Sección ordinaria

The role of pre-existing social ties in jihadi-Salafist radicalization: the case of Spain*

El rol de los vínculos sociales previos en la radicalización yihadista salafista: el caso de España

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Abstract

This research paper analyses how pre-existing social ties influence in the Jihadi-Salafism radicalization processes from the theoretical point of view and provides a practical approach by studying data on this matter applied to Spain. The empirical-descriptive methodology will consist firstly on gathering information from the literature on jihadist radicalization and network formations and secondly, using El Cano's database of Jihadists in Spain (BDEYE) data from 2001 to 2018 to observe how pre-existing social ties and radicalization modalities in the two periods evolve. Our two research questions: (1) Are social networks, and specifically, pre-existing social ties significant in the process of jihadi-Salafism radicalization in Spain? And (2) As the

Internet and social media platforms become prominent in the second period of study, will the role of pre-existing social networks still be relevant? will guide our research. In our case study will observe the data and test our hypothesis, "social networks, especially pre-existing social ties, are essential in adopting radical jihadist beliefs in Spain in the two periods." In Spain, when pre-existing social ties existed, friendship and kinship allowed individuals to engage in radicalization processes. The low cost of maintaining social media platforms and websites with the diffusion of jihadist propaganda have let social media channels increase their importance, changing trends in the two periods studied. However, the change in pattern does not decrease the importance of pre-existing social ties to virtual communities as the mixed and offline modality in the second period gathered 71,9% of individuals, proving that pre-existing social ties are a crucial variable.

Key words: radicalization; social networks; social media platforms; social ties; Spain.

Resumen

Este trabajo analiza cómo influyen los vínculos sociales preexistentes en la radicalización yihadista salafista proporcionando un enfoque práctico al estudiar datos de esta materia aplicados a España. La metodología empírico-descriptiva consistirá, primeramente, en recopilar información de la literatura sobre radicalización yihadista y formación de redes. Secundariamente, utilizar la Base de Datos Elcano sobre Yihadistas en España (BDEYE) de El Instituto del Cano de 2001 a 2018 para observar cómo evolucionan, en los dos periodos, estos y las modalidades de radicalización. Nuestras dos preguntas de investigación: i) ¿Son los vínculos sociales preexistentes significativos en la radicalización yihadista-salafista en España? Y ii) ¿A medida que internet y las redes sociales se vuelven prominentes en el segundo período de estudio, seguirá siendo relevante el papel de los vínculos sociales preexistentes? Guiarán nuestra investigación. En nuestro caso de estudio observaremos los datos y contrastaremos nuestra hipótesis: los vínculos sociales preexistentes son fundamentales en la adopción de creencias radicales yihadistas en España en los dos periodos. En España, cuando existían lazos sociales preexistentes, la amistad y el parentesco permitían que

los individuos se involucraran en procesos de radicalización. El bajo costo de mantenimiento de las redes sociales y la facilidad de difundir propaganda yihadista ha permitido que estas plataformas aumenten su importancia, lo que cambia las tendencias en los dos períodos estudiados. Sin embargo, el cambio de patrón no resta importancia a los lazos sociales preexistentes, ya que la modalidad mixta y la *offline* en el segundo período reunió al 71,9% de los individuos, demostrando que los vínculos sociales preexistentes son una variable crucial.

Palabras clave: España, plataformas de redes sociales, radicalización, redes sociales, vínculos sociales

1. Introduction

In the last 15 years, three terrorist attacks in Spain committed by terrorists with Jihadi-Salafist ideology have killed 234 people and injured 2.284. My interest in the research comes from working as a Counterterrorism Analyst, where understanding the factors that lead a terrorist to commit attacks are imperative to prevent them. Therefore, adopting radicalized beliefs is a prior stage to committing an attack, and comprehending the motivation and understanding of the process will allow us to create effective policies to prevent them from entering radicalization process.

Comprehending the factors that influence the adoption of radical beliefs is widely studied but lacks consensus due to the extensive explanations and variables that aim to answer why individuals radicalize. Variables such as the socio-economic background, how an individual is integrated into society, or micro-level explanations are predominant in radicalization processes. Nevertheless, social ties and relationships are underrated as they are more challenging to explain and generalize. Placing importance on how social ties can legitimate and reinforce beliefs as well as facilitate recruitment with immediate circles will help public authorities reshape public policies and make them more effective. Authors like Sageman (2004, 2008), Vicente (2021, 2022), Wiktorowicz (2005), and Malthaner (2017, 2018) confirm through studies and empirical data the importance of social relations and pre-existing social ties on the adoption of radical beliefs, especially on the jihadist radicalization process, our object of study.

Acknowledging the importance of social relations in shaping beliefs, this paper aims to analyze the role of pre-existing social ties in the jihadist radicalization process and how these contribute, reinforce, and legitimize these ideas. By focusing our research on Spain with data from 2001 to 2018, we aim to place this variable as a crucial one in the radicalization processes that take place in the country. Our objectives are to understand and confirm the importance of this factor and comprehend if this variable has decreased or increased in importance in our case study. To do this, we have two research questions that will guide our investigation:

1. Are social networks, and specially, pre-existing social ties, significant in the process of Jihadi-Salafism radicalization in Spain?
2. As the Internet and social media platforms become prominent in the second period of study, from 2012 to 2018, will the role of pre-existing social networks still be relevant?

