

Uncovering the Far-Right Online Ecosystem: An Analytical Framework and Research Agenda

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Introduction

Recent years have seen a substantial increase in far-right inspired attacks, with multiple data sources highlighting the severity of far-right violent extremism and terrorism in the contemporary world. For example, the Anti-Defamation League (ADL) reported that during 2019, 42 people were killed across 17 different terrorist incidents taking place within the United States, with all but four of these deaths having ties to right-wing extremism.¹ While just over half of these fatalities can be attributed to Patrick Crusius' shooting at an El Paso Walmart on 03/08/2019, the ADL still demonstrated that 90% of all US domestic terrorist incidents in 2019 were linked to right-wing extremism.² Internationally, the UN Counter-Terrorism Committee Executive Directorate estimated a 320% rise in “attacks conducted by individuals affiliated with such movements and ideologies over the past five years”.³ These data illustrate why authors such as Bjørge and Ravndal argue that violence motivated by right-wing extremism in the West demonstrates a constant, “high frequency but low intensity pattern” that cannot be ignored.⁴ Indeed, Parkin and colleagues calculated that far-right attacks in the US have been both more frequent and more lethal than jihadist attacks over the 1990-2017 timeframe; a count that excludes both 9/11 and the Oklahoma City bombing.⁵

In spite of the significance of far-right attacks, terrorism scholars and policy makers alike have largely focused on Salafi-jihadi movements such as IS or Al-Qaeda. Schuurman's analysis of terrorism scholarship revealed that between 2007 and 2016, less than 2% of published academic articles focused on right-wing extremism (with 74.5% dedicated to jihadist terrorism), a development he rightly viewed as "unwelcome".⁶ As Bjørge and Ravndal summarize, the "deficit in research on the topic of violence and extremism from the extreme right" comes as a result of the "international and scholarly focus on Jihadist terrorism".⁷

An increasingly important component of this far-right extremism and terrorism is its online dimension. The far-right's presence on the internet is by no means new. The establishment of the *Stormfront* message board in the early 1990s was one of the earliest examples of such a movement adopting the use of digital technologies for communication and content dissemination. However, the advent of web 2.0 and the increasing use of social media have significantly altered the way in which far-right adherents and groups engage with new sympathisers and recruits. The development of digital technologies has not only resulted in changes in the online-offline interplay of far-right ideas, with Europol noting that "online spaces have been observed to strengthen international links among right-wing extremists",⁸ but has also supported the rapid growth and diversification in both these ideas and the methods with which they are spread. The densification of transnational relationships between right-wing extremist bloggers⁹ and the livestreaming of attacks on "grey" chatrooms offer just two examples of this development.

Recent scholarship explores various aspects of the far-right online landscape, producing mappings of national networks of websites,¹⁰ analyses of the dissemination of ideology on Twitter,¹¹ in-depth analyses of particular groups of websites,¹² as well as examinations of the online inspiration of individual killers.¹³ A series of broader initiatives have also emerged, such as book-length explorations of the diverse facets of the "post-digital" far-right online

presence,¹⁴ research centres dedicated to the problem (e.g. University of Oslo's C-REX), or attempts to spell out the roles of internet in facilitating far-right radicalization.¹⁵ Despite this considerable progress on the study on far-right online extremism, much remains to be done—many dimensions of what is a constantly changing and rapidly expanding landscape do not appear on researchers' radar, in spite of their sometimes crucial roles in spreading ideas or inciting and organizing violence. As a result, what is a rapidly growing research agenda risks developing in a scattered and non-cumulative way.

The present paper seeks to address that risk, offering an analytical framework for the study of the far-right internet. Specifically, we conceptualize it as an *ecosystem*, which allows us to identify its components and characterize its constitutive processes in a way that both opens up avenues for further work and organizes a research agenda. We provide illustrative examples of the various concepts coined in the analytical framework.

Our aim is not to provide in-depth analyses of all features of the far-right online ecosystem—this would be the end goal of the whole research agenda—but to instead offer a new understanding of the far-right internet as a dynamic and multidimensional entity. We clarify what components constitute it, and explain how they together constitute an evolving whole. Such an endeavour builds on, and extends Conway, Scrivens and Macnair's important account of the evolution of the right-wing extremist internet from static websites to the newest generation of social media.¹⁶ Conway et al. trace back the main evolutions of the far-right ecosystem, particularly the development of fringe social media platforms in the recent years. However, as we demonstrate in the remainder of this essay, these elements are only the tip of an iceberg. Indeed, exploring the far-right online reveals an expansive and expanding online and multi-media milieu hosting numerous far-right communities that are sometimes competing for audiences and members.

Analytical framework: The far-right internet as an *ecosystem*

We conceptualize the various far-right ideas and the different platforms through which they spread as an *ecosystem*. Research in the biosciences generally utilises three approaches when defining an ecosystem:¹⁷ one that “considers an organism as the focus of the ecosystem, with the remaining ecosystem components acting as a resource base for that focal organism”, a second that “views the ecosystem as a set of processes and, generally, focuses on the flow of matter and energy, with organisms serving as vectors and vessels for that matter and energy”, and a third that “considers ecosystems to be geographic places that represent areas of sufficiently similar topography, climate, and biota”. The notion of an ecosystem has proven so scientifically productive that it has gained a generic acceptance beyond the biosciences. The Merriam-Webster dictionary, for example, defines it as “the complex of a community of organisms and its environment functioning as an ecological unit; something (such as a network of businesses) considered to resemble an ecological ecosystem especially because of its complex interdependent parts”.¹⁸

The above definitions allow us to build an analytical framework characterizing the far-right online ecosystem as comprising four key elements, each corresponding to a level of analysis: *entities*, *communities*, *biotopes*, and *whole network* (we understand the first two elements as they would be conceptualized in network analysis). We explain these four conceptual elements in a generic way in the next paragraphs, with the two empirical sections applying them to a range of illustrative examples.

1. *Entities*. The far-right online ecosystem is made of a range of different *entities*, that is, individual domains. As we illustrate extensively below, multiple type entities exist, corresponding to the different types of websites (static websites, social media platforms, etc.) that populate the internet today: an entity can be, for example, a Facebook group page, a thematic forum, or a blog. Such individual entities constitute the basic level of analysis

for researchers seeking to map and study the development of the far-right online ecosystem.

2. *Communities*. While finding the individual entities populating the far-right internet is important, conceptualizing it as an ecosystem calls for an understanding of the complex relationships of interdependence that tie them together. In line with network approaches, we understand these entities as nodes connected together in *communities* by ways of links. Direct hyperlinks are the most visible type of links interconnecting entities, but migration flows (e.g. user base migration) and content flows (e.g. visual memes disseminating from one platform to others) can also be conceptualized as links tying together two or more entities. The overall far-right ecosystem may thus be understood as a dynamic network made of a multitude of communities of linked entities. Some of these communities are *organic* (in the sense that they have emerged without individual, group, or organization pressure), whereas others are *strategic* (hyperlinks are strategically placed to structure the community, and content/user flows are provoked and steered). We suggest that each of the communities corresponds to a particular niche, that is, has a particular identity and plays a certain role in the context of multiple far-right groups seeking to exist and gain prominence online. When two communities come to occupy the same niche (hosting, for instance, similar German white-supremacist content), two scenarios are possible: they might either compete for visibility and relevance (meaning one will syphon out the user base of the other, or both will sharpen their differences by carving out narrower niches), or cooperate and merge together in a unique community.
3. *Biotopes*. While in most network approaches there is no level of analysis between the communities and the whole network, we suggest to categorize communities into a limited number of groups defined by a shared ideological, thematic, or cultural sub-identity within the general umbrella of the far-right ecosystem writ large. Davey and colleagues for

example claim that the right-wing extremist internet consists of six discrete yet overlapping ideological sub-groups: white supremacists, ethno-nationalists, militia groups, the “manosphere”, anti-Muslims, and the alt-right,¹⁹ which is a good hypothesis for future attempts to systematically categorizing the communities constituting the far-right online ecosystem. We use the term *biotope* (from the Greek etymology combining “bios”/life and “topos”/place) to name such groupings of communities in order to emphasize their dynamic, “living” character due to the constant patterns of competition/cooperation that characterize the interactions between the communities constituting them. Biotopes, moreover, should not be understood as sealed impermeable categories: the fact that some communities occupy sometimes very specific niches means that biotopes overlap. To take Davey et al.’s subgroups, a community can for example be simultaneously white supremacist *and* ethno-nationalist.

