can explain this is precisely the lack of proximity between these groups in terms of framing. Figure 19 is enlightening on that topic. Certain grassroots groups had specific objectives and individual messages. Corporate Europe Observatory notably campaigned on the overrepresentations of industry representatives in advisory groups of the European Commission. CHEM Trust focused on the issue of chemicals and the necessity for companies to disclose the ones they used in their hydraulic fracturing mix and to comply with REACH regulations. WWF and NatureFriends decided to focus their communication campaigns on countering the economic arguments advanced by the industry. In comparison to the proponents' coalition, the opponents' coalition appeared very scattered with many different messages to convey to the policymakers. In the end, the results of this study confirm the theoretical assumption that collective framing enhances the chances of lobbying success in comparison to individual efforts.

6.3. Science Capture

Counter-intuitively, the astroturf group RECC also participated in capturing the scientific debate surrounding the hydraulic fracturing technology. It is counter-intuitive in the sense that grassroots movements are historically not the groups possessing expert knowledge on an issue. Indeed, industries usually have much data on the scientific aspects of a specific issue because of the fact that they know the reality of the field (Miller & Dinan, 2015). In the case of hydraulic fracturing, oil and gas companies present themselves as experts because they are the ones who engineer the process, construct the wells, and do the drilling. However, this vision of an industry owning expert knowledge and trading it for *access* to the political arena is starting to crumble (Bouwen, 2004). Indeed, NGOs with more considerable financial resources are starting to conduct scientific research as well in order to support their political demands.

In the case of RECC, their communication materials focus on economic benefits but also on the reassurance regarding the technology. For example, on their website, there are two tabs directing to specific aspects of the shale gas issue: *benefits* and *safety* (see Appendix 11). In the latter, RECC downplays the risks of hydraulic fracturing and do so by using the case of Poland. This country is a pioneer in shale gas exploration, and RECC argues that all these trials have been successful and are thus safe for the environment, the water, and the community.

This case raises questions. How can a newly-formed coalition of concerned citizens have such extensive knowledge on the exploration processes that have occurred in Poland? The literature review showed that astroturfing is a way for a company to enjoy the legitimacy of grassroots movements. However, this legitimacy refers to the voice of citizens marking their support or their opposition to a policy, not to the scientific debate. Relying on RECC to convey scientific messages was, therefore, a choice that is questionable. As a pretended spontaneous movement, the scientific debate led by RECC draws attention, which could have led to unmasking its true sponsor.

In that regard, the US case was insightful in showing how the scientific process can be still be hijacked. Contrarily to conveying scientific messages via astroturf movements, the

proponents of shale gas have used the concept of ghostwriting, that is the production of scientific studies that are signed by actual scientists.

6.4. Venue Shopping

The last aspect under scrutiny regarding the use of RECC for lobbying is venue shopping. The concept of venue shopping postulates that interest groups are concentrating their lobbying efforts on the venue where they consider they can exert the most influence. Along those lines, an interest group might develop a strategy to try to enact a change in the policymaking system and make another institution responsible for the policy in question. Venue shopping can be considered as horizontal when the change occurs at the same level of power or within the same institution (i.e., changing the DG responsible for drafting a directive at the Commission) or vertical when the change occurs through different levels of power (i.e., a national competence becoming an EU competence).

The concept of venue shopping is particularly interesting in the shale gas debate given the fact that the issue is at a nascent stage and that no specific legislation was in place at the beginning of the policymaking process. Table 8 showed the involvement of the different EU institutions on the matter. Proponents and opponents to shale gas exploration have different preferences in terms of venues where the decision is taken. The literature review of the first chapter has shown that historically, the Commission has always welcomed information from business groups and that the EP was more sympathetic to grassroots movements. On a vertical level, the stakes are high. There are many differences between Member States. Some have potential access to shale reserves while others do not. Some Member States have shown strong stances regarding hydraulic fracturing (i.e., early moratoria in France and Bulgaria in 2011), while others perceive it as a unique opportunity. The government of Poland, for instance, has repeatedly expressed its desire to keep this competence at the national level.

The first decision taken by an institution suited the proponents of shale gas exploration since the legal assessment of the Commission concluded that sufficient regulation was existing. It is actually under the impetus of the EP that more attention has been drawn on the issue. Even though its right of initiative has no binding power, business groups decided to mobilize for amending the reports in their way. Given the fact that the EP is not the ideal venue for business to spread their message, creating an astroturf group can be seen as a strategical

choice by private interests. In order to compete with the voice from genuine grassroots movements, an astroturf group would appear as legitimate and appeal to MEPs who were on the fence regarding shale gas and hydraulic fracturing. The case of RECC shows that astroturfing can be used strategically depending on the target of a lobbying campaign.