We will conclude our study by confirming our hypothesis: social networks, predominantly pre-existing social ties, are essential in adopting radical jihadist beliefs in Spain in the two periods, from 2001 to 2011 and from 2012 to 2018. To reach that conclusion, we will make an in-depth study of the existing literature using thematic analysis to search for the main topics and analyze them. Following, we will explore the trends in the variables of "localities," "modalities," and the role of pre-existing social ties in the analysis section to answer the two research questions and test our hypothesis.

Our paper will firstly analyze the contextual and theoretical framework to understand the role of pre-existing, weak, and strong ties in radical networks. The following section will explain the methodology and data gathering techniques as well as present the objectives, research questions, and hypothesis of our research. Finally, we will analyze Spain as our case study and the modalities, the role of pre-existing social ties, test our hypothesis with the data gathered, and conclude our paper.

2. Contextual and Theoretical Framework

2.1. The threat of Jihadi-Salafism terrorists

There have been about 130 terrorist attacks in Europe, without including the foiled plots, like the one detected by the Spanish National Police, where they arrested five jihadists on suspicion of preparing a terrorist attack in October 2021 (Europol, 2021). Furthermore, Spain has experienced over the past 150 years three terrorist attacks that injured about 2000 people. The severity of the threat posed by transnational jihadist networks as battle-hardened European Fighters returning home from Syria has been considered a reiterating threat for the EU and Spain. Therefore, an essential aspect of understanding this evolving threat is the phenomenon's scale created by the number of radicalized individuals willing to engage in violent actions.

2.2. The jihadi-Salafism ideology

Salafism has been described as a theological movement in Sunni Islam disturbed with purifying the faith (Haikel, 2009). This ideology aims to promote the notion, according to Moghadam (2008) "that the only identity that truly matters is membership in the umma, the global Islamic community that provides comfort, dignity, security, and honor upon the oppressed Muslims".

In this line, the Jihadi-Salafism ideology with a rigorous and literal interpretation of the texts has aimed to *purify* Islam from Western influence (Antunes, 2017). The texts are interpreted literally and are merely focused on theology and thus, have no explicit mention of their strategy or goals (Olidort, 2015). Therefore, terrorist groups provide additional strategies, tactics, and goals that do not necessarily need to be related to the content of the texts.

2.3. Radicalization: a difficult and contested definition

Radicalization has been considered a contested concept as it has been conceived and interpreted in different ways and recurrently

employed in a vague and ill-defined manner (Malthaner, 2017). For example, the Oxford English Dictionary defines radicalization as "the action or process of causing someone to adopt radical positions on political or social issues" (Lexico, 2022). However, with this definition, problems might arise as the consideration of "radical" necessarily depends on a problematic notion of what is "normal" or "moderate" (Sedgwick, 2010). In the attempt to define the concept, Moskalenko & McCauley (2009) aimed to differentiate "radicalism" and "activism", as the authors defined the second term as the "readiness to engage in legal and non-violent political action" while the first concept was defined as the "readiness to engage in violent and illegal political action".

At the center of the debate, Neumann (2013) and Bourekba (2019) argue that the primary conceptual fault-line is found on the notions of radicalization that focus on extremist beliefs ("cognitive radicalization"), that is the adoption of radical ideas, and others that focus on extremist behaviors ("behavioral radicalization"), that is adopting violent behavior. In this line, Bourekba (2019) argues that despite many jihadists "act in the name of a radical ideology (jihadi-Salafism), a large majority of individuals who adhere to this ideology do not act violently." For this paper, we will follow Malthaner's (2017) definition, which understands it as "the gradual adoption of extremist ideas that promote and eventually lead to acts of terrorism." Acknowledging the limitations of the definition, it will enable us to focus on the individual's processes of cognitive and ideological transformations and how these processes end up in the adoption of extremist ideas.

2.4. SOCIAL NETWORK ANALYSIS

Firstly, social networks and the social ties derived from them have been considered central and crucial in the radicalization process of individuals (Bakker, 2006; Hegghammer, 2006; Sageman, 2004, 2008). Furthermore, comprehending how commitments and behaviors are linked with group membership will help understand how the group dynamics influence the adoption of radicalized beliefs. Therefore, using network methods to map and analyze the links and relationships could provide precise information on how the social

ties are connected and how these influence individuals' behavior, or lack thereof (Bouchard & Nash, 2015).

Secondly, including a network lens approach in the analysis will allow for an accurate depiction of the internal organization of terrorist groups without necessarily making false assumptions about how these networks should function (Bouchard & Nash, 2015). Despite that, only a few studies undertake considerable efforts to contextualize radicalization and, even fewer analyze and map the structure and creation of radical networks (Malthaner, 2018). Moreover, recurrent studies conclude that social ties are a crucial factor in shaping individual pathways to adopting radical beliefs (Malthaner, 2018). Finally, understanding the functioning of networks, their structure, and dynamics can improve the effectiveness of counterterrorism measures.

