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## Radicalization of Islam or Peddling Radicalism? Lessons from the French Experience

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by

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Abstract: A simple game-theoretic model is used to end the sterile intellectual trench war between those who analyze each instance of a community's radicalization process as a self-contained phenomenon and those who prefer to embed such episodes within a more encompassing social framework. In the model, two groups labeled "Muslims" and "Nativists" are competing using radicalization as a tool to enlarge their share of the limelight in the media. Exogenous shocks are then shown to entail both idiosyncratic responses and interactions between the two groups. The French "radicalized decade" 2011-2020, which witnessed both the highly lethal November 13, 2015, Jihadist attacks at the Bataclan theater, several cafés outside terrasses, and at the *Stade de France*, and the populist *gilets jaunes* massive uprising from 2018 to the COVID-related lockdown in 2020, among other radicalization events, is used to put some of the model's insight to work. A simple extension of the model sheds some light on the emerging Islamo-Leftist and Lefto-Populist tacit collusions, suggesting that the radical left' splintering probably did boost the collective radicalization process. **Wordcount:** 10198 (abstract and acknowledgements included).

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#### Introduction

Like in many other parts of the world, many vocal politicians are nowadays pointing at political Islam as a social and cultural threat on the French nation. At least two of the main candidates in the 2022 presidential election in France were daily voicing thinly veiled references to various conspiracy theories involving the Muslims in their campaign speeches. The incumbent Macron Administration has even denounced a form of "separatism" on the part of the most politicized of them and legislated against that a few months before the electoral campaign started. At the same time, most of the main candidates have drifted to the extremes of the political *spectrum*, making on the right-wing hard-liner stands on the issue of immigration control and on the left-wing some pleas for radical redistribution, as well as some thinly veiled anti-Jews allusions. Most voters clearly understand "Islamic threat" when politicians talk about "migrants", as very few people fear immigration from inside the EU.

At a time when this radicalization of the political debates was just affecting some marginal politicians, former Prime Minister Edouard Balladur (center-right) published a strong warning against policies that might be perceived as a mark of religious intolerance against Muslims (Balladur, 2005). In particular, he pointed out that the ban on the headscarf (hijab) for girls at school should be lifted to avoid a strong rigidification of the ethno-religious identity issue. His vibrant call fell on deaf ears, and ten years later, the identity crisis imposed itself as a fact, if only because of its extremely violent expressions. Political scientists and sociologists felt compelled to search for a theory explaining its causes, looking for a way out of the deadlock. In the best Parisian Academic tradition, a spectacular conflict opposed the two best known specialists of Islamism and Jihadism of the place. In 2015, Gilles Kepel argued that the root cause of Islamic radicalization and the rise of Jihadism in France were to be found in the mosques (Kepel, 2015). His claim is supported by interview-based field work describing the proselytizing taking place at or around the mosques, often supported by imported external influences. About a year later, Olivier Roy analyzed instead Islamism as an ideological cover hiding a deeper radicalism, reflecting a broader generational phenomenon (Roy, 2016). The shockwave from this encounter peddled across the Atlantic, where Clarke (2019) mentions it. Ferret and Khrosrokhavar (2020) provide an extensive review of this specialist debate that spilt over beyond Academic circles. Cécile Daumas made it accessible to a larger public in a deeply researched article published in 2016 in the daily newspaper Libération, showing that these are two one-dimensional visions of causality clashing head on.

This verbal duel fed the conversations of a large part of the Francophone Intelligentsia at the time. Nevertheless, she suggested that each contending author had a valuable piece of the puzzle, and we agree with her. The present paper suggests a way out of the turmoil within an inclusive framework.

However, this debate is not a French idiosyncratic phenomenon, as a similar one appeared in the Anglophone literature, in a more muffled style. Petter Nesser (2016) shows how Islamic terrorism arose in Europe, by scrutinizing the channels of influence of the various Middle Eastern conflicts. He emphasizes like Kepel that the imported external Jihadist influence was decisive in the radicalization of European Islamism and the rise in violent Jihadism. By contrast, various voices arose to recast the rise in Radical Islamism in a broader perspective, like Roy's. Gambetta and Hertog (2016) bring out striking similarities between radical Islam and White supremacist extremism. They emphasize the commonalities between the profiles of the two sides' most lethal terrorists, showing statistically, with reasonably sized samples of terrorists' biographies, that highly educated activists are often implicated on both sides. They find a shockingly dominant number of engineers among them, among the most lethal ones. In a similar vein, Bergen (2017) shows that, after correcting the data by removing the foiled attacks that involved an FBI informant, the so-called "sting operations", there are more terrorist attacks in the US due to White Supremacists than to Islamists. He wrote: "[...] the FBI has organized more jihadist terrorist plots in the United States than any other organization" (Bergen, 2017, p.97). Azam and Ferrero (2019) show the equally striking similarities between (i) the Islamist murderers like Mohamed Merah and Mehdi Nemmouche, who perpetrated spectacular attacks in Toulouse, Montauban and Brussels, respectively in 2012 and 2014, (ii) some killers from the European extreme right like Anders Breivik who killed 77 people in Norway, mostly teenagers from a socialist family background in Utoya Island, on July 22, 2021, and (iii) the school-shooters following the pattern set at Columbine, USA. They draw on the Herostratos syndrome analysis by Borowitz (2005), which they embed in a participation-game framework where the players seek self-glorification and social recognition by perpetrating odious deeds. They suggest that the media play a key part in amplifying these killers' appetite for infamy by creating some emulation between them. Hence, these analyses converge and bring out a kind of "tidal wave" that lifts up the radicalization observed from different sides.

The present paper sheds some light on this debate, based on a fundamental methodological diagnosis. It ascribes the sterility of the polemics between those who emphasize imported influences and those who focus on the tidal-wave phenomenon to the narrow causality concept that they use, too close to the simplest mechanical physicist's one. On the "imported" side, Jihadism stems from the "radicalization of Islam", decisively due to external influences. On the "tidal wave" side, Roy's "Islamization of radicalism" is just one of a broader kind. The next section shows that you can't reconcile the two sides without getting absurd predictions unless some interactions between the two are explicitly introduced. The subsequent sections offer a synthesis within an "analytic narrative" framework (Bates, et al., 1998). We first embed Islamist radicalization in a framework where other brands of radicalization may also exist and interact with one another. We understand radicalization as the process whereby many persons from a given social group cross the line for inflicting significant costs to the society at large and we discard this word's psychological overtones. This could involve murderous attacks or other violent actions entailing massive losses of income or property for many citizens. For simplicity, we label "populist" the alternative type of radicalization beside the Islamic one. What makes this step decisive is the assumption that there is an interaction between the radicalizations developed by each group. In the light of the French experience, we suggest that the Jihadists and the gilets jaunes (yellow vest) competed to strengthen their group consciousness and to defend a collective self-image. A simple gametheoretic model enables us to produce a graphical analysis of the equilibrium of the game between the "Islamic" and the "populist" brands of radicalization, which interact in an amplifying way. Special attention is paid to the micro-foundations of the groups' social bestresponse functions using a symbolic market equilibrium to generate the symbolic price that helps coordinate the activists with the bystanders that they claim to represent. Hence, the model articulates two types of interactions: (i) within group between bystanders and activists, and (ii) between groups that compete for media attention.