4. *Whole network*. At the most macro level of analysis, all these entities, communities, and biotopes constitute together a vast and evolving overarching whole network: the far-right online *ecosystem*. Because of its dynamic character and the presence of several biotopes, this ecosystem is a composite and its boundaries and relationships with neighbouring ecosystems (for example with the “manosphere”) are blurred. Some clusters can indeed belong both to the far-right ecosystem and a neighbouring one (e.g. a racist [far-right ecosystem] *and* incel [manosphere ecosystem] community).

Figure 1 below visualises these four definitional levels of the far-right online ecosystem in a single generic model. A number N of communities populate the far-right online ecosystem (for the sake of clarity, all are made of 7 entities), grouped into 6 overlapping biotopes (we use Davey and colleagues’ count). Community K is an example of a community occupying a niche at the cross between two biotopes (this could be our example of a white supremacist and ethno-nationalist community), while Community N is a case of a community belonging both to a

certain biotope of the far-right online ecosystem and to a neighbouring ecosystem. For example, N might be a network of entities (say, two YouTube channels, a blog, two Facebook groups, an Instagram account, and a static website) strategically constructed by a white supremacist (far-right ecosystem) eco-terrorist (ecology ecosystem) group. In some cases, such as Community H, communities might be less homogenous, with entities clearly belonging to a certain biotope but others positioned in the overlap between that biotope and the neighbouring one.

While this model is generic, the two following empirical sections offer illustrative examples that clarify its different dimensions. First we identify the many different types of entities that are present in the far-right online ecosystem, then we providing key examples of communities and biotopes.

[FIGURE 1 HERE]

Entities

In this section, we provide an overview of the many types of entities that make up the far-right online eco-system. We can distinguish between two main types of entities: websites 1.0 (traditional, “read only” webpages allow for minimal or no interactions between users) and 2.0 (platforms built for, and structured around, user-generated content and interactions). Both types of websites are extensively used by an array of different far-right groups and individuals.

a) Web 1.0

The first type of web 1.0 sites are those that have been set up by a group or individual to disseminate propaganda. Some have a very narrow scope: *Siege Kultur* is, for example, entirely dedicated to the book *Siege* by James Mason (which has long been considered *the* book to read in some far-right circles). While the *Occidental Quarterly* only displays issues of the

eponymous pseudo-scientific journal (a “journal of Western perspectives on man, culture, and politics, founded by the former California State University anti-Semitic conspiracy theorist Kevin MacDonald alongside the Occidental Observer blog). Others correspond to the broader preoccupations of particular social movements, like *Project White*, a professional-looking resource site offering numerous documents detailing ideology and “the cause”, or the website of the *Cosmotheist Church*, a religious-based white ethno-cult that supports the “religion” by hosting ideological content and selling items such as audiobook versions of *The Turner Diaries*.

An increasing number of 1.0 websites have become sophisticated multimedia hubs that embed various types of textual and audio-visual content into a series of subsections (“news”, “resources”, etc.), to the point where some sites like *RedIce.tv* are now almost “hear/watch only”. *Fight White Genocide*, for instance, incorporates articles, a podcast, and training resources, while *Alternative Right* hosts two radio/podcast channels, a vlog, and commentaries on a series of different subjects (Covid-19, “white genocide”, etc.). The *Radix* e-journal similarly includes videos and podcasts, as well as commentary pieces on issues as diverse as the “hidden meanings” of video games and the “Empire or nationalism”. Jared Taylor’s *American Renaissance* website follows this trend, embedding a podcast and a video channel, as does *VDARE.com*. This use of dynamic audio-visual media reflects the attempt made by many groups to comment on current social and political issues, a tendency also evidenced by the prevalence of platforms containing short news articles. Some sites like the Neo-Nazi *Purity Spiral* mix them with general ideological comments, others dedicate a subsection entirely to news, and yet other groups have opted for the strategy of creating websites entirely dedicated to providing carefully selected and framed information that primes readership to their ideology; *Suavelos News* is for instance the news website of *Suavelos*. This fragmentation strategy will be explained in more depth in the next section. Some of these “news providers” attempt to

appear impartial, but others are openly far-right in both the stories posted and the language used. On the French far-right internet, for example, *Suavelos News* carefully selects its items in a way that “evidences” Muslims’ backwardness and violence in Europe, but carefully avoids overtly racist terms. In contrast, *DemocratieParticipative* uses only the most offensive labels to mention Arabs, Muslims, Black and Jewish people, and regularly displays pictures of monkeys to illustrate a news story whose main protagonist is a Black person.

Besides these platforms, there are commercial websites selling far-right merchandise. Two sorts of these sites have, in particular, proliferated: online publishing houses and e-stores. In terms of publishing houses, some are generalist in scope, selling the prose of contemporary far-right thinkers and activists as well as “classic” works of the genre. *Arktos* is perhaps the most prominent example: its resolutely international catalogue includes books by Charles Maurras (e.g. *For a French Awakening*), Guillaume Faye (e.g. *Ethnic Apocalypse*), Alexander Dugin (e.g. *The Fourth Political Theory*), Oswald Spengler (e.g. *Man and Technics*), or Julius Evola (e.g. *The Myth of the Blood*). Other publishers have a more narrow thematic scope or contemporary edge. *Ostara Publications*, for instance, focuses on the idea of racial rebirth (the name Ostara itself coming from the name of an Anglo-Saxon goddess of spring and dawn) and emphasizes its commitment to publish a “Eurocentric history”, with its catalogue consisting of volumes such as Arthur Kemp’s home-schooling textbook *March of the Titans: The Complete History of the White Race*. San Francisco-based *Counter-currents*, which chiefly publishes Greg Johnson’s books (e.g. *The White Nationalist Manifesto*, *White Identity Politics*) is overwhelmingly concerned with the theme of the passage of time (the ongoing “decadence” of the West, the bygone “Golden Age”, and the effort that whites must undergo in order to bring about the “new Golden Age”).²⁰ In the UK, *Palingenesis Press* has published books such as *The Passing of the Great Race* (which ranks European races in history and “warns” of the

“degenerate” immigrant masses). These publishing houses regularly embed audio-visual content in their websites and are associated with webzines or e-journals.

The second type of commercial websites that has proliferated are e-stores selling far-right merchandise and apparel. While some have limited product range, others like *LegioGloria* (whose “aim” is “to promote European aesthetics”, and views purchasing its clothes like a “contract” whereby the buyer pledges to “reject degeneracy and embrace self-determination”) sell casual clothes, accessories (amulets, wristwraps, etc.), gym apparel, polos and shirts, etc. These shops usually correspond to a particular far-right subculture: for instance, the French *Alabastro* promotes Gallic, “Pagan” and European identities in its T-shirts, not unlike *LegioGloria*’s use of Nordic (runes, etc.) and Medieval (sword, fleur-de-lys, etc.) symbols.

It is necessary to mention here the importance of blogs as key components of the far-right ecosystem. While not purely read-only websites, neither are they purely user-generated platforms; in fact, blogs constitute the “1.5” transition between the two types of websites, combining contributions from a host with more or less open discussions by readers. As already shown by the literature, blogs have long been used by far-right activists and authors. Meleagrou-Hitchens and Brun, for example, demonstrated the key role bloggers like Robert Spencer (*JihadWatch*) and Pamela Geller (*Atlas Shrugs*) played in inspiring and helping to structure the “counter-jihad” movement in Europe,²¹ and it is also well-known that large sections of Anders Breivik’s “compendium” were copied-pasted from Islamophobic blogs such as the *Brussels Journal* or the *Gates of Vienna*. Apart from these notorious cases, and despite the move towards Web 2.0, blogs are still a favoured medium of expression in today’s composite far-right milieu. *Affirmative Right*, for example, publishes contributions mixing white supremacist ideology with conspiratorial claims (one of its most recent post titled “The Lockdown is a Psyop”, with the next one celebrating the anniversary of the 1941 German invasion of Russia) and Andrew Anglin still runs *Daily Stormer*, whose front page features a

“demographic countdown” clock representing the “white genocide” and “the great replacement”.