Conclusion

The objective of this fourth chapter was to design a method to measure the lobbying success of astroturf lobbying. In order to so, the similar analytical process mobilized for the third chapter has been replicated, and an additional step has been conceived to assess the influence of interest groups on public policy. The case study that has been chosen is the shale gas issue in the European Union.

The first sections of this chapter followed the same process as the first case study. More than a simple transposition of the method, this case study actually served as a way to replicate the method designed to detect astroturf groups in another political context. On that matter, the results emanating from the framing analysis are consistent with the ones from the US case, which means that the method elaborated in this dissertation was successful in the detection of astroturf groups.

The novelty of this chapter was to find a way to measure the lobbying success of astroturf groups. For that purpose, a specific issue has been identified first: the vote of two reports by the EP. The draft reports and the final texts voted in plenary were added to a corpus already made up with the position papers of the 31 interest groups that have been identified as having participated in the debates. By conducting a correspondence analysis, it was thus possible to see the evolution of the reports in terms of framing.

To assess the influence of interest groups, the literature review has shown that isolating the influence of individual organizations on a policy is difficult and present biases. For that reason, the choice has been made to look at the policy preferences of coalitions of interest groups. The underlying assumption is that if the framing of a report has evolved and moved closer to a coalition, this coalition has been successful in steering the debates on the aspects of the issue that was most important to them. This assumption can be illustrated by the addendum of amendments pushed by a coalition that would appear in the final text. As the method relies on quantitative text analysis, the position of a report that has taken specific amendments from an interest group would move closer to that group on the graph.

The results show that the coalition of business groups in which the astroturf group took part was successful in influencing the report led by the ITRE committee, but less so regarding the

ENVI report, which showed a final framing closer to a small coalition of business and grassroots groups sharing a common interest in preserving groundwater.

The results of this case study have different implications. First, it validates the method to detect astroturf movements. By replicating the method to a new issue in another political context, it was possible to detect the Responsible Energy Citizens Coalitions whose framing differed significantly from genuine grassroots groups and was actually similar to business groups advocating for shale gas exploration.

Second, the method to measure lobbying success has proven to be useful in identifying trends regarding the evolution of policy documents and by identifying the interests that were taken into account by the institution. Several methodological limits remain regarding the assessment of lobbying success. Nonetheless, the results from this research are significant and pave the way for further replications.

Third and last, this chapter shed light on the use of astroturfing for lobbying purposes. Even though this study seems to confirm that the US are more impacted by this practice, the EU also has to face astroturf movements. Given their underground nature, they pose a real threat to the EU democracy. In addition to providing tools to detect astroturf efforts and assessing their influence, this chapter thus gives insights about how astroturfers operate and for what purpose.

Conclusions

This dissertation addresses the complex phenomenon of astroturf lobbying. The findings of this research have significant implications from both theoretical and empirical perspectives. The results lead to refine the definition of astroturf lobbying and to understand the purposes of relying on such tactics. Also, in terms of methodology, the research design used in this study has proven useful in attaining the research objectives and offers the possibility of being transposed to other issues. All these aspects are explained in more detail in these general conclusions along with considerations about the future of research on astroturfing and the ways to tackle the threats that it causes to democratic processes.

This dissertation has contributed to better understand and define the concept of astroturfing. The literature on the subject is still at a nascent stage, and the concept has been used by researchers from different fields and sometimes describe different realities. The most comprehensive definition until now has been suggested by Sophie Boulay (2015) who insists on two key features: "astroturfing is a communication strategy whose true source is hidden, and that pretends to emanate from a citizens' initiative" (p. 61). Although this definition is helpful in understanding the range and the possible application of this strategy in general, a narrower definition is necessary to delimit the scope of astroturf lobbying. In this dissertation, it is understood as a degree of simulation of citizen support for political purposes. An important feature of this new definition resides in a notion of "degree of simulation". Whereas previous scholarly definitions envisioned astroturfing on a binary basis (something is, or is not astroturfing), this research has shown that astroturfing should be assessed on a continuum ranging from total astroturf to authentic grassroots. For instance, a genuine citizen coalition can be boosted by purchasing followers on Twitter, and conversely, a bogus NGO can attract real citizens sharing the values of that organization. Communication and lobbying strategies can, therefore, present different degrees of astroturfing.

Through the two case studies, a clearer picture has been depicted of the reasons behind the use of astroturfing for political purposes. Researchers had already demonstrated that an important objective for astroturfers was to benefit from the credibility and legitimacy usually associated with grassroots movements (Berry, 1993; Boulay, 2015). This legitimacy results from the sacrifices made by citizens to support or oppose a cause, as they often have to spend

their free time and their own money to pursue their volunteering activities. Nonetheless, the in-depth analysis of the two cases has shown that astroturfing offers new perspectives for lobbyists when they design their campaigns.