Beyond the methodological clarification, this model generates the (potentially testable) comparative-static predictions describing the antagonistic radicalization mechanisms within a unified framework. This allows us to predict the impacts of external shocks, including those that emphasize imported external influences. Radicalization-boosting external shocks may also involve side effects of government policies. Azam and Bhatia (2017) show econometrically in the case of India that local police- or militia violence against some minority groups that predictably respond by "terrorist attacks" seems to have been engineered

purposefully by local governments to justify clearing the ground for mining firms. A similar type of provocation is found econometrically by Azam and Thelen (2018), showing that the rise of transnational terrorist attacks produced by citizens from overseas countries where US soldiers are deployed, especially in or near oil-exporting ones, seems to have been knowingly accepted as a collateral damage of military presence. Moreover, section four recalls that the French government's attempts at raising the taxes on fossil fuel played a key part in triggering populist uprisings. This comparative-static analysis gives a precise meaning to the concept of "peddling radicalism", i.e., the process whereby an initial radicalization response to a group-specific exogenous shock propagates by triggering similar responses by other groups. This captures the "tidal wave" effect by showing how a populist shock may trigger an Islamic response to catch up.

This framework is then extended fruitfully after discussing more deeply the French experience of the 2010s that suggests that the gilets jaunes (yellow vests) movement embodied more than a pure "populist" radicalization inflicting a massive disruption on the French economy, whose cost was evaluated at several billion euros. It was triggered by a plan to raise taxes on diesel fuel, for ecological reasons, without any preliminary concertation and then built up to reach gigantic proportions. Weekly monstrous marches in the main cities involving hundreds of thousands of demonstrators affected the central inner-city shopping areas every Saturday, the usual peak day for commercial business. It also involved roadblocks in hundreds of important roundabouts and crossroads, especially on motorway feeder roads and toll booths. The tourism sector's turnover fell drastically, inflicting several billion-euro worth of lost activity. Moreover, the massive marches harbored the classic "black blocs", i.e., gangs of masked marchers breaking shop windows, setting cars on fire, and vandalizing urban public goods, also costing several billion euros (Dupuis-Déry, 2019). These weekly demonstrations and nearly permanent roadblocks lasted for about two years. The movement side-stepped the standard institutional framework of political demonstrations, like political parties and trade unions, and used a strikingly "anti-system" rhetoric (Le Bart, 2020). It was coordinated using the social media by independent working-class people from the lower tail of the wage distribution. Some surveys have shown that they had mainly voted either for extreme right-wing or extreme left-wing parties at the previous presidential election. Many observers were surprised by the convergence of the extremes of the political spectrum, such that national tricolor flags and communist red flags were often flying side by side in many demonstrations and makeshift road-side encampments. Moreover, a similar but more drawnout convergence occurred on the other side of the spectrum between the far-left intelligentsia and the Islamists, despite the former's professed secularism. This seems to exclude any "clash of civilization" type of approach (Huntington, 1996) as no "fault line" is involved, pointing instead at systemic social exclusion in France as the causal factor (Alimi, 2023). A simple application of the model suggests that this "anti-system" tacit bi-lateral collusions between the far left, the far-right, and the radical Islamists, boosted radicalization on both sides, triggering an additional shade of "peddling radicalism" of massive proportion.

#### 1. Jihadism and Radicalism: The Mono-Causal Dead End.

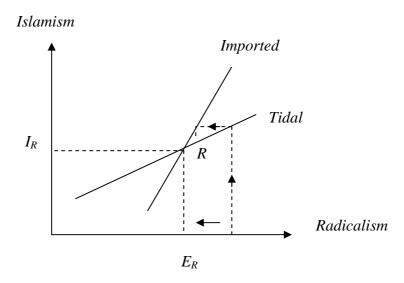


Figure 1: The Two Mechanisms Combined

For simplicity, the two antagonistic positions defended by the "imported" and "tidal" sides can be summarized as swapping the direction of causality between the impacts of Islamism and radicalism. For the former, an increase in Islamism entails an increase in radicalism, while the impact works the other way around for the latter. Let us first look at the impacts of transitory changes in either variable, may be due to some random shock. Figure 1 captures these two alternative causal links by positively sloped straight lines in the {Islamism, Radicalism} space. This means, for example, that if we compare two dates differing by their levels of Islamism, we expect a higher level of the latter to cause a higher intensity of radicalism by the former effect, while the positive correlation would be driven by the higher level of radicalism by the latter one. Figure 1 assumes that the "imported" mechanism has a

steeper slope than the "tidal" effect in this space. The opposite assumption is examined in figure 2 below. This relative-slope assumption means for example that if an exogenous increase in radicalism occurs, it triggers an increase in Islamism by the latter mechanism, which entails a second-round impact on radicalism by the former mechanism that is weaker than the initial shock, i.e., a decreasing incremental response. The opposite case is analyzed below. The intersection point R is the "reconciliation" equilibrium where the two mechanisms function simultaneously in a consistent fashion, i.e., where the level of Islamism  $I_R$  produced by the tidal mechanism for a given level of radicalism  $E_R$  creates in turn by the other mechanism the same level of radicalism. This consistency property does not exist at any other point of this  $\{I, E\}$  space. Elsewhere in this space, the "imported" mechanism would produce a different level of radicalism than the initial one, entailing the chain reaction of I and E chasing each other in the convergence process. This is illustrated in figure 1 by the arrows born by dashed lines, starting to the right of  $E_R$  and moving to the left after hitting the "tidal" line, and then moving downwards after hitting the "imported" line, indicating the reduced level of radicalism, etc., until point R is reached. The iteration between the two effects stops at the equilibrium point, which is then deemed stable; any initial shock away from R tends to be corrected by the subsequent iterative dynamics between the two causal effects. A similar convergence process could be initiated starting from a point to the left of  $E_R$ . This stability property is also required to meaningfully simulate the impacts of any parameter change that shifts exogenously one line or the other by looking at the changed position of the equilibrium point, according to "Samuelson's Correspondence Principle" (Samuelson, 1947).