While all the previously mentioned websites can be found on the clear web, significant read-only platforms are to be found on the so-called Dark Net, which is not solely made of forums and social networks. Indeed numerous *.onion* sites²² offer an array of content, from hate-filled propaganda sites such as *Wake up Europe* and *Pure Europe* with tag lines such as “cleanse Europe of the dirt” to sites that offer downloadable files to create far-right banners and other resources, including 3D-printed firearms.

b) Web 2.0.

As already shown by Conway, Scrivens and Macnair,²³ the far-right has been quick to embrace the Web 2.0, i.e. web platforms dedicated to online interactions and whose content is overwhelmingly user-generated. In line with their typology, we distinguish between major social media platforms initially conceived for the general public, and fringe platforms designed from the onset to constitute niche discussion environments or/and accommodate communities and individuals whose messaging would not be allowed on major platforms

Major social media. The far-right is present in all major social media platforms. As Europol explains in their latest Terrorism Situations and Trends Report, “despite efforts to detect and delete white supremacist content, major social media platforms remain important vectors for the spread of right-wing extremism”.²⁴ *Facebook* is undoubtedly the largest social media network, both in terms of users and daily content;²⁵ it is therefore not surprising that a vast number of far-right groups and individual figures have a presence on the platform. While relatively little is still known about how far-right extremist groups communicate and mobilize via private groups and chats on Facebook, a body of recent work analysing the far-right’s use of Facebook in different countries is starting to show a global pattern of content dissemination on the platform. Namely, public pages act as key dissemination hubs for content, particularly

if these public pages are linked to an offline political entity. This content then filters down to public groups, which have fewer members and allow for much more interaction between members, and finally to private groups, which have the fewest members, but which allow for active coordination.²⁶ Ideologically-neutral looking public pages (for example pages displaying beautiful European landscapes or good-looking white women) in particular serve to attract audiences not initially versed in right-wing extremism. Organisations such as the Finnish group *Soldiers of Odin* and the Canadian *Three Percenters* thus use the platform in order to gain new members and coordinate real-world meetings;²⁷ the latter have even been able to use this model to evolve from a Facebook group to an offline armed militia.²⁸ The US-based *Boogaloo Bois* have also efficiently used Facebook groups such as *Big Igloo Bois* to coordinate and mobilize during the 2020 Minneapolis protests.²⁹ This marked an evolution in the group's nature, from an obscure community nested in sites such as *4chan/k* (4chans board dedicated to weapons discussions, see below) to a more mainstream movement. Besides these organizations-specific Facebook pages and groups, Facebook also hosts open groups that are not related to a specific organisation, ranging from “news” groups that share and discuss articles containing misinformation from outlets such as Ben Shapiro's *Daily Wire*, to groups dedicated to the sharing of right-wing extremist memes. It is worth noting that extremist groups also use the “Russian Facebook” *Vkontakte*. Myagkov and colleagues,³⁰ for instance, observe that Russian far-right groups set up pages with ideologically neutral content to attract audiences, as in the common Facebook strategy mentioned above.

Besides Facebook, *Twitter* also has significant far-right activity, with the platform's hashtag feature allowing users to draw attention to a specific far-right topic and create online communities based around them. In an analysis of tweets collected from across Europe, Ahmed & Psoiu found that some of the most common hashtags were “#whitegenocide”, “#afd”, “#merkel”, “#trump”, “#brexit”, and “#islam”,³¹ broadly matching the same conversation

topics seen on other platforms. Indeed, in comparing communication patterns on Twitter, Bruns and Stieglitz found that the cluster of tweets associated with the far-right movement had a number of hashtags that were related to political protest movements; i.e. “#wikileaks”, “#occupy”, or “#occupywallstreet”.³² While Ahmed and Psoiu demonstrated that right-wing populist political figures, parties, and issues are resonating with the more extreme-right online,³³ other studies have demonstrated that only a few issues, such as anti-immigration and nativist interpretations of the economy, and Donald Trump truly attract transnational Twitter audiences.³⁴ Berger’s “Far-right Twitter Census” identified the six most prevalent categories of content found in far-right tweets: Pro-Trump content, white nationalist content, general far-right content, anti-immigrant and anti-Muslim content, trolling/shitposting, and conspiracy and fake news content.³⁵ In terms of users, Buckin’s (2019) measurement of the scale of the far-right “Twittosphere” identified no less than “19,000 users with high proximity to extremist content”, whereby “openly racist accounts” were as popular as “prominent right-wing figures”. A range of openly racist accounts prove to be resilient to being shutdown and attract thousands of followers (e.g. 6,410 for “Outsider_14”, 4,277 for “Urbanus_Crusade”, 5,738 for “NoWhiteGuiltNWG”), while established white supremacist and anti-Islam figures reach tens of thousands (e.g. 78,400 for Robert Spencer, 43,000 for Renaud Camus). Some of these “influencers” use twitter as part of a multi-media approach that includes a Facebook and YouTube presence (“NoWhiteGuiltNWG” is for instance a known YouTuber). While such accounts still flourish on Twitter, a range of far-right users banned from the platform have moved to the new “unbiased social media” *Parler*, which operates in a very similar way. Launched in 2018, the social network “enables free expression without violence and a lack of censorship”, and saw its user base rise dramatically in 2019 with over a million users as of June 2020.³⁶ Figures like Milo Yiannopoulos and Katie Hopkins have gathered followers on the platform, although never reaching audiences as big as the ones they had on Twitter.³⁷

Compared to other social media platforms, there is relatively little research on the relationship between *Instagram* and the far-right. However, what little does exist appears to indicate that this platform is used by the far-right adherents to target the younger, Generation Z, demographic.³⁸ This is perhaps not surprising, as the very nature of the platform lends itself to the “shitposting” style that is seemingly reminiscent of the younger, internet savvy, alt-right demographic. Because Instagram is essentially an image-sharing platform, it is being used by numerous far-right groups to cement their identity through the sharing of particular images that convey particular ideological messages. While some accounts such as @the_typical_liberal and @_gen_z_ (with the latter just recently being removed) have a visual style centred on memes, which play a central role within certain far-right subcultures (see below), others use Instagram to disseminate utopian images of a European Golden Age. *Europa Invicta*’s account, for instance, creates an aesthetic where beautiful nature landscapes and stunning pictures of past architectural achievements (medieval castles, fine baroque interiors, etc.) are published aside photographs of good-looking, healthy white people, with embedded captions such as “For the Love of Europe”, “The West Is the Best”, or “Fight for European Children”.

As mentioned above, far-right groups increasingly use audio-visual content to convey their messages. *YouTube* has therefore become an important platform to use, especially by alt-right figures such as Lauren Southern, Alex Witoslawski, and the *New Right Network*. As an example, during June 2020, the latter posted videos with titles such “Antifa exposé” and “BLM epic fail”. Daniel Conversano, the main animator behind the Suavelos websites (see above and next section), has more than 12.500 subscribers to his *Vive l’Europe* channel. Besides openly racist YouTube accounts, which have been removed at an increased pace since the platform’s new terms of use in 2019, a series of popular influencers uploading borderline content have become reference figures among far-right activists. “PewDiePie” (real name Felix Kjellberg), who was at one point nothing less than the most popular YouTuber in the world, became an

icon among certain extremist communities following a series of interventions containing racial slurs and after his use of the gig-economy platform *Fiverr* to have two individuals hold up a sign saying “death to all Jews”. When Brenton Tarrant livestreamed his mosques attack on Facebook, the last words he said before engaging in the rampage were “remember lads, subscribe to PewDiePie” – this “linguistic meme” used by the shooter offers immediate insight into both the shooter’s motivation and the pivotal role that YouTube plays in the current far-right ecosystem. For audio-only content such as podcasts or online radios, far-right activists similarly rely on mainstream podcast or music-sharing platforms such as *Spreaker*, *CastBox*, or *SoundCloud*. The *Radix* journal, for example, has a podcast hosted by *Spreaker*, listing dozens of episodes like “Catching up with David Duke”, “Islamitarianism”, or “Je Ne Suis Pas Charlie”.