First, forging grassroots mobilization allows to enlarge a coalition and to expand it to new types of groups. Guéguen (2007) has described the evolution of coalitions in the history of EU lobbying. Nowadays, in order to be heard by the policymakers, coalitions need to be transversal, that is to present a front involving actors from all sides: business groups and civil society. By creating bogus NGOs, business groups aim to present a more transversal front and to manufacture a consensus. The idea with this tactic is to explain to the policymakers that the recommendations suggested by the business groups are acceptable given that even citizen groups support them. The case of Responsible Energy Citizen Coalition was telling in that sense as the industry literally brought citizen support within the premises of the European Parliament to argue that the civil society gave their green light for hydraulic fracturing activities in the EU. Astroturfing is thus a tool for creating and broadening coalitions.

Second, astroturfing could grant access and to be more successful in different venues. The underlying assumption behind the concept of venue-shopping is that interest groups have different affinities with different institutions. Interest groups, therefore, *shop* to the venue where they feel they have the best relationship and where they believe that they will be heard. Consequently, they will try to induce a change in venue if they feel that the institution responsible for the regulation is not inclined to listen to them. Creating astroturf groups for diversifying lobbying targets has been perceived in the two case studies at different levels. In the US, regulations regarding shale gas exploration are managed at the State level and not the Federal level. Astroturf groups were therefore created with a view to influence decision-makers at that level. Moreover, the industry was eager to forge local movements because any drilling activities taking place in the backyard of citizens must be authorized by them beforehand. It was thus crucial for the industry to create groups at the local level. In the EU, there was no existing binding regulation for shale gas exploration. It is the European Parliament that decided to launch a legislative process. Historically, the EP is an arena sympathetic to NGOs and citizen movements, the industry having easier access to the Commission. The setting up of an astroturf group was imagined along those lines. As the traditional trade associations could have limited access to MEPs, creating RECC was a way

to gain literal access to the EP and to propound the arguments of the industry through an additional mouthpiece. Astroturfing is thus a tool for gaining access to alternative institutional venues.

Third, astroturfing can be used in an effort to frame or re-frame an issue. This purpose was most patent in the US case study. Whereas environmental NGOs collectively framed the process of hydraulic fracturing as *fracking* and thereby giving it a pejorative connotation, the numerous astroturf groups identified consistently avoided to use that term. In an attempt to tilt the rhetorical balance, they strived always to use the longer and more technological form *hydraulic fracturing*. Astroturfing is thus a tool for re-framing an issue.

Fourth, astroturfing can also be part of a broader lobbying strategy that consists in capturing the scientific debates surrounding an issue. The objective is to cherry-pick scientific publications that promote a specific agenda. Sometimes, the objective is not to scientifically demonstrate anything (e.g. hydraulic fracturing causes no harm to groundwater), but to cast doubt and discredit the opposing view (e.g. no studies have scientifically demonstrated the link between hydraulic fracturing and water contamination). This tactic has been coined as *agnotology*, or the process of manufacturing doubt or ignorance on an issue. Even though the use of astroturfing can be deemed as paradoxical given that small spontaneous movements supposedly do not have that kind of scientific expertise, the rationale behind it is to use citizens as witnesses. The arguments brought by astroturf groups would thus be that citizens living near drilling grounds have not perceived any changes or any harms following the exploitation of wells. Astroturfing is thus a tool for capturing the scientific debate of an issue.

These observations have implications regarding the theoretical framework that has been presented in the first chapter. Despite the negative image that is often associated with the term *lobbying,* it is argued in this dissertation that, when driven by aspirations for pluralism, it is a democratic activity. Interest representation is understood as a right, protected by the First Amendment of the Constitution in the US and by article 227 of the Treaty of the Functioning of the European Union. However, lobbying becomes problematic when it conflicts with democratic, pluralist, and ethical values. The purposes for which astroturf lobbying is deployed, as demonstrated in this dissertation, clearly makes this practice is

unethical and therefore not compatible with a democratic policymaking process and with a healthy, functioning public sphere.

Regarding the pluralist theory, the brief history of the concept presented in the first chapter shows similar premises by scholars from the US and the EU. One of them is the equal access to the decision-makers for all interests. This way, the policymaker can obtain all necessary information on a topic and, therefore, make an informed decision that is best for the common good. However, this idea of equal access remains a normative idea. In the EU for instance, some pluralist scholars claim that instead of being pluralist, the political system can be best defined as elite pluralism, stressing the fact that it is the elite (resourceful associations and private interests) that enjoys access to policymakers much more than civil society organizations. This participates in the idea of a democratic deficit, which pushes the institutions to offer better platforms for citizens to be heard. This need for a legitimization from the bottom actually represents a window of opportunity for astroturfers who aspire to conduct their lobbying campaign through this new channel and therefore to compete with the genuine grassroots in the public sphere. From that perspective, astroturf lobbying undermines the principle of pluralism.