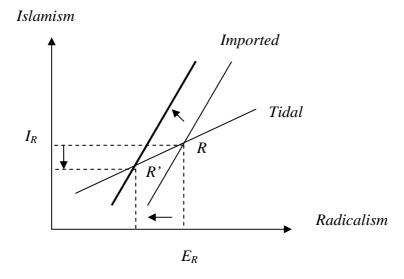


Figure 2: Impact of an exogenous Islamization shock

Let us now perform a slightly different thought experiment where the equilibrium point *R* itself is moved by a parametric change in the model. In figure 2, the "imported" line is shifted upwards relative to figure 1 by a permanent exogenous increase in Islamism, as shown by the thick line. The level of Islamism is thus increased for any given initial level of radicalism, e.g., because of a regime-change regarding foreign intervention in support of rigorous religious practice or Jihad as in Kepel's field work. Unfortunately, this exercise leads to an absurd prediction. Because of the stability requirement, the "imported" line must be steeper than the other one. This entails that the equilibrium shifts from *R* to *R*', thus depicting a simultaneous *decrease* of radicalism and Islamism.

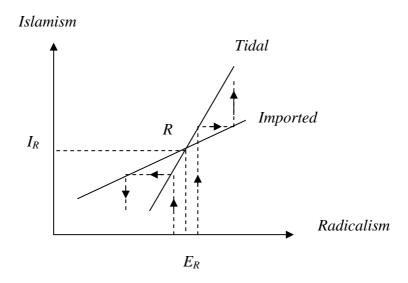


Figure 3: The Explosive Case

Figure 3 shows what happens if we swap the relative slopes of the two lines so that R is not stable anymore by looking at the consequence of starting from an initial point located to the right of  $E_R$ . The tidal line now lies above the other one in that part of the space, entailing a higher level of Islamization, which triggers in turn an increase in radicalism, etc. The little arrows borne by the dashed lines show that an explosive chain reaction starts pushing Islamism and radicalism to ever increasing levels up to infinity. The symmetric thought experiment can be performed to show the consequence of an initial level of radicalism located to the left-hand side of  $E_R$ . The chain reaction now starts leftwards, leading to a complete eradication of Islamism and radicalism. Hence, starting from R, any tiny exogenous change in the external influences mentioned above would send our world either to the zero or the

infinite of Islamism and radicalism. Hence, any hope of reconciling the two viewpoints within a mono-causal framework must be given up. Fortunately, the small intellectual investment in game theory offered in the next section allows us to take on board their scientific contributions.

#### 2. A Game-Theoretic Reconciliation

Assume for simplicity that there are only two groups having the potential to develop the type of radicalization analyzed here, which might end up producing dangerous or murderous attacks, while the real world obviously involves a larger set of relevant groups. We call them "Muslim" and "Nativist", keeping in mind the drastic simplification involved. We keep "Islamist", "Jihadist" and "populist" to describe the outcomes of their potential radicalization processes. A specialist's study of radicalization would require much finer distinctions, but this simplification yields a good combination of simplicity and analytical insight.

Assume that each community maximizes an objective function representing what Montesquieu (1748) called its "general spirit", capturing somehow the dominant state of mind prevailing in the group. This aggregate might result from idiosyncratic processes generated by the group's informal institutions, charismatic leaders, or religious or professional associations, or in some cases from a spontaneous grassroots phenomenon, as illustrated below. Such a collective Welfare function immediately raises a red flag for economists: which axiom of Arrow's '(im)possibility' theorem has been dropped to make it possible? This theorem assumes that the individual preferences to be aggregated are given and immutable, among other axioms. By contrast, we consider the fact that a lot of social processes are influencing people's preferences. These kinds of processes are certainly at work in forming the social groups labeled "Islamist" or "Populist" here. Responding to a comment by Amartya Sen, Ken Arrow gave this beautiful answer: "Amartya is correct that I did not address the question of conversation and dialog in the formation of preferences, the meaning of changing your opinion when talking to someone else" (Arrow, 2014, p.58). By contrast, this is the focus of George Akerlof's "Loyalty Filters" theory, well summarized by the following quote: "When people go through experiences, frequently their loyalties, or their values, change. I call these value-changing experiences "loyalty filters"" (Akerlof, 1983, p.54). Azam (2012) uses this idea, focusing on how education may change people's worldview and turn some of them into

suicide terrorists. Such loyalty filters undoubtedly play a key part in the formation and evolution of ethno-linguistic, religious, or other forms of collective identity. In two intriguing case studies, Khosrokhavar (2022) and Domingo (2022) document how Olivier Corel, whose real name is Abdel Ilah Al-Dandachi, provided a father figure that was decisive in the radicalization of several young Islamists in his community in Artigat, near Toulouse (France). Strikingly, he was not using any indoctrination strategy, adopting instead an inspiring silent attitude to let the aspiring activists speak out their radical tendencies in a cumulative fashion. El Janati (2022) describes another charismatic figure of the Jihadist movement using a different approach. Mamadou Daffé, a researcher in biochemistry at Paul Sabatier University in Toulouse, was also the Imam of the Le Mirail mosque. His was a strategy of creating a Muslim-friendly haven, where young people could strengthen their self image and dream of the international Caliphate. Many of them joined ISIS in Syria. These two examples illustrate how the radicalization process is largely an individual response to perceived social challenges that is facilitated by the in-group environment. In our model, we use a simple specification to capture a potentially crucial form of endogenous collective preference changes to explain the radicalization process.

We call each group's collective welfare function a utility function, in the broader sense of the Latin *utilitas*, including all kinds of advantages accruing to the maximizing "agent" like the "emotional energy" emphasized by Collins (2004) and other "intangible incentives" discussed by Blattman (2022). For each community, radicalization entails both benefits and costs, and "utility" measures the difference between the two. Many different avenues could be explored to determine what constitutes a benefit for the group, as assessed by its "general spirit". One possible component of group identity may derive from genealogy, as in clanic societies. Azam (2014) discusses how such clanic ties have been harnessed to develop a homegrown democracy in Somaliland. In most European countries, several other mechanisms can result in the crystallization of group identity. This may involve religion, political or trade union affiliation, support of soccer or rugby teams, etc. Ferret et al. (2022) develop the concept of "imaginary family", or "neo-Umma", to explain how a person can link up emotionally to a wider group. Domingo (2022) uses the expression "the Merah clan" to describe how a cluster of Jihadist tendencies developed to restore some pride in the Merah broken family whose self-image had been tarnished by family or professional disappointments, resulting in loneliness and lack of social connections. He shows how Mohamed Merah's killing by the police in Toulouse, ending his series of seven murders, made him a collective identity-defining hero for his extended family. This is close to Ferrero's "Cult of Martyrs" theory (Ferrero, 2013). Azam and Ferrero (2019) report that Mehdi Nemmouche, who killed four people at the Jewish Museum in Brussels in 2014 had pledged to outcompete Merah, taken as a benchmark. Similarly, Ferret (2022) illustrates how Mohamed Merah odious deeds created a cultural script for other groups to emulate: the nine Jihadists of the Ripoll cell, in Spanish Catalonia, killed eventually 16 people in Barcelona and Cambrils in 2017, after claiming that they had carefully planned their murderous acts "à la Merah".