Telegram has been increasingly popular in far-right circles, because of its two key features: end-to-end encryption (thereby leaving no traces of messages and content on servers) and a “self-destruct” function that enables a user to set a pre-defined amount of time for which a message or sent content can be seen before it is deleted. A brief exploration of the proliferating far-right channels shows a wide variety of right-wing extremist content, from white nationalist groups in a number of European countries, to channels dedicated to specific topics such as the Christchurch shooter, and channels that name themselves after *8chan* and contain similar content to what the *8chan/pol* board did (see below on these forums). Groups can attract thousands of users; Daniel Conversano’s channel has for example 3,500 members, about the same as *American Renaissance*’s.

Finally, the discussion platform Reddit, with its 430 million users active in over 2 million “subreddits” (thematic chatrooms), has long hosted a range of far-right communities and allowed the growth of what Massenari called “toxic subcultures”.³⁹ Although the website initially promoted a bottom-up moderation principle, whereby users were in charge of

moderation, successive changes in the platform's leadership have led to stricter moderation rules and quarantine policies that first led to the removal of the most problematic communities at the end of 2017 (neo-Nazi subreddits) then to the deletion of white supremacist and/or alt-right communities promoting conspiracy theories such as “Coontown”, “AlternativeRight”, or “The_donald”.⁴⁰ This gradual tightening up of discussion content played a role in the migration of users to fringe social media such as the “chans”, to which we turn now.

Fringe social media. Alongside these mainstream websites, a range of lesser-known platforms are used by the far-right because they offer specific advantages useful for extremists such as the absence of moderation, anonymity, or encryption. Some of these platforms have been designed from the onset by entrepreneurs sympathetic of the Alt-Right – hence the oft-heard label “AltTech”. As Europol explains, these fringe platform “are either dedicated right-wing extremist sites or have been colonised, [and] constitute online safe havens for rightwing extremist movements”.⁴¹ Their popularity has grown as major social media gradually increased control on extremist content.

Gab is perhaps the most notorious of these platforms; the “social network that champions free speech, individual liberty and the free flow of information” is almost exclusively known as a safe haven for right-wing extremism. Indeed Davey, Hart, and Guerin (2020) found that it proportionally hosts more white supremacist users than comparable mainstream platforms. The platform works similarly to Twitter, with user accounts, hashtags, and discussions through “gabs” (the equivalent of “tweets”). *Gab* is the platform on which Robert Bowers, the Pittsburgh Tree of Life Synagogue shooter, announced his intentions shortly before carrying out his attack. This episode forced *Gab* offline for a period of time, but the platform came back and is still very much active today, with prominent hashtags such as “#stopwhitegenocide” and “#hitlerwasright”, as well as hosting groups like the *Feuerkrieg Division*, which was linked to a failed violent plot in Lithuania in 2019.⁴²

Discord is a VoIP (Voice over Internet Protocol) platform that has proven to be popular, first amongst the online gamer community, then amongst right-wing extremists; particularly white supremacists and neo-Nazis. It is here that a lot of “doxing operations” take place (the act of releasing an individual’s private details online as part of a harassment campaign). Discord hosts chat groups with names such as “Nazism N Chill”, “National Socialist Army”, and “Führer’s Gas Chamber”. It was in chats like these that a large number of the “Unite the Right” demonstrators who marched on Charlottesville, Virginia, in August 2017 mobilised.⁴³ Following the events of Charlottesville, Discord made an increased and noticeable effort to shut down these chat groups. However as with other digital platforms, Discord has had to deal with a “hydra effect”, whereby new groups with names like “Red Pill Party” emerge just as quickly as they are taken down. Indeed, at the time of writing, Discord has just removed a number of chat servers affiliated with the *Boogaloo* movement,⁴⁴ yet others pop up.

More recently, far-right extremists have started using the platform *Minds*, which like Gab, was created as a no-censorship, no-monitoring social network where users can conduct discussions without any interference or concerns about accounts being shut down. The “white paper” accompanying the launch of the “Crypto Social Network” indeed justified the existence of the platform as an effort “against the surveillance, algorithm manipulation and censorship [that] are infecting the web at unprecedented levels”.⁴⁵ The website incorporates a mechanism rewarding active posters with a system of points/tokens, which can then be used by the posters to further promote their profile and interventions, with possible cryptocurrency gains. While the platform is used by a range of tech-savvy companies, it also hosts violent groups such as the *Atomwaffen Division*, the *Feuerkrieg Division* and the *Patriot Front*,⁴⁶ as well as the transnational *Generation Identity*, which use Minds not only because of its encryption and absence of top-down moderation/censorship but also because of policymakers’ limited awareness of the platform.

Just as Gab, Discord and Minds provide alternatives to social network platforms like Facebook and Twitter, *Bitchute* is a video hosting service mirroring YouTube and aiming to avoid the mainstream service's "censorship". Founded in 2017 on the basis of a WebTorrent decentralized architecture,⁴⁷ it mostly hosts alt-right and far-right video content. At the time this paper was being written, the videos featuring on the front page included "The 2020 Attack on Western civilization", "On Redpilling others", or "Holocaust Lies Exposed", as well as a series of recordings of Alex Jones' "Infowars" and other comparable vid/podcasts. The abovementioned strengthening of YouTube's terms of use in June 2019, which led to the deletion of a range of prominent far-right channels, has not (yet) meant a direct transfer of these channels to Bitchute. Although, some expelled personalities have consequently uploaded videos (for instance, Frenchman Alain Soral's few appearances do not compare to the 1,200 videos, 185,000 followers and 80 million views his *ERTV Officiel* YouTube channel counted).⁴⁸

Besides Bitchute and the three niche social networks platforms, the far-right is also flourishing on another type of user-generated websites: forums. Traditional message-boards exist alongside newer image-boards (chatrooms where contributors post both images and text). The most notorious far-right message board is probably the long-standing *Stormfront*, nicknamed "the murder capital of the Internet" by the Southern Poverty Law Center because of its relationship with dozens of homicides and attacks.⁴⁹ Launched in 1995, it was shut down at one point but still hosts a range of thematic boards, some general (e.g. "health and fitness", "ideology and philosophy", "homemaking"), others more specific and news-related (e.g. "coronavirus"), some closed to non-members, others open.⁵⁰ Other forums included *IronMarch* (active 2011-2018, then replaced by *IronForge*, itself shut down a year after), as well as the ones restricted to members of particular groups. The KuKluxKlan, for instance, runs a series

of forums that allow for thematic discussions between members and facilitate coordination, fuelling the group's "fear-based, 'all means are necessary' mindset and violent sentiments".⁵¹

In terms of image-boards, far-right discussions have long populated the so-called "chans" – a multiplicity of anonymous forums (whose origins can be traced back in the early 2000s in Japan) that pop up and shut down as serious controversies or crimes appear to be related to them (*4chan*, *8chan*, *9chan*, *8kun*, *shitchan*, etc.). While each "chan" possesses its own specificity and identity, they all have the same structure and host highly controversial content nested in thematic discussion boards akin to subreddits (from fetishist [and at time paedophile] pornography to advice on weapons) as well as right-wing extremist boards (mostly found under the "politically incorrect", or */pol*, boards). These discussion boards are not only where most far-right and neo-Nazi memes originate, they are also where individuals potentially radicalize, announce their imminent violent actions, share their manifestos, and/or livestream their attacks. The now defunct *8chan* (and its */pol* board in particular) was, for example, associated with three high profile far-right shooters in 2019 alone (most notoriously the Christchurch mosques attack). Even though the site was shut down two days after the third of these attacks, similar image-boards continue to mushroom and diversify, such as the German-speaking *kohlchan* where the Hanau shooter Tobias Rathjen posted links to his manifesto and video before killing 10 people in two shisha bars, in February 2020. Some of the image-boards, such as the */pol* board on the longstanding *4chan*, are freely accessible to anyone, but others are now located in the dark web and can thus only be accessed via Tor. In the aftermath of the death of George Floyd, the */pol* boards were places of intense racist discussions, and were the main access points for a series of far-right videogames in which the main character had to kill George Floyd or drive on Black Lives Matter demonstrators – these videogames would in themselves warrant a scientific study. Although less directly linked to the far-right, the comparable *KiwiFarms* launched in 2013 is nonetheless characterized by such a cynic subculture based on derision and

contempt, that its members have supported harassment campaigns and actively circulated Brenton Tarrant's video.