Regarding the public sphere theory, Sophie Boulay (2015) already demonstrated how astroturfing clashes with the ideals posed by Habermas. This research confirms this observation by looking more specifically at the role of astroturfing for lobbying purposes. In the US case study, one of the roles of certain astroturf groups was to undermine the voice of real grassroots movements systematically and to obliterate their influence. Big Green Radicals, as the name suggests, communicated extensively in order to discredit the arguments from real environmental NGOs. In addition to lying about its real identity, this sort of communication is unauthentic and goes radically against the theory of communicative action developed by Habermas (1981).

The hypotheses underlying the methods developed to answer the two research questions are based on the concept of framing. As this concept has been heavily criticized for its use in the field of information and communication sciences, it was essential to demonstrate how it was conceived and used throughout this dissertation and how its theoretical tenets were useful in the design of the method. The concept of *emphasis framing*, rooted in a sociological tradition,

was central in this research. Applied to the study of lobbying, it postulates that by highlighting certain aspects of an issue and by omitting others, interest groups aim to influence the outcome of public policy debates.

Emphasis framing is sometimes criticized as being an end in itself. Typically, it would involve the selection of articles from newspapers, and the results would consist in identifying the frames that have been used by the journalists. It is not the case in this study. The operationalization of a framing analysis is a means to an end. It is developed as a tool to answer the two research objectives of this research. In that sense, this dissertation has demonstrated that emphasis framing has not arrived at an end, as professed by scholars from the psychological tradition (Cacciatore et al., 2016). Quite on the contrary, the results from this study show that the concept of framing can be revitalized and find a new lease of life in the field of interest representation and lobbying.

This mobilization of the concept of framing has led to the construction of an innovative method to answer the two different research objectives. Even though the method slightly differs from one case study to the other, the base remains the same and entails quantitative textual analysis.

The first objective of this dissertation was to build a method to identify the astroturf groups that take part in policy debates. The assumption was that astroturf groups would frame the issue differently from grassroots movements. Indeed, interest groups have to frame their position by selecting arguments and by omitting or discrediting others. This choice of frames can be explained by different factors: the logic of influence and the logic of membership (Klüver & Mahoney, 2015; Schmitter & Streeck, 1999). The former means that interest groups behave in accordance with the target of their lobbying campaign. The latter supposes that the interest groups mobilize frames in accordance with the members they represent. There is thus a dilemma for astroturfers as to whether or not they should follow that logic of membership and frame the issue similarly to the interests they truly represent.

To test this assumption, a framing analysis has been performed on a corpus of documents representing the frames used by 72 interest groups active on the issue of shale gas in the United States. A correspondence analysis allowed to map all the interest groups on a two-

axis graph based on the words that they used. A subsequent analysis has been performed on the outliers, that is the grassroots groups that had a framing differing significantly from the principal coalition of NGOs that had formed. The criteria that were used to qualify a group as presenting astroturf features were that they presented themselves as a citizen mobilization and that the true sponsor of the message remained concealed.

The results confirmed the assumption of a difference of framing, leading to the detection of 12 astroturf groups. These findings lift the lid on the magnitude of astroturf lobbying. What emerged from the review of the scientific literature on astroturfing was that the US were a political system likely to be a target of such tactics and that environmental issues offered a breeding ground for the proliferation of astroturf efforts (McNutt & Boland, 2007). The present findings seem to be consistent with this previous research. Astroturf groups were indeed numerous and, once revealed, a different picture emerged of the overall debate on the hydraulic fracturing issue in the US and the forces involved.

The second objective implied to go one step further and, in addition to identifying astroturf groups, aimed to measure their lobbying success. For this purpose, the political system that was chosen was the European Union. This work was made possible by the transparency of the policymaking process that allowed to have access to numerous legislative documents, which are needed to assess the evolution of a legislation and the potential influence of interest groups.

As explained in greater detail earlier, the fact that the issue of hydraulic fracturing was chosen for the two case studies does not make this study comparative. There are numerous structural differences in terms of geology, politics, and interest representation between the two cases making direct comparisons potentially perilous. The two case studies aimed to answer one research question each. Opting for the US and the EU was the result in light of theoretical and empirical considerations.