Social network analysis is a set of methods for studying relations among actors (Knoke & Yang, 2008). Therefore, the methodology applies to almost any social context. Social network theories rely on the empirical reality that people need to interact socially and not act in isolation. Rather their preferences, choices, and attitudes are shaped by the relations individuals have with others (Vicente, 2021). Therefore, this theoretical approach puts the social content in individual actions at the center of their study, and with that, it explores the "functions and dynamics of interpersonal bonds that affect mobilization" (Vicente, 2021).

According to Dario & Mische (2015), radical networks are "emergent patterns of informal social relationships between activists participating, or seeking to participate, in militant forms of action." Friendship and kinship facilitate the dynamics and potentiate these networks' role as "echo-chambers" to further and reinforce radical beliefs (Bokhari et al., 2016). Furthermore, Malthaner (2018) concludes that these networks are created by individuals seeking to reinforce their radical beliefs. In other words, individuals create radical networks that "micro-mobilize", shaping their pathway, and, at the same time, these are the "outcome of radicalization as a dynamic networking-process" (Malthaner, 2018).

Regarding terrorist activity, social links have been signaled as important variables in terrorist engagement as the networks shape worldviews, reinforce ideas and identities, motivate collection action

and, eventually, facilitate participation (Sageman, 2004; Neumann & Rogers, 2007; Cragin, 2014; Arie et al., 2019, Hazef & Mullins, 2015). In the radicalization studies, the role of networks and how these are formed are particularly relevant, especially if this is applied to the phenomenon of jihadist radicalization in the West (Malthaner, 2018). Malthaner (2018) considers that the radicalization process of a jihadist is generally a "bottom-up" process where individuals radicalize within the loose context of a broader Salafist movement and actively seek to establish contact with like-minded individuals. Furthermore, Sageman (2008) argues that these like-minded individuals could potentially engage and create informal and largely autonomous radical networks when this happens.

The literature on radical network formation focuses on one crucial aspect: the role and different types of social ties and how these sustain radical networks. Dario & Mische (2015) distinguish between strong and weak ties but consider both essential to reinforce the beliefs and assure the radical network's continuation. Strong ties entail prolonged interaction and a significant emotional investment that derives from loyalty and sharing common values among the members. Conversely, weak ties do not have such high levels of commitment and engagement and are merely based on discontinued interactions and superficial contact among individuals. Despite that, weak ties have a crucial role in facilitating collaboration and spreading ideas and information through the radical network (Dario & Mische, 2015). In a complementary way, strong links generate and reinforce the values of trust and loyalty among the existing members and help recruit new members.

Another relevant classification in the literature on how radical networks appear and are established, distinguishes the mobilization via pre-existing social ties and the encounter of people in chance encounters. The mobilization via pre-existing social ties has been considered to create more engagement and participation of individuals in adopting radicalized beliefs. McAdam (1986), Della Porta (1992), McAdam & Paulsen (1993), and Diani (2013) conclude consistently that participation in movements (radical networks) is normally initiated via personal, either friendship or kinship ties to activists that precede involvement. The group of friends and the family are the first agents of socialization, therefore being the principal source through which individuals acquire a set of normative

values and a solid motivation to engage in activities. Pre-existing social ties can also facilitate the connection of individuals with new people as the referral from a trusted one creates familiarity with the relationships established by this via. Sageman (2004: 111) finds that these links are vital in connecting individuals to radical networks, which (combined) he found to be of relevance in 75% of his sample. Furthermore, the attitudinal affinity could predispose someone to join a network, but social ties "are critical for transforming interest and availability in actual activism" (Wiktorowicz, 2005: 15).

The final, and the less studied way individuals can join radical networks, is through chance encounters. Malthaner (2018) asserts that these meetings are, to some extent, the result of a particular socio-spatial setting and sometimes due to the shared membership in larger organizations, movements, or the co-presence at events. If we consider two individuals meeting by chance, the values of trust and familiarity are not present, making it unlikely to establish any relationship. Therefore, Malthaner includes this category but notes that these casual meetings are produced in a context where these individuals already have some connections as part of larger organizations, and therefore, a sense of understanding and familiarity is created.

2.4.1. Conceptual definitions

For the purpose of this paper, we will follow Malthaner's (2017) definition of radicalization, understood as "the gradual adoption of extremist ideas that promote and eventually lead to acts of terrorism."[1] Furthermore, we will follow Bouchard & Nash's definition of a social network as a "group of interconnected social entities of any shape or kind."[2] Finally, we will follow Dario & Mische's definition of (2015) radical networks, defined as "emergent patterns of informal social relationships between activists participating, or seeking to participate, in militant forms of action."[3]

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1 Please refer to the theoretical framework section 2 "*Radicalization: a contested term*" for the debate and the election of this choice.

