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# The Changing Nature of Domestic Online Extremism and Self-Radicalisation

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## Background

At 13:28NZDT on 15th March 2019, a message appeared on the anonymous image board *8chan/pol* stating, "Well lads, it's time to stop shitposting and make a real life effort post. I will carry out and [*sic*] attack against the invaders, and will even live stream the attack via facebook". The post included links to a manifesto document and a Facebook live stream. Moments later, the post's author, Brenton Tarrant, began an attack on two separate mosques in Christchurch, New Zealand, resulting in the deaths of 51 people.

Tarrant was clearly motivated by right-wing extremist (RWE) ideology, as demonstrated by his use of racist rhetoric and discussions of 'the great replacement' theory and other RWE tropes. Crucially, the subsequent inquiry into his attack found Tarrant to have been an active participant in an online extremist ecosystem of content.[1] This latter point was demonstrated by several defining features of Tarrant's attack. Firstly, his activity was inspired by discussions on *8chan/pol*[2] and other similar platforms. Secondly, he used *8chan/pol* to advertise his attack and present his justifications, with his manifesto and cultural references during the livestream being designed to appeal specifically to the online audience of *8chan/pol*. Thirdly, he has subsequently become known as a "hero" or "saint" on these online spaces and has inspired others to carry out attacks using a similar modus operandi.[3]

## How Domestic Online Extremism is changing

The Christchurch case highlights two aspects of domestic online extremism that have become prominent over the last decade. Firstly, Tarrant is an example of what UK authorities refer to as 'self-initiated terrorists' (SITs). These are individuals who do not have any personal links, direction, or material support from a terrorist/extremist organisation or group, but who are influenced by ideological material they have

[1] Royal Commission of Enquiry, 'Royal Commission of Inquiry into the Terrorist Attack on Christchurch Masjidain on 15 March 2019', 2020, https://christchurchattack.royalcommission.nz/.
[2] 8chan is one iteration of a family of anonymous imageboard sites (forums that are characterised by lack of usernames and large use of images in posts), with other iterations including 4chan, 9chan, Neinchan, etc. Each iteration has a series of thematic boards, with the /pol (short for "politically incorrect") boards being known for hosting racist, misogynistic, and homophobic content.
[3] Stephane J. Baele, Lewys Brace, and Travis G. Coan, 'The "Tarrant Effect": What Impact Did Far-Right Attacks Have on the *8chan* Forum?', *Behavioral Sciences of Terrorism and Political Aggression*, 22 December 2020, 1–23, https://doi.org/10.1080/19434472.2020.1862274.

engaged with.[4] Secondly, it supports empirical evidence that has shown how online spaces, such as *8chan/pol*, are not merely places of 'harmless' and 'edgy' discussions with 'dark humour', but are instead radicalising milieu in their own right due to their subcultural dynamics.[5]

Furthermore, advancements in communication technologies have ensured these online extremist spaces do not exist in isolation, but are instead part of a network of interacting online spaces; often conceptualised as an "ecosystem".[6] These online spaces are often characterised by identity-based subcultures that are defined by notions of in-group and out-group(s) identity, with intergroup competition being presented as a crisis-solution narrative.[7] This is the kind of ecosystem in which Tarrant was a participant. They are likely to be part of the reason, as recent research has demonstrated, that acts of extremist violence which take place without any online influence are becoming increasingly rare at the same time as there is an increase in SIT cases in Europe and the USA.[8]

**Changing radicalisation patterns**

These SITs cases have been notoriously hard to detect due to their nature, and there is now evidence that this phenomenon is evolving in ways that will present further issues in detection, prevention, de-radicalisation, and prosecution. Namely, technological affordances are driving an increase in younger individuals forming their

[4] See National Counter-Terrorism Security Office. 'Self-Initiated Terrorists (S-ITs)', 2021. https://www.protectuk.police.uk/threat-risk/threat-analysis/self-initiated-terrorists-s-its.
[5] Baele, Brace, and Coan, 'The "Tarrant Effect"'; Lewys Brace, *Investigating the Far-Right Online: Using Text Data to Understand Online Subcultures* ([object Object], 2022), https://doi.org/10.5258/NCRM/NCRM.00004548.
[6] Stephane J. Baele, Lewys Brace, and Travis G. Coan, 'Uncovering the Far-Right Online Ecosystem: An Analytical Framework and Research Agenda', *Studies in Conflict & Terrorism*, 30 December 2020, 1–21, https://doi.org/10.1080/1057610X.2020.1862895; Jade Hutchinson et al., 'Violent Extremist & REMVE Online Ecosystems: Ecological Characteristics for Future Research & Conceptualization' (RESOLVE Network, 25 August 2022), https://doi.org/10.37805/remve2022.5.
[7] J M Berger, *Extremism* (The MIT Press, 2018), https://doi.org/10.7551/mitpress/11688.001.0001.
[8] Georgia F. Hollewell and Nicholas Longpré, 'Radicalization in the Social Media Era: Understanding the Relationship between Self-Radicalization and the Internet', *International Journal of Offender Therapy and Comparative Criminology* 66, no. 8 (June 2022): 896–913, https://doi.org/10.1177/0306624X211028771; Jonathan Kenyon, Jens Binder, and Christopher Baker-Beall, 'Understanding the Role of the Internet in the Process of Radicalisation: An Analysis of Convicted Extremists in England and Wales', *Studies in Conflict & Terrorism*, 24 April 2022, 1–25, https://doi.org/10.1080/1057610X.2022.2065902; Daniele Valentini, Anna Maria Lorusso, and Achim Stephan, 'Onlife Extremism: Dynamic Integration of Digital and Physical Spaces in Radicalization', *Frontiers in Psychology* 11 (24 March 2020): 524, https://doi.org/10.3389/fpsyg.2020.00524.