The first steps of the analytical process both cases were similar. In total, 31 position papers from interest groups were analyzed using quantitative text analysis (software: KH Coder). Following that method, one single astroturf group was identified. In a second step, the objective was to measure the influence that this group could have had on a specific piece of

legislation, namely the vote of the European Parliament on two reports on shale gas exploration. As isolating the influence of one interest group on the policymaking process is difficult and presents many biases, the choice has been made to focus on the influence at the coalition level. For that purpose, the two initial draft reports and the two final texts adopted by the EP were added to the corpus. A correspondence analysis revealed the evolution of framing of the reports and the direction that it took. Whereas the ITRE report moved significantly towards the coalition made up with business groups and the astroturf movement, the ENVI report moved the other way and closer to a small coalition defending water interests.

The results from these two case studies fill a gap in the scientific literature on astroturf lobbying. Probably due to methodological reasons, the literature on astroturfing, in general, is in a nascent stage, and the literature on astroturf lobbying, in particular, was almost inexistent. This dissertation aimed to address that gap and to shed some light on a topic deserving more academic attention. The two methods that have been developed in this study show promises and have helped to produce significant results. However, these methods have some limits. Rather than seeing them as shortcomings, they will set the agenda for future research.

Regarding the method for detecting astroturf movements, the main limits reside in the data selection process. In order to conduct a rigorous and representative framing analysis, only similar documents could be analyzed. In this case, it was the text presenting the issue on the website of the interest groups. This limit means that other astroturf groups were excluded from the analysis based on the data selection criterion. That was the case for the American Council for Science and Health. Even though this organization presents numerous astroturf features – such as concealing the real source of funding – it was not taken into consideration because they did not have a specific tab on their website regarding hydraulic fracturing, but they actually had published a book. Future research could focus on ways to develop the method so as to be able to encompass more types of data. This could include the aspects of computational propaganda. Social media are indeed an ideal platform to disseminate messages under a false or concealed identity.

The method for assessing lobbying success was more experimental. Based on a technique developed by political scientists (Klüver & Mahoney, 2015; Schonhardt-Bailey, 2005), this method intends to provide new answers to the long-standing question of measuring influence. The results from this study were encouraging and provided clear trends on that matter. However, two limits have emerged. The first is that it is arduous to focus on the individual level. The second is to focus solely on position papers. Interest groups usually mix various tactics in their overall lobbying strategies: demonstrations, face-to-face meetings, petitions, and the list goes on. It is hard to assess the extent to which an interest group had influence based on its position paper without taking into account other tactics. Future research could, therefore, focus on such a text analysis method but should also propose a more comprehensive methodology to explain the results observed quantitatively (i.e., by conducting interviews with both policymakers and lobbyists).

Another limit emerging from focusing on case studies is the lack of generalizable results. This innovative method has been designed to be tested on the issue of hydraulic fracturing. The findings resulting from this study are enlightening but must be understood as it is, i.e. based on a single issue. However, these methods, and in particular the one for detecting astroturf groups, can be easily transposed to other issues and other political systems.

The case studies have demonstrated that astroturf lobbying is unethical and therefore toxic for the wellbeing of democracy. The question of ethics was only briefly addressed in this dissertation and deserves more attention. Future research would be valuable in discussing the ethical aspects of astroturfing and the evolution of lobbying regulations. Indeed, the use of astroturfing by interest groups shows how lobbying is constantly reinventing itself in order to circumvent the rules. Lobby groups have understood the growing attention that is given to citizens and to new informal grassroots movements. Astroturfing is a way for business groups to hijack some of that attention.

The final part of this dissertation discusses the ways to address the emergence and the spread of astroturf lobbying in democratic societies. From an institutional perspective, the possibilities are few. No specific regulation exists in terms of deceiving the public or policymakers with such practice, and new regulations attempting to diminish the right to free speech of interest group could be perceived as undemocratic. The problem resides in the fact

that it is extremely challenging to demonstrate with legal evidence that an astroturf group has been financed by private interests. In the EU, a step in the right direction would be to render the transparency register mandatory. It is not a silver bullet as evidenced by the US, where astroturf lobbying remains despite a mandatory register. However, it would hinder the access for such groups to policymakers.

From an academic perspective, this dissertation lays the foundation for future research to refine the method to uncover astroturf groups. In addition, this method based on quantitative text analysis could be easily implemented by institutions. A telling example is the public consultation system of the European Commission. To submit a position, an interest group or a citizen has to follow the format imposed by the Commission. As a result, the Commission could automatically make up a corpus of all interest groups participating in a public consultation. With a framing analysis as developed in this study, it would thus be possible to map the position of all interest groups and see potential outliers. Greater collaboration between policymakers and academia could significantly enhance any attempt to tackle the threats brought by astroturf lobbying.