2 Please refer to the theoretical framework section 4 "*Social network analysis*" for the election of this choice.

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3. Methodology and analytical framework

This section will present the investigation development, which is the phases that we have followed to organize our research paper. Later, we will briefly describe the research questions and relate them to the general and specific objectives. Lastly, we will outline the analytical framework, which contains the definitions that we have used for this paper and the techniques for data gathering on the theoretical framework.

3.1. Investigation development

The phases that have been followed to undertake this investigation are the following:

1. **Choice of topic and focus of research interest:** This research stems from the interest in learning more about the radicalization processes and jihadism terrorists. At first, the interest was more focused on the methods and variables that influenced the adoption of radical jihadist beliefs, but gradually reading Sageman's (2004, 2008) research, the research interest changed and focused more on how the role of social networks influence on this process, therefore, focusing only in one variable.
2. **Setting the premises, questions, hypothesis, and objectives**.
3. **Elaboration of a theoretical framework**: the theoretical framework of this research is based on three axes (radicalization, jihadist beliefs, networks and pre-existing social ties). The key concepts were necessary for the elaboration of the research are addressed.
4. **Choice of research methodology and design**: In this phase, we select the most appropriate methodology for the object of study and design the necessary tools for data collection.
5. **Data analysis**: analyze the data found in the BDEYE from 2001 to 2018 divided into two periods, one comprised from 2001 to 2011 and the second from 2012 to 2018. Compare and observe those two periods to corroborate the hypotheses presented and analyze, with Spanish-focused literature, the radicalization processes that took place.

The research carried out starts from the objectives of investigation that will lead to asking specific questions and establishing objectives and hypotheses. This section will develop these concepts and their operationalization, the research questions, the objectives, the research methodology used, and the information collection techniques.

3.2. Research question, objectives, and hypothesis

The research questions that will guide our study are:

1. Are social networks, and specifically, pre-existing social ties significant in the process of jihadi-Salafism radicalization in Spain?
2. As the Internet and social media platforms become prominent in the second period of study, from 2012 to 2018, will the role of pre-existing social networks still be relevant?

From the research questions, the following general objectives are derived:

1. Understand the role of social networks on the adoption of radical jihadist beliefs.
2. Comprehend if social networks are a relevant variable in the individual's radicalization in Spain.

From that, our initial hypothesis is "social networks, and especially, pre-existing social ties are an essential component in the adoption of radical jihadist beliefs in Spain in the two periods." To understand the role of social networks, the following specific objectives will help us reach the general objectives:

1. Define what radicalization is.
2. Analyze the different theoretical views and approaches that explain the role of social networks
3. Describe and determine why social networks foster the radicalization process
4. Analyze the data of our case study and test the hypothesis.

3.3. ANALYTICAL FRAMEWORK

To respond to this question will use an **empirical-descriptive methodology.** We will make a descriptive analysis by comparing theories and concepts relevant in the literature about jihadist radicalization and network formations on the theoretical framework. Secondary sources, academic articles, and books will be used from prominent authors in the field of network analysis and radicalization like Sageman (2004, 2008), Della Porta (1992), Malthaner (2017, 2018), Neumann (2003), Vicente (2021, 2022) and Wiktorowicz (2005), among some.

Our analysis on the Spanish case will use the theoretical base to make an inferential analysis and test our hypothesis with data from 2001 to 2018 divided into two periods (2001-2011 and 2012-2017) provided by the Instituto del Cano's database of Jihadists in Spain (BDEYE). The information found in the BDEYE is already processed, operationalized, and presented in tables and graphs in the Reinares, García-Calvo & Vicente's (2019) article, which is the one that we will use as a base for the analytical section. Our analysis will briefly present the findings on the locations where individuals undertook the radicalization process showing "radicalization bags" and further analyze the radicalization modalities, the offline, online, and mixed modalities. We will explore the significance of pre-existing social ties with two tables that ask "do you have pre-existing social ties" to observe the trends on this variable in the three modalities and test our hypothesis and respond to the first research question. Later, by analyzing the modalities, we will observe the trends in the two periods and the importance of the three modalities. Finally, we will focus on the online modality and the trends inside the modality to see if the importance of pre-existing social ties increases or decreases and answer the second research question and re-test our hypothesis.

3.3.1. TECHNIQUES FOR DATA GATHERING

The method that we have employed to analyze and gather the literature is called **thematic analysis** (Braun & Clarke, 2006), a six-step process that has examines a set of texts to identify common topics that come up repeatedly. The process starts with familiarizing

with several texts found in the bibliography and note-taking. Coding words that are repeated come as the second step of the process, like radicalization, patterns, networks, socialization, ties... Then, with different words gathered in the second step, several topics come up, which, are groups of words that are put in the same "category". Afterward, a second and more in-depth review of the selected texts is done to review anything that was not missed and examine the selected topics closer. Finally, we define, name the topics, and write the theoretical framework.