own bespoke ideology that aligns with their own personal experiences and grievances, and which draws upon ideas from several more established ideologies and extreme worldviews. Evidence for this comes from four data-driven insights.

- ***Recent years have seen an increasing number of young people engaging with extremist content.*** Taking the UK as an example, in the year ending September 2022, there was a substantial increase in the number of individuals aged 10-20 being arrested for terrorism offences; the first time this age group had outnumbered the 21-29 age group.[9]

- ***At the same time, there has been a marked increase in the number of individuals engaging with ideologies that are known as 'convergent violent extremist ideologies'***,[10] 'salad bar' ideologies,[11] or 'Mixed, Unclear, and Unstable' (MUU) ideologies; the last term being the UK's official designation. These ideologies are defined as those that combine components of different ideologies together (mixed), evolve and change quickly as their components become more or less favoured by the individual (mixed), or are incoherent (unclear). The emerging academic research refers to this phenomenon as 'ideological cross-pollination' and 'fringe fluidity',[12] with some arguing that this should be viewed as a distinct radicalisation pathway in its own right.[13] Again,

[9] See: Home Office. 'Operation of Police Powers under the Terrorism Act 2000 and Subsequent Legislation: Arrests, Outcomes, and Stop and Search, Great Britain, Quarterly Update to September 2022', 2022.
[10] US Department of Homeland Security, 'National Terrorism Advisory System Bulleting: February 7, 2022 - 2:00 PM ET', 2022, https://www.dhs.gov/sites/default/files/ntas/alerts/22_0207_ntas-bulletin.pdf.
[11] Matthew Alcoke, 'The Evolving and Persistent Terrorism Threat to the Homeland. Https://Www.Washingtoninstitute.Org/Policy-Analysis/Evolving-and-Persistent-Terrorism-Threat-Homeland', https://www.washingtoninstitute.org/policy-analysis/evolving-and-persistent-terrorism-threat-homeland.
[12] M Criezis, 'Intersections of Extremisms: White Nationalist/Salafi-Jihadi Propaganda Overlaps and Essentialist Narratives about Muslims', *Journal of Education in Muslim Societies* 2, no. 1 (2020), https://muse.jhu.edu/article/811620/pdf; G Gill, 'Fascist Cross-Pollination of Australian Conspiracist Telegram Channels', *First Monday* 26, no. 12 (2021), https://doi.org/10.5210/fm.v26i12.11830; Ariel Koch, 'The ONA Network and the Transnationalization of Neo-Nazi-Satanism', *Studies in Conflict & Terrorism*, 12 January 2022, 1–28, https://doi.org/10.1080/1057610X.2021.2024944.
[13] Daveed Gartenstein-Ross et al., 'Composite Violent Extremism: Conceptualizing Attackers Who Increasingly Challenge Traditional Categories of Terrorism', *Studies in Conflict & Terrorism*, 29 March 2023, 1–27, https://doi.org/10.1080/1057610X.2023.2194133; Daveed Gartenstein-Ross and Madeleine Blackman, 'Fluidity of the Fringes: Prior Extremist Involvement as a Radicalization Pathway', *Studies in Conflict & Terrorism* 45, no. 7 (3 July 2022): 555–78, https://doi.org/10.1080/1057610X.2018.1531545.

taking the UK as an example, this type of ideology is not only becoming a prominent part of the domestic extremist landscape but seems to be a radicalisation pathway that is largely dominated by young people.[14]

- ***Online behaviours are changing; all age groups are spending more time online, with this increase being most significant amongst teenagers.***[15] Research now argues in favour of not viewing online and offline behaviours and personas as distinct, but instead, understanding that individuals are increasingly integrating their online and offline experiences when forming their personality and behaviours.[16]