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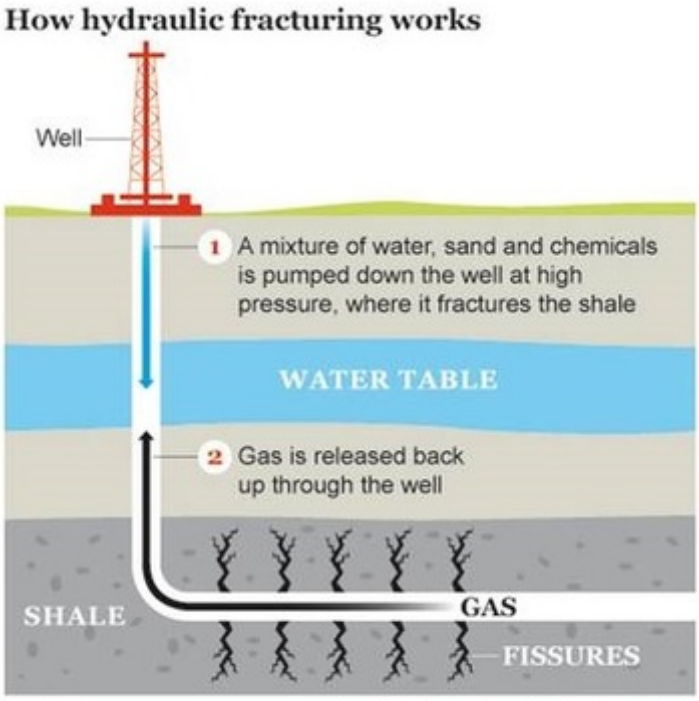
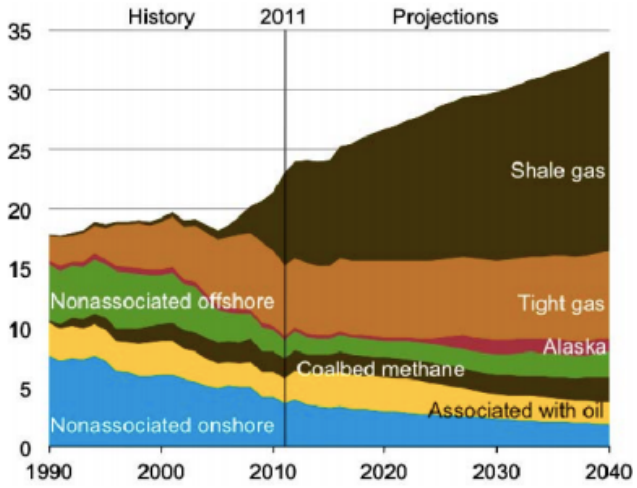
Appendices

1. Process of Hydraulic Fracturing



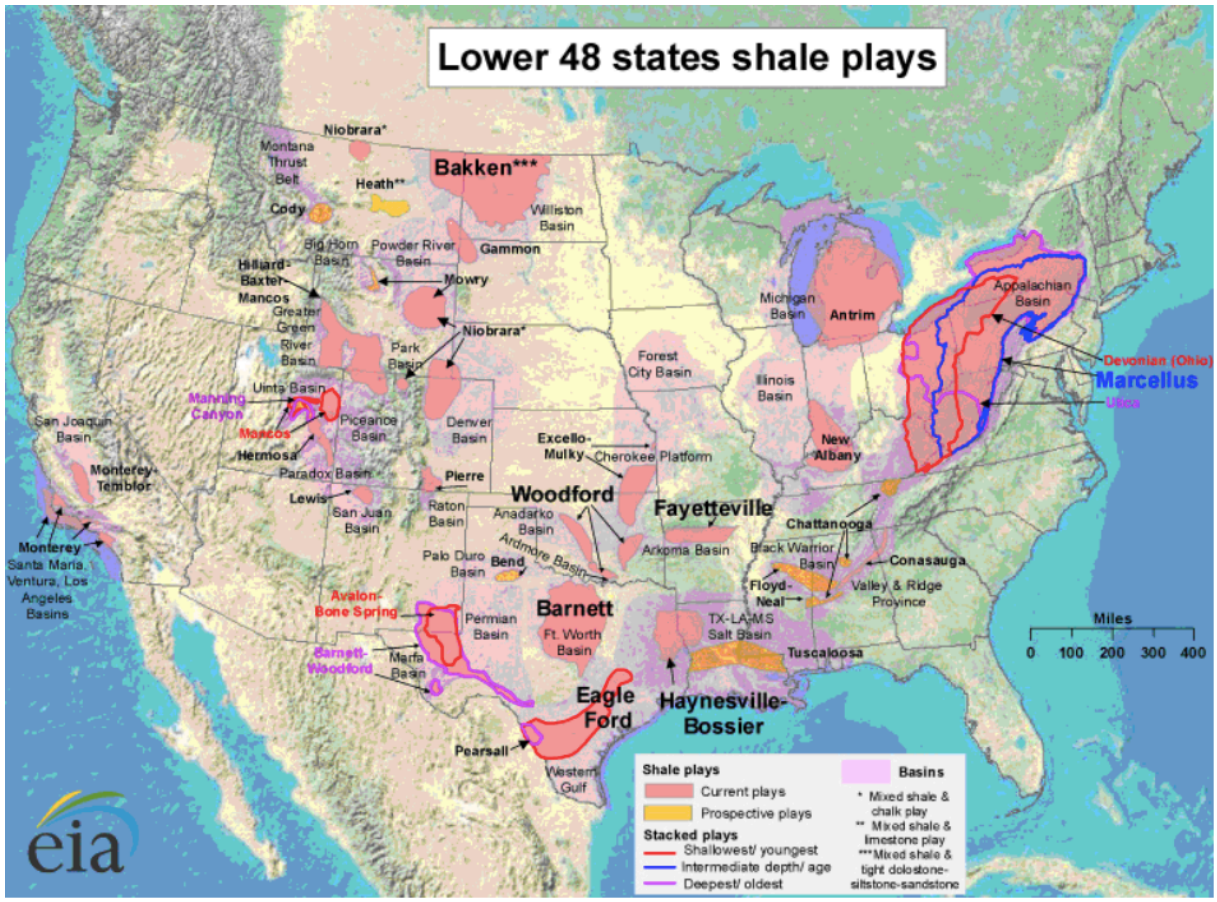
Source: UK Department of Energy and Climate Change (2018)