4. The case of Spain: Social ties and radicalization modalities

This section aims to analyze the data provided by Reinares et al. (2019)'s article with data gathered from EYBDE from 2001 to 2018 to examine the role of pre-existing social ties in the radicalization process. Firstly, we will briefly present the main findings of the location where individuals undertook their radicalization process, which is crucial in arguing that pre-existing social ties play an essential role in adopting radical beliefs. The paper concludes that 60,4% of the cases were radicalized in Spain and 39,6% in "Spain and another country", meaning that 100% of the cases were radicalized fully or partially in Spain. Nevertheless, the radicalization did not occur in a "uniform and proportional way" inside the Spanish territory. Rather, there were Autonomous Communities and provinces that gathered most of the radical networks. For example, Catalonia gathered 27,4% of the cases, Madrid 26,9%, and Ceuta and Melilla together 25,3% of the cases, making these three regions more than three-quarters - 79,6% - of the cases. With that information, Reinares et al. (2019) argue that there are "radicalization bags" in Spain.

The radicalization processes have tended to concentrate in some areas of the period studied, as shown in the graph below. The existence of radicalization bags indicates a local component in radicalization processes in Spain, meaning that the concentration on cities and Autonomous communities could indicate the presence of radical networks and, therefore, pre-existing social ties. As Malthaner (2018) states, radical networks legitimize beliefs and reinforce ideas. Social network theories argue that individuals need to interact socially and not act in isolation. Thus, the concentration of radicalization

processes in these areas back Malthaner's ideas and the hypothesis of social network theories (Vicente, 2021). Radical networks made up of friends, neighbors, and family, and the echo-chamber role they have, together with the need for the individual to verify and act socially, will lead to the concentration of the radicalization processes.

Figure 1. Main radicalization bags of condemned and dead jihadists from 2004 to 2018, divided into two detention periods and deaths
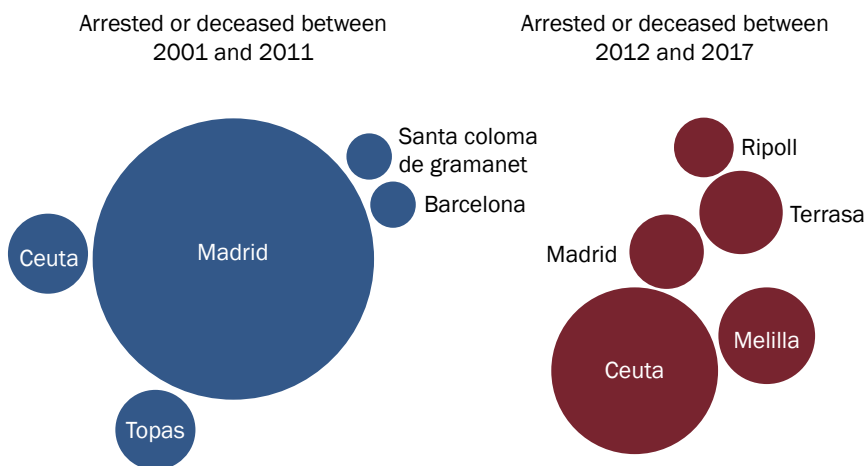
Source: Reinares, F., García-Calvo, C., Vicente, A. (2019).

This elaborated distribution of the different radical networks in Spain shows the importance of pre-existing social ties; neighbors, friends, family, and strong and weak ties. The graph shows that pre-existing and strong social links allow for radical networks to be strong and concentrated in some areas. Whereas weak ties, shown through cooperation or individuals who know themselves outside or inside the CGR, illustrate how radical networks are connected to each other's. In this sense, Dario & Miche's (2015) arguments show that both strong and weak ties are necessary to ensure the survival of radical networks and are complementary in ensuring their functioning. Strong ties allow individuals to entail prolonged interaction, create stability, and reinforce values like loyalty within the radical network. In contrast, weak ties facilitate collaboration and the spread of ideas within different radical networks (Dario & Miche, 2015), as seen in the graph.

Figure 2. Map of Jihadist Radical networks in Spain in 2017
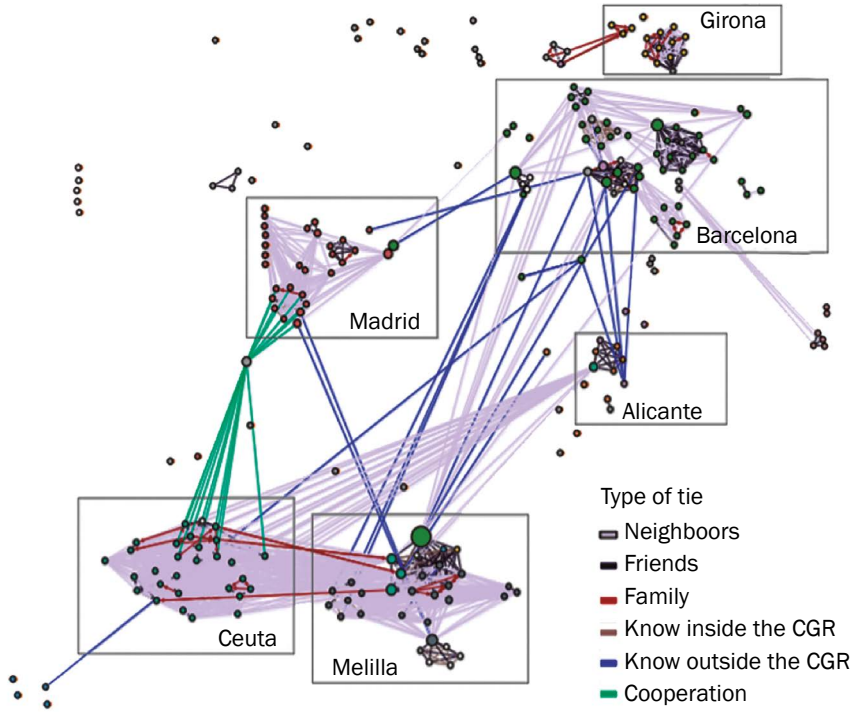
Source: Own elaboration from Reinares, F., & García-Calvo, C. (2017).