While the Chans have attracted attention because of their unhinged content and links to violence, websites based on a *Wiki* architecture remain largely understudied. Wiki are the user-generated platforms par excellence, featuring only collaboratively edited and managed content. Two types of far-right wiki websites have emerged. First, some pages directly mimic *Wikipedia*, with users gradually building “encyclopaedias” skewed towards far-right ideology and themes.⁵² *Conservapedia* (the “Trustworthy Encyclopedia”) is a prominent example. Its front page includes a box with links to articles pertinent for current affairs, whose top line at the time of writing the present paper referred to the medicine Hydroxychloroquine, with the claim that it “reduces risk of death from COVID-19 by about 50% in hospitalized patients” but that “liberals [are] still blocking access to this cheap, effective medication”. Its entry for the Black Lives Matter movement defines it as a “fundraising arm for the DNC [Democratic Party] and a Fifth Column organization that is promoting social radicalism”, while the Democratic Party itself is characterized as nothing less than “pro-infanticide, pro-illegal immigrant rights over American citizens, pro-abortion, anti-capitalist and anti-free enterprise, supports confiscatory taxation, resource redistribution, wealth transfer from American citizens to illegal immigrants, abuse of asylum laws, single party socialism, election cheating, rigged nomination and election process, dictatorial regulation by unelected partisan civil servants, anti-First, Second, Fourth and Fifth Amendments opposing due process rights of the accused, and a dictatorial central controlling government, [...] anti-free speech, religion, the Constitutional electoral process, separation of powers, and advocate court packing”. *Metapedia*, a comparable but less US-centric “encyclopedia” whose main “metapolitical purpose is to influence the mainstream debate, culture and historical view”, is mirrored in 17 different languages, and similarly highlights white supremacist themes in its main page, it comprises a graph plotting

“past and predicted future population numbers 1950-2100”, with the commentary “one issue relevant to White demographics with Whites quickly becoming minorities worldwide”. Beyond encyclopaedic endeavours, the Wiki architecture has been used by far-right communities to build purpose-specific repositories, such as *Coalfax*. *Coalfax* was a listing of women, whereby any user could add the details of any woman who they suspected of being in a multi-racial relationship; entries included the woman’s name, location, and in most cases, photo. The listing (referred to by certain users as a “hit list”) was organized across various subsections (e.g. “toll paid”, or “redeemed” if the woman later became partners with a white man and shows “dedication” in the form of producing white children). This site has had numerous URLs associated with it as it keeps being shut down and re-opened again, and has now been transferred to a dedicated board on *9chan*.

Finally, another type of website used by the far-right are those offering online archiving services. While not akin to the type of social media platforms explored above, such sites sometimes *de facto* work as user-generated content platforms whereby people can save/upload different types of files or webpages to make them directly but inconspicuously available to others. This functionality has made them popular with extremist groups across the ideological spectrum, who use archiving services to further amplify their propaganda and increase its resilience in a context of increased crackdown on radical content. Websites such as *Library Genesis*, *Anon files*, and *Pastebin.com* are all being used as deflected ways of sharing far-right manifestos and books. More importantly, *Archive.org* – the platform of the Internet Archive, the non-profit organization whose mission is to “building a digital library of Internet sites and other cultural artifacts in digital form [...] to provide Universal Access to All Knowledge” – has become one of the main ways used by far-right extremists to save, hide, multiply and disseminate forbidden material.⁵³ *Archive.org* and its various imitations (e.g. *archive.is*, *.4plebs.org*, *.i*, *.li*, *.fo*, etc.) were, simply, the most frequent types of outlinks posted by

8chan/pol users to disseminate radical content or “save” particularly good contributions to the board, well above links to YouTube or Twitter. At the same time Facebook, YouTube and other major platforms engaged in efforts to remove the video of Brenton Tarrant’s shooting in Christchurch from their servers, the very same video was constantly being archived in multiple new webpages and shared at a high pace, first on *8chan/pol*, then within and between other extreme online communities across the world.

Communities and biotopes

As spelled out in the conceptual framework, listing individual components used by far-right activists is not only a valuable exercise in itself to demonstrate the multifaceted extreme-right wing activity on the Internet, it is also a necessary first step when trying to map the many communities populating the ecosystem and draw the boundaries of the several ecosystems constituting it. Since such a comprehensive mapping effort is far beyond the reach of this – and indeed any – paper,⁵⁴ we provide key illustrative examples of communities already evoked in the previous section and explain how they play a role in determining the fragmentation or homogeneity of their respective biotopes.

a) Communities

We first explore two examples of communities: one *strategic*, the other one *organic*. As clarified above, communities can indeed be entirely strategic: far-right activists can set up hyperlinks connecting their various components in ways that set up large propaganda nets with multiple entry points. In particular, many groups create different types of sites hosting various sorts of content in order to target and attract specific audiences, with the aim then to steer users from their ports of entry towards the other platforms. This strategy can end up constituting very wide webs. The *SuaveLos* case evoked above is a paradigmatic example of such an extensive strategic community: the central website and its “news” sister site are hyperlinked from (and

to) two websites targeting a female audience (*Madame Suavelos*, *Bellica Femmes Entières*), a radio podcast (*Fréquence Occident*), an online shop (*Alabastro*), and a blog (*Univers Conversano*). The *Bellica* site itself leads to another, this time women-centred radio podcast (*Radio Chaton*), as well as to a Facebook page and a Telegram community. Similarly, the *Univers Conversano* blog leads to an array of other platforms via a Telegram group: links are recurrently posted to Daniel Conversano's *Vive L'Europe* YouTube channel as well as to a website called *Les Braves* – which is itself a major gateway to a series of specialized sites (one centralizes the organization of local groups and holidays) and social media platforms (Gab, Discord, Facebook, Telegram), and further links to the *Europa Invicta* Instagram page mentioned above (itself linking to its own Gab community). More recently, Conversano added to this already expansive community a website (*BatirUnFoyer*) proposing coaching and dating services, offering to help French men to find white Eastern European women eager to build a white family. By casting such a wide web with professional-looking websites that attract a lot of users, the Suavelos/Conversano community is securing its existence in the broad ecosystem by occupying a specific ideological and cultural niche within the white supremacist biotope: one that is French-speaking but promotes Europe (instead of embracing a narrow French nationalism), emphasises the pagan heritage (rather than, say, the Christian or Judaeo-Christian “civilization”), emphasizes cultural differences between Europeans and non-Europeans (rather than using the most blatantly racist language), and is geared towards connecting like-minded people (rather than towards, for example, advancing the intellectual foundations of white supremacism).

While conscious efforts to carefully construct wide and multidimensional community targeting different audiences are relatively uncommon, less ambitious efforts to cast a more narrow multi-media, multi-platform net are commonplace. The *Affirmative Right* blog and the *American Renaissance* website are typical examples, with a main site linking to a podcast

channel, a video channel, and one or two social media platforms (together with links to book publishers' sites). Richard Spencer's *National Policy Institute*'s website similarly links to an e-journal (*Radix*) and podcasts. The *Vertigo Politix* blog, maintained by Theodore Beale, is a testament to just how diverse nets like these can be: hyperlinks lead to the Beale's science fiction and comic book pursuits (as well as other similar productions) on Amazon, which all have far-right content.⁵⁵ Amazon user comments show the enthusiasm of readers explaining, for example, how the graphic novel was recommended by friends or how they purchased copies for their local libraries. In all these cases, attempts are made to steer audiences to all the entities constituting the community.