2. US Natural Gas Production by Source



Source: US Energy Information Administration (2013)

3. Location of US Natural Gas



Source: Energy Information Administration (2011)

4. List of Identified US Interest Groups

#	Interest Group Type	Short	Organization
1	Business Group	AFPM	American Fuel and Petrochemical Manufacturers
2	Business Group	AGA	American Gas Association
3	Business Group	ANGA	America's Natural Gas Alliance
4	Business Group	APGA	American Public Gas Association
5	Business Group	APC	Anadarko Petroleum Corporation
6	Business Group	API	American Petroleum Institute
7	Business Group	ARC	Antero Resources Corporation
8	Business Group	BHP	BHP Billiton
9	Business Group	BP	BP
10	Business Group	BR	Business Roundtable
11	Business Group	Chspk	Chesapeake Energy
12	Business Group	Chvrn	Chevron
13	Business Group	CncPh	ConocoPhillips
14	Business Group	Cnsl	CONSOL Energy
15	Business Group	DTE	*DTE Energy**
16	Business Group	EOG	EOG Resources
17	Business Group	EQT	EQT Corporation
18	Business Group	Exxon	ExxonMobil
19	Business Group	INGAA	Interstate Natural Gas Association of America
20	Business Group	IPAA	Independent Petroleum Association of America
21	Business Group	Koch	*Koch Industries*
22	Business Group	MSC	Marcellus Shale Coalition
23	Business Group	NGSA	Natural Gas Supply Association
24	Business Group	NGVA	Natural Gas Vehicles for America
25	Business Group	NS2A	*Nord Stream 2 AG*
26	Business Group	NE	*Noble Energy*
27	Business Group	NMOGA	New Mexico Oil&Gas Association
28	Business Group	PIOGA	Pennsylvania Independent Oil Gas Association
29	Business Group	P66	Phillips66
30	Business Group	Oxy	*Occidental Petroleum*
31	Business Group	Reps	Talisman Energy (Repsol)
32	Business Group	Shell	Royal Dutch Shell
33	Business Group	Stat	Statoil
34	Business Group	USOGA	US Oil & Gas Association
35	Business Group	WEA	Western Energy Alliance
36	Business Group	WC	*Williams Company*
37	Grassroots Group	350	350.org
38	Grassroots Group	AAF	Americans Against Fracking
39	Grassroots Group	ACFAN	Athens County Fracking Action Network