4.1. The Importance of Pre-Existing Social Ties

Out of the 105 studied cases (100%), 78 had pre-existing social ties (74,28%), while 27 cases did not (25,71%). Thus, **nearly eight out of ten individuals who radicalized accompanied had some pre-existing social ties**, confirming our hypothesis. Out of the 78 cases (100%) who affirmed they had a previous social tie, most concentrated in the mixed and the offline modalities, accounting for 84,6%.

The data confirms that eighty percent of the cases who radicalized in Spain in company had pre-existing social ties. Reinares et al. (2019) concluded that in the mixed modality, pre-existing social ties were crucial, especially with individuals who were already radicalized —radicalizing agents— or already involved in activities related to jihadist terrorism. Considering that the mixed modality is predominant throughout the two periods, with 45,8% of the cases

radicalizing through this modality, **pre-existing social ties are crucial in the radicalization process**. Therefore, we affirm that social ties are essential in adopting radicalized beliefs in the mixed modality.

Table 1. Jihadists convicted or killed in Spain between 2004 and 2018 but detained or deceased between 2012 and 2017, according to the environment of radicalization and link previous social relationship with another jihadist (in %)

Prior social ties			
Environment	Yes	No	Total
Online	15,40 %	77,80 %	31,40 %
Offline	20,50 %	14,80 %	19,00 %
Mixed	64,10 %	7,40 %	49,50 %
Total	78	27	105
Cases without data	9	4	13

Source: own elaboration from Reinares, F., García-Calvo, C., Vicente, A. (2019).

Table 2. Jihadists convicted or killed in Spain between 2004 and 2018 but detained or deceased between 2012 and 2017, with a pre-existing social link with someone else jihadist, according to the type of social bond and sex (in %)[4]

Type if previous social tie	Men	Women	Total
Neighborhood (in the same locality)	68,90 %	66,70 %	68,60 %
Friendship	59,50 %	41,70 %	57,00 %
Kinship	48,60 %	83,30 %	53,50 %
Neighborhood (in the same district)	36,50 %	25,00 %	34,90 %
Total	74	12	86
Cases without data	1	0	1

Source: Own elaboration from Reinares, F., García-Calvo, C., Vicente, A. (2019)

When pre-existing social ties existed, the primary relations were either kinship, neighborhoods, or friends, being these not mutually exclusive, but rather complementariness. Seven out of ten cases (68,6%) stated pre-existing social ties were created within the same

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4 Note: the sum in the percentage is not 100% because several of the convicted or dead had ties to different pre-existing social ties.

locality (Reinares et al., 2019). This can be linked with the first graph, where radicalization processes are not diverse throughout the territory but rather concentrated in localities within small groups of relatives that share some relation. The importance of pre-existing social ties puts relevance on the local networks, constituted based on interpersonal ties, facilitating the radicalization and recruitment of jihadists (Reinares et al., 2019).

Kinship and friendship relations are the first agents of socialization and have the potential to be the primary source of normative values and be a solid motivation to engage in activities. According to Sageman (2004: 120), individuals are especially vulnerable to these relationships if they consider that society has few things to offer. In the Spanish case, jihadist networks are evident and have an essential role, for instance, in the Abu Dahdah case, the 11-M case (Jordán, Mañas & Trujillo, 2006: 91), and the 17-A. Kinship and friendship dynamics can lead to radicalization by having this end from the beginning. In other words, they instrumentalize the friendship with recruitment finalities or because inside a pre-established group, some members have contact with the ideology, and afterward, they influence the other members.

Vicente (2022) concluded that recruiters or radicalized agents not only leveraged their pre-existing social ties to draw underage youths to extremism and violence but also developed associations with individuals with whom they were previously unconnected. Vicente (2022) established three complementary theories that help us explain how kinship is one of the most important social networks in the radicalization process.

1. The intra-family formula explains that family members indoctrinate members of their own nuclear family ranging from early infancy to 17 years of age.
2. The extra-family formula within the immediate environment is defined as the social circle or networks used by people who maintained personal links of varied nature with their targets, such as sentimental relationships, friendships, or neighborhood ties.
3. The extra-family formula in the non-immediate environment allows recruiters or radicalized agents to use the Internet and social media channels, the online modality, to contact adolescents whom they had not previously met and could not know by any

other means. Vicente's study concludes that 84,1% of the mobilization contacts took place within kinship, partnership, friendship, and neighborhood ties.