Besides these strategic communities, a series of organic communities emerge more naturally. The chans is a typical example of such an organic community. First, user (and content) migration is frequent between the various chans, meaning that they should be understood together as a community with its own subculture and common practices of identity construction, not as isolated websites. While each /pol board within individual chans appears to occupy a specific niche (see below) within that subculture, content (e.g. far-right memes) travels across them and users frequently move from one forum to another, usually following particular events. As an example, 8chan developed an active user base when the #Gamergate controversy drove 4chan users to the site because of a perceived increase in moderation. Second, and although there are attempts by platforms' founders to direct users to other platforms, the various posts within the /pol boards are constantly being fed by hyperlinks that users post to direct other participants to particular platforms. The chans are thus not only worrying in their own right, but more importantly because they act as a "gateway" to a myriad of other platforms containing right-wing extremist content, from Discord communities to Telegram channels or illegal onion websites. Even though the majority of the hyperlinks found on the chan /pol boards redirect to news articles from legitimate sources and archived sites

containing far-right writings/videos, a non-negligible proportion aims to trigger user flows, that is, to attract part of the chan posters to artificial communities (built by organized groups that are more ideologically coherent and action-directed than the chans). Some posters on 8chan, for instance, recurrently posted hyperlinks to the private chatroom of the neo-Nazi community *Fort*. Others posters directed their peers to the abovementioned *Coalfax*, which in spite its user-generated character was created and directed by an individual, who was keen to attract users to Coalfax, Gab, and Discord platforms, and eventually to a custom “/coalfax” board on 9chan. While patterns and dynamics of outlinking practices in these organic communities have never been studied, a plausible hypothesis is that “super users” make them quasi-artificial, in the sense of driving the discussion and using user-generated sites as seemingly leaderless hubs leading to more organized online webs.⁵⁶

A visual representation of the nature of the hyperlinks specifically on the *8chan/pol* board can be seen in **Figure 2**. Here, individual web domains that appear more than 10 times in the entirety of the *8chan/pol* text corpus, made up of both original posts and reply posts, is plotted as an individual data point, with the size of the node indicating the domain’s relevant frequency on the board. Types of domains, i.e. social media, government page, etc. are coloured the same colour. Similar types of domain groups are indicated by the similar colours used by the different groups; i.e. social media is cyan and boards are a slightly darker blue. The single most common domain for each group is labelled, with the exception of the news group, where the 5 most occurring domains are listed. We can clearly see that *8chan/pol* constituted a gateway to a much broader organic community characterized by a diversity of outlinks, which correspond to all the individual types of entities listed above (far-right news sites, wikis, archived pages, podcasts, YouTube, etc.).

[FIGURE 2 HERE]

b) *Biotopes*

As explained above, communities (strategic and organic) sharing a common ideological and cultural identity within the broad far-right umbrella constitute biotopes. It would indeed be a mistake to understand the far-right online ecosystem as a homogenous network; rather, as Europol explains, it is best “described as extremely heterogeneous both from a structural and ideological perspective”.⁵⁷ The aim here is not to provide a definitive categorization of the far-right ecosystem’s biotopes – such a task necessarily rests on a systematic, large-scale mapping of the thousands of existing communities and on their classification within broader classes. Instead, we highlight here noteworthy cases of the two types of inter-cluster relationships that define the biotopes’ level of homogeneity/fragmentation: communities might *competitively co-exist* (which in some cases leads some to carve out ever-narrower niches) or *cooperate/merge*.

First, communities can *co-exist* within biotopes. When they occupy very different niches, competition for users/members is unnecessary, but antagonism emerges when several communities occupy the same or overlapping niches. To continue using our examples, *Suavelos* and *DemocratieParticipative* constitute a good case of two communities that co-exist within the white supremacist biotope. As explained above, their discourse is so different – with *DemocratieParticipative* using a much more offensive language/images, focusing more insistently on the alleged “race war”, and being more nationalist – that they attract different publics. However, a degree of antagonism does exist between the two platforms, because despite their differences, they both occupy the same rather narrow niche of French-speaking white-supremacism, and both have set up extensive multimedia nets to attract as many members as possible (*DemocratieParticipative* linking, among others, to a Vkontakte group, a Tor mirror site, the *Wolfencrest* video podcast, or a “Racial Guide of France’s Cities”). In October 2018, for instance, *DemocratieParticipative* published a communiqué urging the

public to “stay clear, in all circumstances, from the Conversano/Merkado tandem” on the basis that they had been careless with the privacy settings of their forums and were thus responsible for the arrest of some of their members, as well as because they were fundamentally mistaken in their project to build a community beyond the French borders, especially Eastern Europe.

Our example of the /pol boards in the Chans illustrates that when such competition for a particular user base or audience exists because of a similar niche, some communities carve out ever-more specific niches to further differentiate themselves from their competitors. Whereas all /pol boards may look similar to outsiders, each nonetheless possesses its own sub-subculture, and it is not rare to read derogatory comments about other Chans. Some boards, for example, support Brenton Tarrant’s anti-Muslim views and share his conspiratorial fear of the “Great Replacement”, while others are more acutely anti-Semitic and spend time “uncovering” the alleged Jewish domination of the world, hence criticizing the shooter for choosing the wrong target. Also, most Chan forums host a “/k” board dedicated to discussions on weapons, and although both the /k and /pol boards clearly have a far-right user base, with the former being the birthplace of the “boogaloo” movement which adopts an “accelerationist” ideology, there is a subtle difference between the two. This is exemplified by the way in which the *8kun/k* board⁵⁸ clearly states at the top of its page that users are not allowed to discuss politics and that the board is purely for discussions and questions about firearms and ammunition. This slight difference denotes the existence of extremely specific niches carved out gradually not only within the same biotope, but also within a narrower organic community.

Second, we nonetheless observe that occupying the same niche within a biotope can conversely lead the groups setting up online communities to *cooperate*, thereby making the biotope more homogenous than others. If anti-Muslims do indeed constitute a biotope of the far-right ecosystem as Davey and colleagues suggest,⁵⁹ then the gradual development of synergies among high-profile “counter-jihad” communities into a common “nebula”⁶⁰

constitutes a good example. While a “loose collection of bloggers, political parties, street movements, think tanks, campaign groups, and pundits across several countries”, the counter-jihad movement is nonetheless “united by the shared belief that, to some degree, the ‘Muslim world’ is at war with the ‘West’”,⁶¹ and the 2010s have seen an effort by prominent figures such as Robert Spencer and Pamela Geller to establish links between their respective communities and ensure that both content and users travel between them.⁶² Bloggers have started contributing to each other’s websites, and hyperlinks have multiplied that directly lead the audience from one website to another. Not only has this rapprochement increased inter-community flows of users and content (in a non-zero-sum way),⁶³ it has also harmonized ideological lines (and terminology) and significantly boosted the online and offline development of groups such as the various European “Defence Leagues”.⁶⁴ This example shows that although each community strives to maintain its relevance within its biotope, there are also benefits in forming mega-communities that reinforce the homogeneity of their biotope.

Conclusions: Towards a systematic research agenda on the far-right online ecosystem

The present paper sought to provide an analytical framework for the study of the far-right internet conceptualized as a dynamic and rapidly-evolving ecosystem. By identifying four levels of analysis – entities, communities, biotopes, and whole network – and illustrating them with key empirical examples, we hoped to structure what is a growing yet scattered and still limited research agenda on extreme right wing actors’ presence online. **Table 1** below summarizes what we think are the key outstanding questions that emerged from our preliminary exploration of the ecosystem – these are only some of the many interrogations for which there is currently no rigorous answer.

While these questions await answers, our two empirical sections, while only conceived as an initial exploration set to clarify our key concepts, already brought about two very general observations. First, there is no online instrument left untouched by far-right movements, who use every single platform to disseminate their ideas and mobilize for action. Second, while the self-proclaimed Islamic State is generally credited for being the most technologically-savvy extremist groups of contemporary times, the width and sophistication of several far-right strategic communities is comparably impressive. That such clusters have for a long time remained under the radar of both scholars and the authorities is concerning, and recent efforts to address this problem are most welcome.