A group must reach a critical mass and have some mental cohesion to deliver this kind of services to its members. One way to get to that point is to capture a significant share of the limelight in the media. Islamic radicalization has been effective at amplifying the Muslims' presence in the news. Similarly, the gilets jaunes have mobilized mostly underdog or "invisible" people feeling unconnected to the wider society because of their low income or lack of professional qualification (Algan et al., 2019, Le Bart, 2020). They then succeeded in getting a lot of attention in the country and abroad. Hence, radicalization may benefit a group by enhancing its presence in the media, and this entails a competition for the limelight with other groups. The group's payoff from the radicalization of some of its members may thus be the mitigation of the threat entailed by the other community's radicalization, affecting both their self-image and the security of the group's members. Each community has an incentive to face up to such implicit threats, to avoid any increased feeling of inferiority. This betweengroup competition is amplified by the social media that reach a very large number of viewers outside the control of the conventional mass media. Kepel (2015), for the French Jihadism case, Abdel Bari Atwan (2015) and Stern and Berger (2015) (among others) for ISIS, Boulouque (2019), for the *gilets jaunes*, and Castells (2015) for several other protest groups, all provide fine descriptions of the use of the social media in this context. This technology opens new avenues for competition between the different groups, each one trying to match the innovations adopted by the others. The benefits may also derive from external influences, like the Salafist increasing aura of holiness for the Muslims, or the increased political visibility of populist movements elsewhere in Europe and the US for the Nativists. These influences may enhance the allure of radical Islamist or Populist postures by endowing them with brighter images. Activism also entails some individual human costs, like personal risk-taking that could result in imprisonment or self-sacrifice in perpetrating suicide attacks, as well as the increased social pressure on non-activist community members, increased police surveillance,

profiling, and discrimination, etc. Figure 4 describes how our model captures both types of interactions, within and between groups.

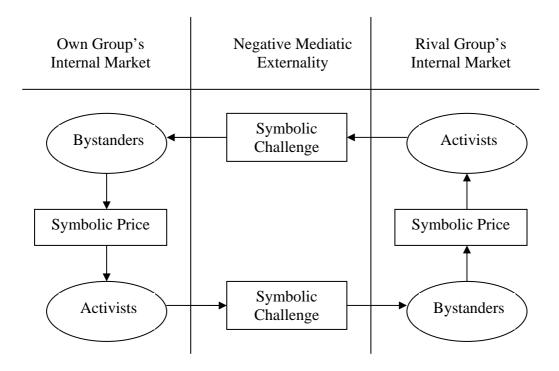


Figure 4: Between/Within Groups Interaction Chain

Each group is composed on the one hand of activists who supply the radicalization and on the other hand of bystanders whose welfare depends directly on the resulting self-image and group consciousness. Let us accept the standard simplification that there is a "representative" activist and a "representative" bystander in each group, i.e., that heterogeneity within each type of group members does not matter, as if they were all identical and their numbers fixed but large enough to ensure free competition. Then, a symbolic market equilibrium may determine each group's radicalization level, generalizing drastically the "laudatory equilibrium" analysis of Azam (1995) and the "symbolic transactions" one of Azam (2008) (both used initially to explain the relationships between African elites and their ethnic groups). In Marshallian terms, the community members' demand behavior may be represented by a demand-price schedule for radicalization i.e., an inverse demand function. In the symbolic market that we have in mind, it is the collective valuation of the degree of radicalization, e.g., some aggregate of approval rate, recognition, respect, enhanced status, etc. which plays the part of a price. As briefly discussed above, such an incentive could be

provided by the prospect of a kind of "cult" arising after the deed as described by Domingo (2022) or Ferrero (2013) or other reputational mechanisms within the group. Similarly, Hobsbawm (2000) analyzes many examples of "social bandits" who are regarded by public opinion as champions of social justice or primitive resistance fighters like Robin Hood or Jesse James. An intriguing autobiographical account of how activists feel connected with the social groups on behalf of which they claim to act is provided by Jann Marc Rouillan (2018). He was one of the main members of the Action Directe terrorist group that claimed to fight for the "international proletariat" in the 1977-1987 years, when the Rote Armee Fraktion in West Germany and the *Brigate Rosse* in Italy were similarly perpetrating murderous and destructive attacks in Europe. Although a lot of guesswork was involved in his assessment of their action's symbolic price, his book shows that he and his girlfriend Joëlle Aubron became careless about security as they ran out of stamina when they felt that they had lost the support of the "proletariat", i.e., in response to the perceived fall in their symbolic price. They quickly got caught by the police and Rouillan spent overall 26 years in jail in several spells, while Aubron died in jail of cancer. The "Internet revolution" changed that, and a lot richer information is now available to perform such assessments (Castells, 2015). For example, Merah used the social media to enhance the symbolic price for his deeds, as he filmed his murders and posted immediately the gore videos on YouTube and other websites (Azam and Ferrero, 2019). The number of downloads or "likes" certainly entered his perception of his deeds' symbolic price. For simplicity, we assume that the "representative" activists form a reasonably unbiased estimation of the symbolic price, under the rational expectation hypothesis. As shown by Guesnerie (2005), rational-expectations equilibria require that the "eductive learning stability" requirement holds, i.e., that the players involved understand that when their incentives change, this also affects other similar people, whose aggregate behavioral response will feed back on them in turn by changing these incentives further. As they are assumed to know the model as well as the theorist does, they can figure out the implications of this "eductive learning" for the resulting equilibrium. Hence, this "symbolic demand price" will naturally depend negatively on the members' own group's level of radicalization, because of diminishing marginal utility, and positively on the other group's level of radicalization, by the above-mentioned benchmark mechanism labeled "symbolic challenge" at figure 4.