- ***Advancements in communication technologies continue to change how individuals engage with online content by offering various, and sometimes novel, affordances***; i.e. the ability to share content, comment on the posts of others, and tagging other users. Online extremist communities have demonstrated that they are, both consciously and sub-consciously, eager adopters of such affordances; with studies attributing many of the recent trends seen in online extremism to the use of such online affordances.[17] The impact of such affordances cannot be understated, especially given recent

[14] Lewys Brace, Stephane J. Baele, and Debbie Ging, 'Where Do 'mixed, Unclear, and Unstable' Ideologies Come from? A Data-Driven Answer Centred on the Incelosphere', *Journal of Policing, Intelligence and Counter Terrorism* 19, no. 2 (2 April 2024): 103–24, https://doi.org/10.1080/18335330.2023.2226667.
[15] Monica Anderson and Jingjing Jiang, 'Teens, Social Media & Technology 2018', *Pew Research Center*, 2018, https://www.pewresearch.org/internet/wp-content/uploads/sites/9/2018/05/PI_2018.05.31_TeensTech_FINAL.pdf; Ofcom, 'Online Nation - 2021 Report', 2021, 185, https://www.ofcom.org.uk/__data/assets/pdf_file/0013/220414/online-nation-2021-report.pdf.
[16] Primavera Fisogni, 'Cyber Terrorism and Self-Radicalization - Emergent Phenomena of Onlife Age: An Essay Through the General System Theory', *International Journal of Cyber Warfare and Terrorism* 9, no. 3 (2019); Valentini, Lorusso, and Stephan, 'Onlife Extremism'.
[17] Brace, Baele, and Ging, 'Where Do 'mixed, Unclear, and Unstable' Ideologies Come From?'; A Corbeil and R Rohozinski, 'Managing Risk: Terrorism, Violent Extremism, and Anti-Democratic Tendencies in the Digital Space', in *The Oxford Handbook of Cyber Security*, ed. P Cornish (Oxford: Oxford University Press, 2021), 163–72; S Peeters and T Willaert, 'Telegram and Digital Methods: Mapping Networked Conspiracy Theories through Platform Affordances', *M/C Journal* 25, no. 1 (2022), https://doi.org/10.5204/mcj.2878; Xinyi Zhang and Mark Davis, 'E-Extremism: A Conceptual Framework for Studying the Online Far Right', *New Media & Society*, 7 June 2022, 146144482210983, https://doi.org/10.1177/14614448221098360.

advancements in generative AI. Given the history and past behaviours of such online communities as those that inhabit sites like *8chan/pol*, it likely that they could make use of this technology in 5 distinct ways: propaganda generation, blackmailing/harassment, platform boosting, polluting the information environment, and developing misperception-inducing content.[18]

**The Internet Remains the Breeding Ground**

It is hypothesised that these factors are all inter-related, with the increasing number of MUU cases being driven by expanding ecosystems of extremist content. This results in certain online spaces acting as gateways to other online spaces that host radical content, and which are more integrated into their respective ecosystems. Crucially, such gateway spaces are sometimes not extremist in nature themselves but have some users who post links to extremist online spaces and content. This use of the linking affordance appears to sometimes be strategic to establish links between online spaces. while other times. It appears to be subconscious with individuals sharing content "of interest to the discussion". Regardless of motives, over time this behaviour results in both certain spaces acting as gateways to extremist content and contributes to the mainstreaming of certain extremist ideas that have originated on extremist online spaces.

It is believed that young people are particularly vulnerable to the effects of this linking behaviour, even if they are not actively seeking out such content. This is because their young age means they are likely to be undergoing a process of socialisation, resulting in some of these ideas providing "answers" to their personal insecurities due to their identity-based nature; as has been demonstrated with more established ideologies, such as the incel worldview.[19] While substantial empirical evidence of this phenomenon is yet to emerge, some early studies do support it. For example, a data-driven approach has been used to show that the MUU phenomenon was being driven by users making use of linking between different online spaces, sometimes, but not always strategically, and that this technological affordance allows individuals to be

[18] Stephane J Baele and Lewys Brace, 'AI Extremism: Technologies, Tactics, Actors' (VoxPol, 2024), https://voxpol.eu/new-vox-pol-report-ai-extremism-technologies-tactics-actors/.
[19] Lewys Brace, 'Incels and the Incelosphere: An Overview of Current Research and Understanding' (Centre for Research and Evidence on Security Threat, 2023), https://crestresearch.ac.uk/resources/incel-and-the-incelosphere-an-overview-of-current-research-and-understanding/.

easily exposed to different notions from various ideologies and online subcultures, sometimes from other extremist ecosystems.

**Way Forward**

This emergent phenomenon is likely to increase in frequency in future years given technological advancements and subsequent changes to our behaviours. However, more empirical and data-driven work is required to increase our understanding of both this phenomenon itself and to allow for the development of effective detection and deradicalisation approaches.