[TABLE 1 HERE]

Uncovering the Far-Right Online Ecosystem

TABLES AND FIGURES

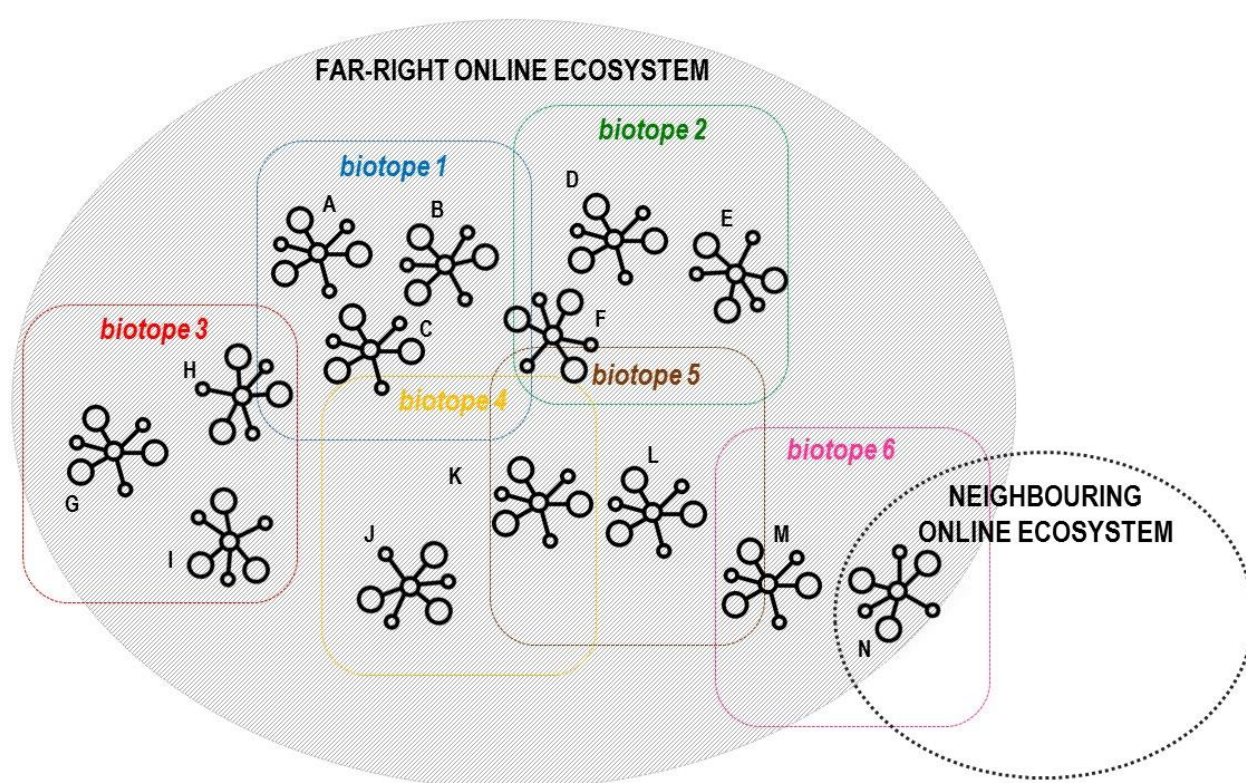


Figure 1: Generic model of the far-right online ecosystem, displaying a number of entities linked in communities (capital letters A to N), themselves grouped in a limited series of biotopes (numbered 1-6).

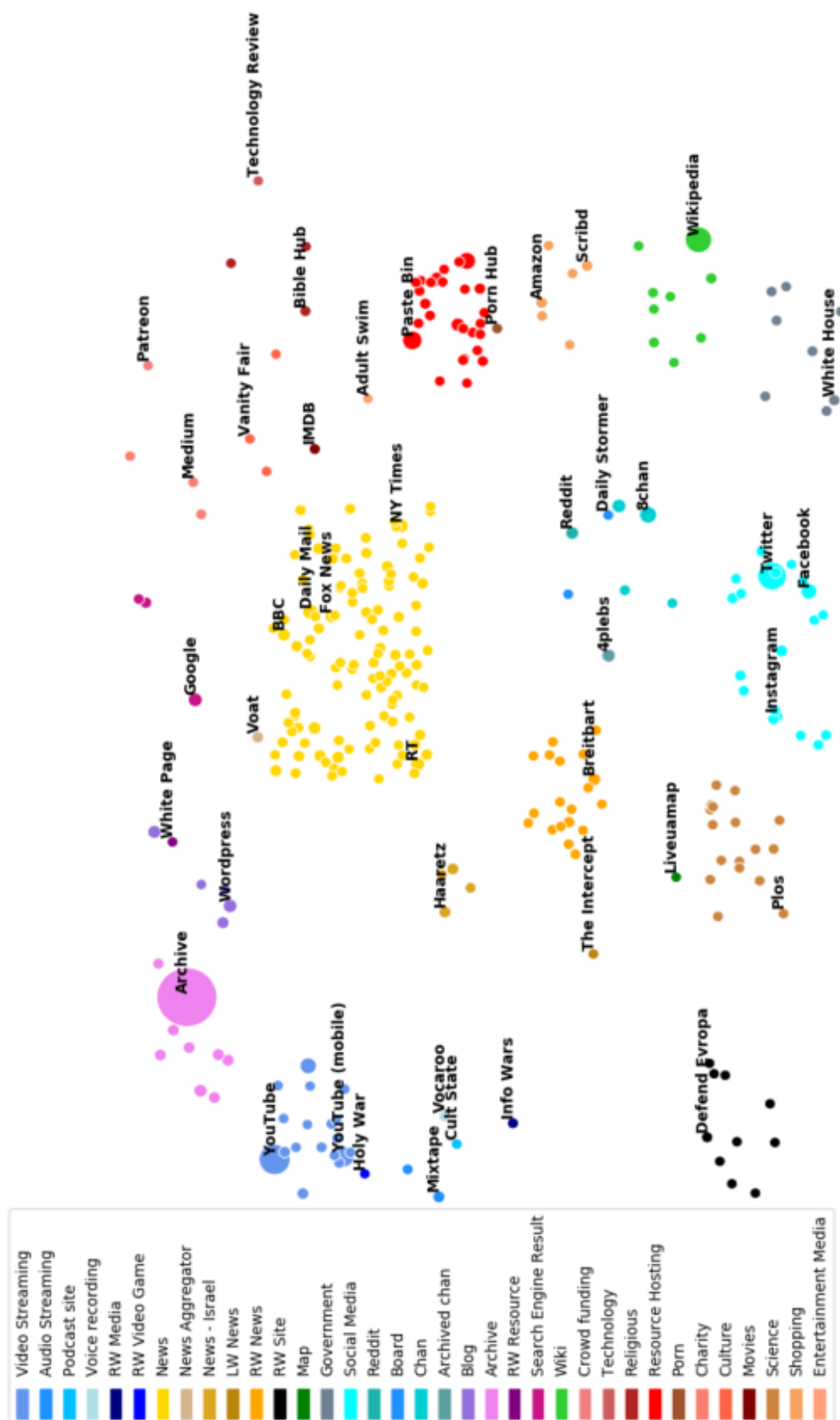


Figure 2: Example of a far-right organic community: All internet domains that appeared more than 10 times on *8chan/pol*.