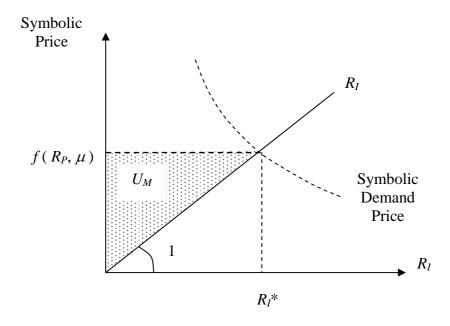


Figure 5: The Symbolic Market Equilibrium

Figure 5 depicts this symbolic market equilibrium for the Islamist case. The populist case can be easily analyzed likewise, mutatis mutandis. Let  $R_I$  and  $R_P$  denote the levels of Islamic and populist radicalization, respectively. The drawback of their radicalization is captured for each community by assuming that the measurement unit ("utils") is such that the costs borne by each community's activists, measured in the same units as the benefits, may be written as one half of the square of their respective levels of radicalization  $R_I^2/2$  and  $R_P^2/2$ . This specification captures the idea that radicalization inflicts more drawbacks, the higher its level already is. It follows that their supply prices are equal to their marginal costs  $R_I$  and  $R_P$ . In the symbolic market depicted at figure 5, the activists will supply radicalization levels whose collective valuation is larger than- or equal to the corresponding marginal cost derived above. This symbolic market mechanism will then find its equilibrium in the Marshallian way when supply equals demand and the demand price is equal to the supply price. The equilibrium valuations on these two symbolic markets are then given by the functions  $f(R_p,\mu) \ge 0$ , as depicted in figure 5 for the Islamist side, and  $g(R_I,\pi) \ge 0$  for the populist side. They are increasing functions of their two arguments,  $R_P$  and  $R_I$ , the radicalization levels of the other group, to capture the interaction between the groups labeled "symbolic challenge" in figure 4. They are also increasing in  $\mu$  and  $\pi$ , respectively, which represent other possible external influences, including the "imported" effects discussed in the introduction. Let us

assume also that these two functions are concave with respect to the other group's radicalization level, to capture a decreasing marginal impact, i.e., a possible blend of increased indifference and discouragement. Hence, the benefits for each community produced by its own radicalization level read as  $f(R_p, \mu)R_I$  and  $g(R_I, \pi)R_P$ , respectively.

Then, figure 5 shows clearly that this symbolic market equilibrium yields the group's chosen level of radicalization  $R_I^*$  that maximizes the activists' surplus, represented by the shaded triangle  $U_M$ , taking as given the equilibrium symbolic price  $f\left(R_p,\mu\right)$  and the other group's radicalization level  $R_P$ . A similar analysis could be performed for the other group, mutatis mutandis. Therefore, the collective utility functions  $U_M$  or  $U_N$  that each community seeks to maximize to determine its best-response level of radicalization, given the other community radicalization levels  $R_I^*$  and  $R_P^*$  are the respective activists' surpluses that may be written as follows:

$$U_M = f(R_P, \mu)R_I - R_I^2/2$$
 and  $U_N = g(R_I, \pi)R_P - R_P^2/2$ . (1)

Their first-order conditions are fulfilled when the per-unit benefits of their radicalizations,  $f\left(R_p,\mu\right)$  and  $g\left(R_I,\pi\right)$ , respectively, are equal to their marginal costs,  $R_I$  and  $R_P$ . These conditions allow us to write each group's chosen radicalization level as the following collective best-response functions:

$$R_{I}^{*} = f(R_{P}, \mu) \text{ and } R_{P}^{*} = g(R_{I}, \pi).$$
 (2)

Hence, this symbolic market mechanism explains how the maximization exercise described above can be performed in a decentralized fashion, providing clean foundations for the two collective utility functions specified in (1). The maximization is here performed by the activists under the guidance of the symbolic price that summarizes the relevant information about the "general spirit" of the community, as market prices are understood to do in standard Marshallian price theory. Graphically, a "symbolic challenge" in the sense of figure 4 is captured by an exogenous increase in  $R_P$  that entails an upward shift of the symbolic demand price curve, by the benchmark effect described above, which then lifts the

symbolic price  $f(R_P, \mu)$  upwards too. This in turn provides the incentive for activists to increase  $R_I^*$  as described by the best-response functions (2).

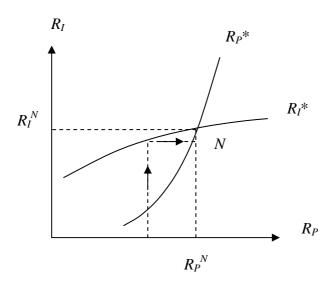


Figure 6: Equilibrium Radicalization Levels

Hence, our model boils down to the pair of collective best-response functions (2) linking the endogenous variables  $R_I$  and  $R_P$ . Notice the approximate symmetry between these equations, as one can be approximately deduced from the other by swapping  $R_I$  and  $R_P$ , given the f(.) and g(.) functions as well as the parameters  $\mu$  and  $\pi$ . This approximate symmetry helps to construct figure 6, where the Nash equilibrium is defined by the consistency condition that the equations (2) are simultaneously holding for  $R_I = R_I$  and  $R_P = R_P$ . The new twist introduced here is that the two "players" are neither individuals nor hierarchically organized groupings like firms or governments, but collective entities whose maximization behavior might be highly decentralized as described above. Figure 6 represents the Nash equilibrium by the point  $\{R_I^N, R_P^N\}$  in the  $\{R_I, R_P\}$  space, at the intersection N of the two curves. The concavity of one curve is reflected in the convexity of the other, because of the approximate symmetry mentioned above. The little arrows on the dashed lines describing the chain reactions like in figures 1 and 3, show that this equilibrium is stable, as required by Guesnerie's argument mentioned above.

#### 3. The Peddling Radicalism Process

We can now gauge the fruitfulness of this model by deriving its predictions regarding the impacts of changes in the exogenous parameters  $\mu$  and  $\pi$ . An imported shock is captured by an increase in the  $\mu$  parameter, which entails an upward shift of the  $R_I^*$  line. Figure 7 shows that the Nash equilibrium responds to this shock by shifting to the North-East of the  $\{R_I,R_P\}$  space. This shift of point N may be decomposed into a first direct vertical shift, for the given initial value of  $R_P^N$ , followed by a chain reaction of the two groups' levels of radicalization increasing in turn one after the other. Hence, the model provides a natural way of separating the impact of the direct partial effect, which is the focus of the imported shock school, from the resulting interactive increases of the two sides' radicalizations, called "peddling radicalism" above that captures the "tidal" mechanism that lifts both sides' levels of radicalization.