40	Grassroots Group	ACSF	American Clean Skies Foundation
41	Grassroots Group	AEF	America's Energy Forum
42	Grassroots Group	BCA	Breast Cancer Action
43	Grassroots Group	BGR	Big Greens Radicals
44	Grassroots Group	BMF	Ban Michigan Fracking
45	Grassroots Group	CBD	Center for Biological Diversity
46	Grassroots Group	CEA	Consumer Energy Alliance
47	Grassroots Group	CHJ	Center for Health, Environment & Justice
48	Grassroots Group	CM	Climate Mama
49	Grassroots Group	Credo	CREDO
50	Grassroots Group	DFM	Don't Frack Maryland
51	Grassroots Group	DS	DeSmogBlog
52	Grassroots Group	EA	Environmental Action
53	Grassroots Group	EC	Energy Citizens
54	Grassroots Group	EDF	Environmental Defense Fund
55	Grassroots Group	EID	Energy in Depth
56	Grassroots Group	EJ	Earth Justice
57	Grassroots Group	EN	*Energy Nation*
58	Grassroots Group	EPA	Environmental Policy Alliance
59	Grassroots Group	ET	Energy Tomorrow
60	Grassroots Group	EWG	Environmental Working Group
61	Grassroots Group	FA	Frack Action
62	Grassroots Group	FoE	Friends of the Earth
63	Grassroots Group	FWW	Food & Water Watch
64	Grassroots Group	GA	Green America
65	Grassroots Group	GP	Greenpeace USA
66	Grassroots Group	MO	MoveOn.org
67	Grassroots Group	NARO	*National Association of Royalty Owners*
68	Grassroots Group	NNU	National Nurses United
69	Grassroots Group	OCA	Organic Consumers Association
70	Grassroots Group	OCI	Oil Change International
71	Grassroots Group	PE	PennEnvironment
72	Grassroots Group	RAN	Rainforest Action Network
73	Grassroots Group	SC	Sierra Club
74	Grassroots Group	ShCy	Shale Country
75	Grassroots Group	ShT	Shale Test
76	Grassroots Group	UFA	United for Action
77	Grassroots Group	USA	United Shale Advocates
78	Grassroots Group	V4E	*Vote4Energy*
79	Grassroots Group	WKA	Waterkeeper Alliance
80	Grassroots Group	WTFC	What the Frack? Colorado
81	Grassroots Group	WWF	*World Wildlife Fund*

82	Grassroots Group	YEV	Your Energy Virginia

* In italics are the ten groups that have not been selected in the final corpus.

5. Frequency List of Words for the US Corpus

Words	TF		Words	TF		Words	TF
gas	939		america	67		activity	42
natural	571		area	67		gallon	42
water	359		operation	67		pollution	42
energy	339		unconventional	67		require	42
fracturing	303		benefit	64		clean	41
frack	295		create	64		epa	41
oil	286		regulation	64		agency	40
hydraulic	277		work	64		bring	40
state	251		economy	63		lead	40
use	206		climate	62		need	40
fracking	195		methane	62		price	40
industry	174		protect	62		carbon	39
production	171		rock	62		coal	39
chemical	165		source	62		earthquake	39
new	156		drill	61		extraction	39
drilling	152		come	60		producer	39
percent	148		federal	60		way	39
shale	146		reduce	60		accord	38
health	144		report	59		high	38
development	135		people	58		practice	38
process	134		american	56		safety	38
year	125		business	56		today	38
environmental	120		cost	56		contaminate	37
job	116		develop	55		decade	37
resource	112		help	54		groundwater	37
shale	108		pennsylvanium	54		power	37
make	107		continue	53		significant	37
community	102		know	51		wastewater	37
fuel	100		local	51		ban	36
include	100		safe	51		californium	36

impact	99		sand	51		level	36
increase	96		growth	50		protection	36
air	95		marcellus	50		day	35
public	94		nation	50		fracture	35
u.s.	82		country	49		group	35
use	82		drinking	49		opportunity	35
economic	81		policy	49		antero	34
produce	81		future	48		change	34
technology	80		information	48		concern	34
unite	76		just	48		foot	34
company	75		pipeline	47		global	34
fluid	73		time	47		ground	34
support	73		cause	46		home	34
environment	72		grow	46		horizontal	34
study	72		site	46		infrastructure	34
provide	70		contamination	45		inject	34
risk	70		allow	44		release	34
emission	69		fact	44		service	34
formation	69		toxic	44		supply	34
land	68		surface	43		pressure	33

6. Actors at the New Orleans City Council

Source: https://thelensnola.org/2018/05/04/actors-were-paid-to-support-entergys-power-plant-at-new-orleans-city-council-meetings/

7. Scene from *Gasland*

Source: https://www.amazon.com/dp/B005C0DHEY

8. Map of shale basins in the EU

Source: http://www.shale-gas-information-platform.org/where-is-it-found/

9. Poster of the event How shale gas will transform Europe

Source: https://corporateeurope.org/sites/default/files/shalegas_transforms_europe.jpg

10. Photos of the event How shale gas will transform Europe

Source: https://corporateeurope.org/sites/default/files/shalegas_transforms_europe.jpg

11. Screenshot from RECC website