Level of analysis	Key questions for future research
<i>Entities</i>	- Which types of platforms are most used by far-right groups, and why? - How is each type of platform used by far-right groups? What are the strategies they deploy, and what patterns of interactions are observed? - To what extent do fringe websites really syphon extremist content from mainstream websites? - Given the spectrum of ideologies that make up extreme right-wing extremism, do different “flavours” of the far-right use different types of entities? - What are the exact roles of archiving services in the evolution of the far-right ecosystem?
<i>Communities</i>	- What are the major hyperlink dynamics (which entity links to which and how often, etc.) characterizing today’s far-right ecosystem? - How many significant communities constitute the far-right online ecosystem? Which ones occupy central positions? - Are there different types of organic and strategic far-right communities? If yes, does this typology depend on the nature (e.g. violent v. non-violent) of the groups? - What are the patterns of content dissemination (text, visual imagery, audio) within and between communities?
<i>Biotopes</i>	- Based on an extensive automatic web-crawling effort, how many biotopes actually constitute the far-right online ecosystem, and what are they? - How much overlap exists between the various biotopes, how porous are their boundaries? - Have these boundaries evolved organically or through conscious strategies designed by far-right groups? Do communities perceive these boundaries and engage in boundary-making behaviours? - Do ideologically-defined biotopes correspond to particular cultures (e.g. common practices, shared values, tastes, etc.)? To take Pierre Bourdieu’s terminology, is each biotope a

	hierarchically-structured “field” with some individuals/communities enjoying higher levels of “social/symbolic capital”?
<i>Whole network</i>	- Exactly how big is the whole far-right online ecosystem? - What are the main characteristics of this network, and what are its dynamics of evolution (e.g. expanding/shrinking, fragmenting/homogenizing)? - How does this ecosystem overlap with neighbouring ecosystems, such as the manosphere, or environmentalists? What is the nature of the far-right ecosystem’s relationship with the non-/less extreme right-wing internet? - How does content, ideas and concepts flow from the far-right ecosystem to other ecosystems?

Table 1: Key questions for future research on the far-right online ecosystem, by levels of analysis.

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- ² Ibid.
- ³ UN Counter-Terrorism Committee Executive Directorate, “Member States Concerned by the Growing and Increasingly Transnational Threat of Extreme Right-Wing Terrorism,” *CTED Trends Alert* (2020): 3, https://www.un.org/sc/ctc/wp-content/uploads/2020/04/CTED_Trends_Alert_Extreme_Right-Wing_Terrorism.pdf.
- ⁴ Tore Bjørgo and Jacob Ravndal, “Extreme-Right Violence and Terrorism: Concepts, Patterns, and Responses,” *ICCT Policy Brief* (2019), <https://icct.nl/publication/extreme-right-violence-and-terrorism-concepts-patterns-and-responses/>.
- ⁵ William Parkin, Brent Klein, Jeff Gruenewald, Joshua Freilich, and Steven Chermak, “Threats of Violent Islamist and Far-right Extremism: What Does the Research Say?,” *The Conversation*, February 22, 2017, <https://theconversation.com/threats-of-violent-islamist-and-far-right-extremism-what-does-the-research-say-72781>.
- ⁶ Bart Schuurman, “Topics in Terrorism Research: Reviewing Trends and Gaps, 2007-2016”, *Critical Studies on Terrorism* 12, no.3 (2019): 463-480.
- ⁷ Bjørgo and Ravndal, “Extreme-Right Violence” (see note 4 above).
- ⁸ EUROPOL, *European Union Terrorism Situation and Trend Report 2020* (The Hague, 2020): 68, <https://www.europol.europa.eu/activities-services/main-reports/european-union-terrorism-situation-and-trend-report-te-sat-2020>.
- ⁹ See for example Jacob Davey and Julia Ebner, *The Fringe Insurgency. Connectivity, Convergence and Mainstreaming of the Extreme Right* (London: ISD, 2017).
- ¹⁰ For example Manuela Caiani and Linda Parenti, “The Dark Side of the Web: Italian Right-Wing Extremist Groups and the Internet,” *South European Society & Politics* 14, no.3 (2009): 273-294; Manuela Caiani and Linda Parenti, *European and American Extreme Right Groups and the Internet* (New York: Routledge, 2016); Caterina Froio, “Race, Religion, or Culture? Framing Islam between Racism and Neo-Racism in the Online Network of the French Far Right,” *Perspectives on Politics* 16, no.3 (2018): 696-709.
- ¹¹ For example Caterina Froio and Bharat Ganesh, “The Transnationalisation of Far Right Discourse on Twitter,” *European Societies* 21, no.4 (2019): 513-539; Valentine Crosset, Samuel Tanner, and Aurélie Campana, “Researching Far Right Groups on Twitter: Methodological Challenges 2.0,” *New Media & Society* 2, no.14 (2019): 939-961; Reem Ahmed and Daniela Pisoiu, “How Extreme is the European Far-Right? Investigating Overlaps in The German Far-Right Scene on Twitter,” *VoxPol Brief* (2020), https://www.voxpol.eu/download/vox-pol_publication/How-Extreme-is-the-European-Far-Right.pdf.
- ¹² For example Benjamin Lee, “A Day in the “Swamp”: Understanding Discourse in the Online Counter-Jihad Nebula,” *Democracy & Security* 11, no.3 (2015): 248-274.
- ¹³ Lars Erik Berntzen and Sveinung Sandberg, “The Collective Nature of Lone Wolf Terrorism: Anders Behring Breivik and the Anti-Islamic Social Movement,” *Terrorism & Political Violence* 26, no.5 (2014): 759-779.
- ¹⁴ Maik Fielitz and Nick Thurston, *Post-Digital Cultures of the Far Right. Online Actions and Offline Consequences in Europe and the US* (Bielefeld: Transcript Verlag, 2019).
- ¹⁵ Tiana Gaudette, Ryan Scrivens and Vivek Venkatesh, “The Role of the Internet in Facilitating Violent Extremism: Insights from Former Right-Wing Extremists,” *Terrorism & Political Violence* (2020), online before print, <https://doi.org/10.1080/09546553.2020.1784147>.
- ¹⁶ Maura Conway, Ryan Scrivens and Logan Macnair, “Right-Wing Extremists’ Persistent Online Presence: History and Contemporary Trends,” *ICCT Policy Briefs* (2019), <https://icct.nl/publication/right-wing-extremists-persistent-online-presence-history-and-contemporary-trends/>.
- ¹⁷ Roger Blew, “On the Definition of Ecosystem,” *Bulletin of the Ecological Society of America* 77, no.3 (1996): 171.
- ¹⁸ This is not the first time that concepts related to biology have been applied to the far-right. Most famously, the term meme, which refers to the kind of viral image that has become incredibly popular on far-right forums and the internet as a whole, was originally coined by Richard Dawkins (1976) in

- The Selfish Gene* where it was intended to act as an analogue for how cultural artefacts spread and change over time in similar ways to genes. Richard Dawkins, *The Selfish Gene* (Oxford: Oxford University Press, 1976).
- ¹⁹ Jacob Davey, Mackenzie Hart and Cécile Guerin, *An Online Environmental Scan of Right-wing Extremism in Canada* (London: ISD, 2020).
- ²⁰ Its “about” section asserts that “we live in a Dark Age, in which decadence reigns and all natural and healthy values are inverted. [...] Even in the depths of the Dark Age, there are hidden Golden Age counter-currents: survivals of the past Golden Age that sustain the world and serve as seeds of the Golden Age to come”.
- ²¹ Alexander Meleagrou-Hitchens and Hans Brun, *A Neo-Nationalist Network: The English Defence League and Europe’s Counter-Jihad Movement* (London: ICSR, 2013).
- ²² .onion sites are websites that can only be accessed via Tor proxies and browsers.
- ²³ Conway, Scrivens and Macnair, “Right-Wing Extremists’ Persistent Online Presence” (see note 16 above).
- ²⁴ EUROPOL, *European Union Terrorism Situation and Trend Report 2020*: 64 (see note 8 above).
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- ⁵⁴ Indeed this endeavour is the long-term aim of the authors’ [REMOVED FOR PEER-REVIEW]-funded project (see [REMOVED FOR PEER-REVIEW]).
- ⁵⁵ The blurb for the fourth issue of the *Alt Hero* graphic novel summarizes: “Despite being hunted by the police and the Global Justice Initiative, Jean-Michel Durand is determined to stand with his generation against the enemies of France. How can even the most steadfast nationalists hope to stop Antifa when the riot police, a United Nation Incident Team, and Captain Europa himself are standing in their way?”.
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