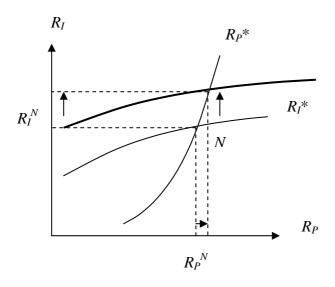


Figure 7: Impact of an Imported Islamic Shock

The impact of an autonomous increase in the other side's radicalization can be analyzed symmetrically as the response to an increase in  $\pi$  as in figure 8; the rightward shift of the  $R_P^*$  curve captures the exogenous increase in populist radicalization. We find symmetrically a direct partial effect of the populist radicalization, followed by a chain reaction where the two types of radicalizations interact by increasing in turn one after the other that captures the tidal mechanism that raises the joint level of radicalism. In particular, it entails an increase in Islamic radicalization that does not respond to any idiosyncratic causal

shock on the Muslim side. This confirms that Roy's distinction between the radicalization of Islam and the Islamization of radicalism is an important theoretical *caveat*: the cause of a puzzling buildup of Islamic radicalization must not necessarily be sought in the Muslim world but might be a response to a shock occurring somewhere else in the radicalization field. This precludes using a narrow interpretation in terms of "clash of civilization"

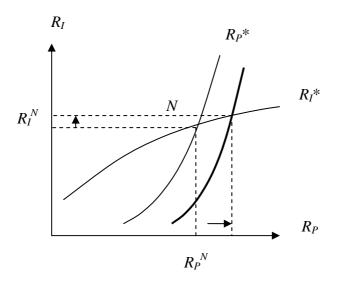


Figure 8: Impact of a Populist Shock

To sum up, the foregoing section has shown that (i) idiosyncratic shocks like the ones analyzed by Kepel (2015) and Nesser (2015) are crucial determinants of the changes in the groups' radicalization levels, and (ii) the different groups' radicalization processes can also be triggered by a chain reaction responding to the other group's radicalization process, as emphasized by Roy (2016) and the other authors on the "tidal" side. Without making any claim at exhaustivity, this model focuses on the competition for the limelight in the media as the mainstay of these interactions between the groups' radicalization processes. The next section offers a glance at the French experience during the 2011-2020 decade, in which many events bring out the two groups' radicalization processes. The narrative sheds some light on the model's predictions and suggests some marginal adjustments to take more facts on board.

#### 4. Lessons from the 2011-2020 Radicalized Decade in France

The second decade of the 21<sup>st</sup> century witnessed many lethal Jihadist attacks in various French cities and populist marches involving strong rioting events, including the infamous

graffiti tagging and sacking of the Arc de triomphe, a lot of broken shop windows and looting of luxury shops on the Champs Elysées and the burning of many cars parked in the area. Table A.1 gives a partial list of these events, presented "face to face" in two separate columns for the Islamist and Populist sides. Kepel (2016) provides an exhaustive narrative of the Jihadist events in France that killed 259 people between January 2015 and the summer of 2016. The civil war in Syria was a major focal point on the Islamist side, attracting more than 1000 young French Muslims and recent converts to Syria to fight for either Al Qaeda (al Nusra) or ISIS. The converts were often drawn from right-wing populist backgrounds and Taguieff labels this connection "Islamo-Nazi" (Taguieff, 2021). His historical narrative shows that age-old links exist between political Islam and Nazism, bonded by common anti-Jews hatred. The Grand Mufti of Jerusalem Haj Amin al-Husseini started to stir up anti-Jews riots in Palestine in the 1920s and these riots got him an impressive reputation as an antiimperialist activist against the British authorities that survives to this day. In 1933, al-Husseini closely linked up with the Third Reich and was invited to Berlin where he met Hitler and the Nazi top brass. In 1943, Hitler created the 13<sup>th</sup> division of the Waffen-SS, called *Handschar* (dagger), mainly involving Muslims from Bosnia-Herzegovina. Al-Husseini played a key part in getting that unit created as confirmed after the war by photographs showing him doing the Nazi salute and strutting down the line of men. This division inflicted extreme levels of violence on the Serbian civilian population and the Jews. Taguieff carefully traces a chain of people who kept this legacy alive to this day, via the Muslim Brotherhood in particular. Some former Nazi officials found refuge in the Middle East and North-Africa, and even converted to Islam in some cases, like the former SS Johan von Lees, alias Omar Amin. He died in Cairo in 1965, where he worked as an adviser to President Nasser. About a third of the French Jihadists in Syria came back to France, being tightly filtered at the sealed border, and most of them ended up in jail (Thomson, 2016). However, this was not true during the early years of the war, so that some of the lethal Jihadist activists of the 2010s, like Merah and Nemmouche mentioned above, spent some time in Syria and returned freely.

A surprising set of partners popping up in this competition for the limelight between the Islamists and the Populists comes from the far left (hard-liner socialists, communists, and Trotskyites). Caroline Fourest (2005) traces the origins of this connection to the rise of the Anti-globalization movement around the turn of the century, which converged over time with the Islamist intelligentsia inspired by the Muslim brotherhood. The resulting unholy alliance has been dubbed "Islamo-leftist" (*islamo-gauchiste*) initially by Taguieff. This expression

became viral in the subsequent political debate, and it was crowned with some form of officialdom when the Minister of Education Jean-Michel Blanquer voiced it on the Europe 1 radio channel while commenting on the beheading of high-school history teacher Samuel Paty in the classroom on October 22, 2020, by a Chechen Islamist. The Minister of Higher Education Frédérique Vidal has used it again in February 2022 to announce the launch of a special inquiry about the kind of affirmative action and anti-White discrimination alleged to be implemented in various Universities, within this ideological framework. Taguieff (2021) provides an up-to-date account of this process, which seems so far to remain limited to the intelligentsia, without much impact on the grassroots. This might be credited to the Islamoleftists, as many of their actions are clearly targeted at opening new channels of inclusion, a point not perceived by their critics. Both Fourest (2005) and Taguieff (2021) take a deontological approach rigidly defending fundamental republican first principles, without paying much attention to more consequentialist strategic considerations. However, the opinion survey data cited by Taguieff suggest that the Islamo-leftist strategy has gone too far, as some of the most worrying Jihadist claims have percolated into the mental setting of average 18-30 years-old youths. In terms of our model, this suggests that the  $R_I^*$  curve has shifted upwards as in figure 7.

By contrast, numerous communist red flags were visible in the *gilets jaunes* marches and roadblocks up to the end of the movement. This suggests that many far-leftist marchers joined autonomously the populist movement, creating an external shock shifting the  $R_p^*$  curve to the right, as in figure 8. This apparently spontaneous collusion between the two extremes reveals the yawning gap inside the French far left between its intelligentsia and its grassroots, reflected by the 2022 presidential election where the socialist candidate Anne Hidalgo ended up with about 2% of the votes. Algan et al. (2019) present a statistical comparison of the radical leftist and right-wing populist supporters of the *gilets jaunes* movement. All of them have low incomes and a basic distrust of both formal institutions and other people, while they differ significantly in terms of educational achievement. The "Lefto-populists", as we may call them by analogy with the Islamo-leftist expression used above, have a significantly higher level of education, creating some resentment for being unfairly treated by the labor market. The latter feeling does not affect the right-wing populist supporters. Boulouque (2019) brings out another intriguing difference, involving some mediatic specialization. As the left-wing populist activists were often seasoned former trade unionists or party members,

they handled much better their show in the urban marches, managing to get a larger share of the limelight with the conventional media like the main TV and radio channels. By contrast, the right-wing populist supporters of the *gilets jaunes* seem more attracted by the social networks and have largely outcompeted the others in this field. In both cases, the mainly spontaneous large mobilization was undoubtedly targeted by the marchers and roadblock occupiers at increasing their media exposure.