4.2. RADICALIZATION MODALITIES

In the first period - from 2001 to 2011- more than half (51,2%) of the individuals radicalized only in offline spaces, such as physical spaces, either public or private. The NOVA operation is an example of radicalization processes that used the offline modality, where individuals were radicalized through physical interaction in the Tropas Prison in Salamanca (Grupo de Estudios en Seguridad Internacional [GESI], 2022). In the first period, only 2,3% did it online, defined as virtual spaces of social interaction, likely due to the Internet not being as widely used as it is currently.

Table 3. Jihadists convicted or killed in Spain between 2004 and 2018, according to them environment and modality of radicalization, for different periods of detention or death (in %)

Environment	Detained or deceased in 2001 to 2011		Detained or deceased in 2012 to 2017		Total	
	In company	Alone	In company	Alone	In company	Alone
Mixed	46,50 %	-	54,20 %	-	51,80 %	-
Offline	51,20 %	-	17,70 %	11,10 %	28,10 %	11,10 %
Online	2,30 %	-	28,10 %	88,90 %	20,10 %	88,90 %
Total	43	0	96	9	139	9
Cases without data	1	0	22	3	23	3

Source: Own elaboration from Reinares, F., García-Calvo, C., Vicente, A. (2019)

In the second period - from 2012 to 2017- the offline modality drastically decreased to 17,7%, experiencing a decrease of 36,5% and the online modality increased to 28,1%, with a 1000% increase. Like social media platforms, virtual spaces have acquired a predominant relevance due to the sophistication, low cost, and diffusion of jihadist

propaganda. Individuals who radicalize alone mainly do it online – the 90% - where virtual communities do not necessarily need to be made up of individuals they previously knew. In this sense, the Internet, despite not containing pre-existing social ties, social links are essential variables in shaping worldviews and motivating collective action, according to Neumann & Rogers (2007) and Hazed & Mullins (2015). That is why virtual spaces have had ever-increasing importance, due to the social component of legitimizing beliefs and sharing jihadist propaganda.

Still, the mixed modality, a combination of online and offline spaces, gathered a significant number, accounting for 46,5% in the first period and increasing in the second one with 54,2%. Javer Operation exemplifies the combination of both modalities, as individuals radicalized did it through social media platforms and the Assalam Mosque in Melilla (GESI, 2022). We argue that there is a change in patterns between the two periods due to the increasing importance of the Internet, leading to more radicalization agents and activists increasing their means to recruit. This diversification of methods leads to decreased offline and mixed modalities and online modalities gaining importance.

4.2.1. Offline Radicalization

Private domiciles and mosques were the principal places where radicalization took place. For example, the Caronte Operation presented how the radicalization and recruitment work took place in a mosque in Terrassa, Barcelona, where they identified individuals with little religious training and persuaded and attended meetings in private homes (GESI, 2022). The workplace and prisons are decreasing in importance from one period to another despite that social network in prisons were deeply relevant in the first period, for instance, with the NOVA case (Jordán, 2009). Usually, as seen in the previous example, radicalization processes occur in several places. An example of this is Gala Operation, where Lahcen Ikassriem and its radical network recruited affiliates in the M-30 mosque and used a private home in Ávila to gather (GESI, 2022).

Offline radicalization evidences the existence of social networks and pre-existing social ties. Radicalization processes taking place at home likely indicate that the social network uses that space to

gather there – a group of friends, neighbors, or family – like in the 17A case. Islamic cultural centers have regular attendees who usually know each other before the radicalization process occurs, as with Operation Gala and Caronte. The workplace and prisons are likely to contain pre-existing social ties due to being part of the individual's daily life. This shows that Malthaner's (2018) arguments on the "bottom-up" process is correct. Individuals will seek to actively establish contact with like-minded individuals at home, in the neighborhood, and in prison. This dynamic occurs with recruiters and activists looking for like-minded individuals to expand their radical networks.

Table 4. Jihadists convicted or killed in Spain between 2004 and 2018 radicalized totally or partially offline, depending on their area of radicalization, for different periods of detention or death (in %)[5]

Offline radicalization			
Environment of offline radicalization	Detained of deceased from 2001 to 2011	Detained of deceased from 2012 to 2017	Total
Private home	69,60 %	68,10 %	68,10 %
Place of worship and Islamic cultural center	53,60 %	53,60 %	53,60 %
Outdoors and excursions	32,10 %	53,60 %	53,60 %
Shops or commercial center	35,70 %	40,60 %	38,40 %
Prison	21,4 %	10,10 %	15,20 %
Work	17,90 %	-	8,18 %
Total	56	69	125
Cases without data	1	7	8

Source: Own Elaboration from Reinares, F., García-Calvo, C., Vicente, A. (2019)

5 Note: the sum of the percentage of both periods is not 100% because several of those convicted or killed radicalized in more than one area of offline radicalization.