Our quick review of the French experience brought out the openly or tacit collusive behaviors of the radical left and right wings, which came as a shock to observers used to the standard left-right axis. Analyzing this issue in depth would require an extension to a three-group model, which we leave for further research. Less obtrusive but significant as well was the collusive behavior of the far-left intelligentsia with the Islamists. The next section shows that our model opens a larger opportunity set to the players, provided they resort to more sophisticated modes of interaction than those allowed within the Nash-Equilibrium framework. This provides some clue about this blurring of the left/right traditional divide and its Religious/Secular counterpart.

#### **5. Some Room for Collusion**

Our model captures endogenously how the two collective players' radicalization processes affect the value that they attach to their own radicalization levels. The previous sections have shown that this specification of the players' endogenous preference formation yields some important clues about some classic debates regarding radicalization. However, the brief review of the French experience of the previous decade performed above has brought out that the limits of the different groups are not in fact watertight, as shown by various examples of informal collusion between different radical groups. We have seen how the Far Left split somehow, with its intelligentsia providing support for the Islamists and its grassroots joining the Nativists. It is likely that these leftist sub-groups were trying to capture some of the limelight already focused on their hosts. In so doing, they most probably enhanced the levels of radicalization of both the Islamists and the Nativists. This can be interpreted as a form of amorphous collusion, where the Leftists grafted on either side created additional communication and influence channels, may be via straightforward emulation, beside the enhanced numbers of participants that reduced the costs of activism by spreading the risks of police violence over a larger number of people. Analyzing in depth this new kind

of collusive behavior falls outside the scope of this paper and calls for further research. A key issue can still be addressed within our simple framework, i.e., why the original marchers and activists did not reject the newcomers, by showing that there is room for this type of maneuvering in our model, as there are gains to be reaped by going beyond the simple initial Nash equilibrium.

Technically, the way we model the interaction between the groups' levels of radicalization clearly involves externalities, as decisions made by one group affect the environment in which the other group makes its own decisions, and vice versa. Moreover, this positively impacts their preferences, as one group's enhanced radicalization increases the value that the other group attaches to its own radicalization level, for the sake of competition. Therefore, this externality is bound to result in a below-optimal choice of radicalization levels because neither group internalizes the benefit that this decision produces for the other group. A standard economic argument might suggest that our Nash-equilibrium framework unrealistically precludes the search for more rewarding solutions by the players because of the extreme simplicity of the exchange of information between the groups that this concept allows. Without venturing into the jungle of cooperative game theory, we can still take a few steps to clarify this point. We can prove easily that there is some scope for improvement for the two players' strategic choices as there are, so to speak, large-denomination euro notes lying on the pavement. This is done by showing that our Nash-equilibrium point N is not "Pareto efficient", i.e., that it leaves some room for increasing the utility level reached by either player without reducing the other player's utility. However, the kind of cooperative behavior required for achieving such an overt collusion seems impossible to achieve given the actual antagonism between the two groups. We show then that some steps in that direction were taken by other means.

The indifference map of the Muslim group in the  $\{R_I, R_P\}$  space can be defined by performing the following thought barter experiment: by how much would the Muslim group accept to change its own radicalization level in return for a small increase  $dR_P$  of the Nativist group's radicalization level, while remaining as well off as before at a utility level  $\overline{U}_M$ ? To find the answer, let us take the total differential of  $U_M$  from (1) to write:

$$dU_{M} = 0 = (f(.) - R_{I}) dR_{I} + (\partial f(.) / \partial R_{P}) dR_{P}$$

$$= (R_{I}^{*} - R_{I}) dR_{I} + (\partial f(.) / \partial R_{P}) dR_{P}.$$
(3)

Rearranging the terms, we can write the implicit barter price in the question above as:

$$\frac{dR_I}{dR_P}\bigg|_{\bar{U}_M} = \frac{-\left(\partial f(.)/\partial R_P\right)}{\left(R_I^* - R_I\right)}.$$
(4)

Hence, an indifference curve of the Muslim group in this space would be vertical where  $R_I = R_I^*$ , negatively sloped where  $R_I < R_I^*$ , and positively sloped where  $R_I > R_I^*$ . Therefore, such a member of the Islamist group's indifference map would intersect the  $R_I^*$  curve vertically, and slope upwards above it, and downwards below. The one that gives this group's utility level in the Nash equilibrium is drawn in figure 9 with a thicker line labeled  $U_M^N$  intersecting the  $R_I^*$  curve vertically at N.

Using an approximately symmetrical argument we find that the slope of an indifference curve of the Nativist group in this space reads:

$$\frac{dR_I}{dR_P}\bigg|_{\bar{U}_N} = \frac{-\left(R_P^* - R_P\right)}{\left(\partial g\left(.\right)/\partial R_I\right)}.$$
(5)

Hence, such an indifference curve would be horizontal where  $R_p = R_p^*$ , negatively sloped where  $R_p < R_p^*$ , and positively sloped where  $R_p > R_p^*$ . This is depicted in figure 9 by a U-shaped curve intersecting the  $R_p^*$  curve horizontally, which slopes downwards to its left, and upwards to its right. The thicker U-shaped curve through point N labeled  $U_N^N$  shows this group's utility level in the Nash equilibrium.

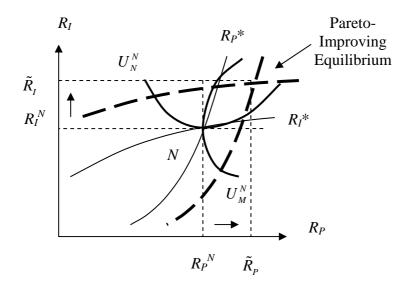


Figure 9: The Pareto-Improving Far-Left Grafting

The diagram displays a non-empty set between  $U_{\scriptscriptstyle M}^{\scriptscriptstyle N}$  and  $U_{\scriptscriptstyle N}^{\scriptscriptstyle N}$  to the North-East of N that contains all the combinations of  $R_I$  and  $R_P$  yielding at least as much utility to both players as at point N. Only the points located on either  $U_M^N$  or  $U_N^N$  to the North-East of N would only benefit strictly one of them. This non-empty set captures graphically the "room for collusion", by showing that there are many  $\{R_I, R_P\}$  pairs that would be strictly preferred by the two sides to the initial Nash equilibrium. Let's call it the "bargaining set", although no bargaining is literally involved. In the absence of external intervention, reaching any of these points would clearly demand from the players using more sophisticated strategies than the Nash equilibrium where each player optimizes its own choice while taking the other one's choice as given. The standard approach to analyze how people manage to improve on Nash equilibrium outcomes is provided by bargaining theory, which has produced an amazingly large number of models. They often analyze a two-player setting where the agreed outcome is a contract that is credibly enforced by a third player, e.g., a judiciary institution, which can force the contractors to keep their words. Hart (1995) suggests that this can work even with very simple "incomplete contracts" in the case of two parties investing complementary assets in a firm. However, it would strain credulity to assume that the Islamists and the Populists could easily exchange information and directly strike a bargain. These are strongly decentralized movements, distrustful of most kinds of formal institutions (Algan, 2019, Le Bart, 2020), in which hatred of the other group is often whipped up high by some activists or charismatic leaders. Another imaginative application of contract theory was presented by Azariadis (1975), using the concept of implicit contracts that reflect social customs rather than judicially enforced binding promises. This might be more relevant for our context. However, it would again strain credulity to try and identify precisely what kind of implicit or explicit contracts would possibly convince the members of the two groups analyzed here to overcome their antagonism to internalize the externality generated by their behaviors. It might simply be some clever strategic thinking by some leaders or other charismatic agents, as illustrated by Domingo (2022) and El Janati (2022) in the case of Jihadists in the Toulouse area. This would, however, involve a higher degree of centralization than we have realistically assumed above. Moreover, there is no reason to believe that all the group members would respond to the same incentives.

However, in the French case in the 2010s, a more likely mechanism seems to explain simply (if not exclusively) how the two sides were led to seize the opportunity to increase their utility levels beyond the initial Nash equilibrium. The split of the Far Left described above, some of its members joining each of the two sides, plausibly provided the incentives for the two  $R_I^*$  and  $R_P^*$  curves to shift, upwards and rightwards, respectively, pushing the final Nash equilibrium point North-Easterly inside the initial bargaining set. This is depicted in figure 9 by the two thick-dashed curves intersecting inside that set at the point labeled "Pareto-Improving Equilibrium". In this case, both groups have increased their utility levels relative to the initial Nash equilibrium, as the new point lies strictly above or to the right of the relevant indifference curves. This might explain why the original marchers or activists did not reject the grafted "Islamo-Leftists" and "Lefto-Populists" activists mentioned above. Moreover, this new equilibrium entails higher levels of radicalization for both groups than the Nash equilibrium point. One might then conjecture that a series of unplanned individual decisions, like the increased numbers of marchers from the radical left who joined the gilets jaunes demonstrations, the emergence of the Islamo-leftists interacting with the Jihadists, or even the non negligible number of recent Muslim converts from the populist right that joined the Jihad, all played a significant part in boosting the radicalization levels on both sides depicted in this model. This fuzzy set of unexpected collusions might deserve the "postmodern" label, as all these radicalized people share a strong distrust of formal institutions, rather than any well-defined Left/Right or Religious/Secular affiliations.

#### Conclusion

This paper's analysis helped us to take a few methodological steps forward by showing that our understanding of the real world is significantly enriched by replacing a mono-causal framework by a more interactive one. The key components of the two contending analyses presented by the "imported" school and the "tidal" one are combined within the Nash equilibrium of a game between two potentially conflicting communities, labeled Muslim and Nativist. This daring simplification of the real world allows us to deepen our intuition about the interactions between external influences and the general climate of radicalization that can tentatively explain the simultaneous rise in Jihadism and populism observed in many countries. A glance at the French experience of the 2010s has provided a finer understanding of the relevant "external" influences, by pointing out among other things the split in the French Far Left between supporting the Islamists, on the one hand, and the Populists, on the other hand. This probably boosted the radicalization processes on both sides, without involving any formal bargaining between the newcomers and the original activists, but rather a form of "grafting", supported by an analysis showing why such "grafts" were not rejected. In terms of political strategy, the synthesis performed here suggests that the right path to avoid the escalation of violence might involve a simultaneous intervention on the two (or more) radicalization fronts. The recently imposed regulations about hate speech online by the EU, and somehow implemented by the main social media companies (Bradford, 2020), probably reduce the outreach of the various radicalized groups in the world. This might in turn dampen the peddling radicalism process that this paper brought out. Further imaginative strategies are probably needed to roll back the current twin levels of radicalism.

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### Appendix Table A. 1: Select Chronology of Radical Events (France 2011-2020)

Year	Jihadist Event	External Event	Populist Event	External Event
2011	- Charlie Hebdo satirical magazine's premises set on fire by a Molotov cocktail thrown by two Islamists	- Ossama Ben Laden killed in Abbottabad by US special forces - Publication of a drawing of Mahomet in a special issue titled <i>Charia Hebdo</i> - Arab Spring in Arab countries.		
2012	- Mohammed Merah kills three French Muslim soldiers in Toulouse and Montauban and four Jewish school children and a teacher in Toulouse	- The Islamic State in Iraq becomes ISIS following its expansion into Syria.	- Manif pour tous (march for all), 300 000 to 1 million marchers estimates. Far-right stewards seen in some cities. Homophobic slogans.	- Taubira Law to authorize same-sex marriage.
2013			- "Red Woolen Hats" uprising in Brittany and other places - Manif pour tous, continued, massive demonstration in May	<ul><li>Carbon tax on fuel on motorways project.</li><li>Taubira Law, continued.</li></ul>
2014	- Mehdi Nemmouche kills four Jews in Brussels	- Daesh proclaims the new Caliphate		
2015	- The Kouachi brothers attack <i>Charlie Hebdo</i> , killing 12 people, on behalf of Al Qaeda - Series of lethal attacks in the Paris area, culminating in the Bataclan attack killing 90+40 people on behalf of the Islamic State.	- Caliphate thrives		
2016	<ul> <li>Catholic priest Jacques</li> <li>Hamel assassinated by two</li> <li>Islamists in his church</li> <li>Truck driven in the crowd</li> <li>in Nice killing 89</li> </ul>	- Caliphate thrives	- 'Labor Law' project riots in main cities	- "El Khomri" Labor Law discussed in Parliament
2017	- Car driven in the crowd in Barcelona's <i>Ramblas</i>	- Caliphate thrives		
2018	- Revolver attack (ISIS claim) in a Christmas market in Strasbourg, killing five.	- Caliphate thrives	- Gilets jaunes uprising in main cities and roundabouts	- Announced tax increase on diesel fuel for cars and trucks
2019		- Collapse of the New Caliphate	- Continued	Pres. Macron opens a series of <i>Grand débat</i> face-to- face meetings.
2020	- Knife attacks against people praying in the Cathedral in Nice - History high-school teacher Samuel Paty decapitated by a Chechen Islamist for showing the Charlie Hebdo drawing of Mahomet in class.		- COVID lockdown discourages gilets jaunes marchers.	