Outdoors and excursions and shops and commercial centers are essential in both periods. Malthaner (2018) argues that meetings that take place outdoors or in areas where "two individuals could meet by chance" are likely attributed to the role of pre-existing social ties. Pre-existing social links help create trust and familiarity between two unknown individuals. Therefore, casual meetings where the radicalization process could start might occur in connection as part of larger organizations, leading to pre-existing social ties relevant to connecting new individuals and engaging them in the radical network and adopting radicalized beliefs Malthaner describes. Thus, the role of pre-existing social ties, either through kinship or friendship, play a crucial role in the radicalization process.

4.2.2. Online Radicalization: The Internet and Social Media Platforms

The online modality gathered 8,1% of the cases in the first period and 34,5% in the second. Furthermore, the mixed modality also accounts for the role of the Internet, social media platforms, and forums. Therefore, the role of social media platforms and messaging applications increases in importance from one period to another. Reinares et al.'s (2017) data confirm that online jihadi radical-ization is not limited to individuals who radicalize alone.[6] Table 4 illustrates the increasing importance of the Internet in the first period and how in the second period the sources diversify, with the growing importance of social media platforms and messaging applications. The participation and creation in Jihadist forums, Yahoo, or Messenger groups, and the subscription to jihadist webs are likely to play a relevant role in adopting radicalized beliefs as it allows jihadist propaganda to be distributed, reinforcing the identarian elements found in the micro-level (Jordán, 2009).

Table 3 illustrates that of the 27 cases (100%) who affirmed they did not have any previous relationship, most of them (77,8%) gathered in the online modality. Nevertheless, eight out of ten individuals who radicalize are accompanied by the mixed and offline modalities. Thus, the role of social media platforms is increasing in importance, but still, most of the cases do not radicalize, solely relying on online

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6 See Table 1 for further information.

methods. Thus, despite the ever-increasing importance of social media platforms and jihadist forums, **the role of pre-existing social ties will be relevant, even in the second period**, confirming our hypothesis again.

Table 5. Jihadists convicted or killed in Spain between 2004 and 2018 radicalized totally or partially online, depending on their area of radicalization, for different periods of detention or death (in %)[7]

Online radicalization			
Environment of offline radicalization	Detained of deceased from 2001 to 2011	Detained of deceased from 2012 to 2017	Total
Internet	96,80 %	68,20 %	75,60 %
Social media platforms	9,70 %	79,50 %	61,30 %
Message applications	-	39,80 %	29,40 %
Total	31	88	119
Cases without data	0	1	1

Source: Own elaboration from Reinares, F., García-Calvo, C., Vicente, A. (2019)

5. Conclusions

Based on a qualitative analysis of the radicalization modalities and the distribution of the radicalization bags, we can respond to our first research question, "are pre-existing social ties are significant in the process of jihadi-Salafism radicalization in Spain?" with an affirmative answer. We conclude that pre-existing social ties is crucial in the jihadist radicalization process. The results indicate that eight out of ten individuals adopt radicalized beliefs through the mixed and offline modality, where pre-existing social ties were crucial, either through kinship, friendship, or other relationships. Furthermore, by

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7 Note: the sum of the percentage of both periods is not 100% because several of those convicted or killed radicalized in more than one area of online radicalization.

analyzing the social network lenses and the literature on pre-existing social ties, this thesis has shown how this factor can, directly and indirectly, shape the adoption of radical beliefs.

Our second research question, "as the Internet and social media platforms become prominent in the second period of study, from 2012 to 2018, will the role of pre-existing social networks still be relevant?" is also responded affirmatively. We conclude that pre-existing social ties are still relevant in the second period. Even when online modalities of radicalization increased, the mixed modality was the predominant one, where pre-existing social ties are crucial. Therefore, our two research questions were answered in the analysis section of our case study, and our hypothesis "social networks, and especially, pre-existing social ties are an essential component adopting radical jihadist beliefs in Spain in the two periods" was confirmed.

The methodology has been conducive to identifying the main trends and patterns in the selected literature and focusing on a niche in the literature's radicalization processes. Still, we have found limitations in our work due to the abundant literature on radicalization and the tremendous number of causes that explain why an individual radicalizes. In other words, pre-existing social ties could be highly relevant. Still, other variables such as the socio-economic background, education, integration in society, and micro-level explanations also condition the adoption of radical beliefs. Nevertheless, the study's conclusions aim to contribute to a better understanding of this variable in the radicalization process and help reshape the existing public policies on the prevention of radicalization and extremist beliefs in Spain by understanding the role of this element in this process. Future studies could address the relationship between pre-existing social ties and the implication of the cases of violent actions, i.e., terrorism, to better understand the impact of these results.

Referring back to the theoretical framework, our research aims to compile, gather and present the main trends and findings in the literature on pre-existing social ties and network analysis and draw the importance of this approach in analyzing radicalization causes. This research confirms the hypotheses we set in the methodology and puts social networks and relationships at the center of our study.

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