A first step in developing an evidence-based approach to tackling this emerging threat would involve understanding how these ecosystems expand, under what circumstances a significant amount of links are made between an online space hosting extremist content and other online spaces, which ideas gain traction and whether this is related to real-world, offline, events. The University of Exeter has a large number of researchers with both substantive expertise in such areas and research methods expertise through the existence of the Centre for Computational Social Science and Institute for Data Science and Artificial Intelligence. This dual expertise allows these researchers to provide novel and actionable insights into online extremism, terrorism, and other homeland security-related issues.

A parallel and second step is to beef up existing legislation. In particular, the Online Safety Act, plus the National Cyber Security Agency and other government agencies ensuring better joined up work to combat this growing phenomenon. This top-down approach should also be accompanied by a bottom-up approach that involves community-based measures such as including lessons on how to spot mis/disinformation and extremist or radical content as part of the national curriculum.

Lastly, an emphasis at tackling the root causes of attraction towards domestic online extremism, which is a whole government and societal issue.

**References**

Alcoke, Matthew. 'The Evolving and Persistent Terrorism Threat to the Homeland. Https://Www.Washingtoninstitute.Org/Policy-Analysis/Evolving-and-Persistent-Terrorism-Threat-Homeland'. 19 November 2019. https://www.washingtoninstitute.org/policy-analysis/evolving-and-persistent-terrorism-threat-homeland.

Anderson, Monica, and Jingjing Jiang. 'Teens, Social Media & Technology 2018'. *Pew Research Center*, 2018. https://www.pewresearch.org/internet/wp-content/uploads/sites/9/2018/05/PI_2018.05.31_TeensTech_FINAL.pdf.

Baele, Stephane J, and Lewys Brace. 'AI Extremism: Technologies, Tactics, Actors'. VoxPol, 2024. https://voxpol.eu/new-vox-pol-report-ai-extremism-technologies-tactics-actors/.

Baele, Stephane J., Lewys Brace, and Travis G. Coan. 'The "Tarrant Effect": What Impact Did Far-Right Attacks Have on the *8chan* Forum?' *Behavioral Sciences of Terrorism and Political Aggression*, 22 December 2020, 1–23. https://doi.org/10.1080/19434472.2020.1862274.

———. 'Uncovering the Far-Right Online Ecosystem: An Analytical Framework and Research Agenda'. *Studies in Conflict & Terrorism*, 30 December 2020, 1–21. https://doi.org/10.1080/1057610X.2020.1862895.

Berger, J M. *Extremism*. The MIT Press, 2018. https://doi.org/10.7551/mitpress/11688.001.0001.

Brace, Lewys. 'Incels and the Incelosphere: An Overview of Current Research and Understanding'. Centre for Research and Evidence on Security Threat, 2023. https://crestresearch.ac.uk/resources/incel-and-the-incelosphere-an-overview-of-current-research-and-understanding/.

———. *Investigating the Far-Right Online: Using Text Data to Understand Online Subcultures*. [object Object], 2022. https://doi.org/10.5258/NCRM/NCRM.00004548.

Brace, Lewys, Stephane J. Baele, and Debbie Ging. 'Where Do 'mixed, Unclear, and Unstable' Ideologies Come from? A Data-Driven Answer Centred on the Incelosphere'. *Journal of Policing, Intelligence and Counter Terrorism* 19, no. 2 (2 April 2024): 103–24. https://doi.org/10.1080/18335330.2023.2226667.

Corbeil, A, and R Rohozinski. 'Managing Risk: Terrorism, Violent Extremism, and Anti-Democratic Tendencies in the Digital Space'. In *The Oxford Handbook of Cyber Security*, edited by P Cornish, 163–72. Oxford: Oxford University Press, 2021.

Criezis, M. 'Intersections of Extremisms: White Nationalist/Salafi-Jihadi Propaganda Overlaps and Essentialist Narratives about Muslims'. *Journal of Education in Muslim Societies* 2, no. 1 (2020). https://muse.jhu.edu/article/811620/pdf.

Department of Homeland Security, US. 'National Terrorism Advisory System Bulleting: February 7, 2022 - 2:00 PM ET', 2022. https://www.dhs.gov/sites/default/files/ntas/alerts/22_0207_ntas-bulletin.pdf.

Fisogni, Primavera. 'Cyber Terrorism and Self-Radicalization - Emergent Phenomena of Onlife Age: An Essay Through the General System Theory'. *International Journal of Cyber Warfare and Terrorism* 9, no. 3 (2019).

Gartenstein-Ross, Daveed, and Madeleine Blackman. 'Fluidity of the Fringes: Prior Extremist Involvement as a Radicalization Pathway'. *Studies in Conflict & Terrorism* 45, no. 7 (3 July 2022): 555–78. https://doi.org/10.1080/1057610X.2018.1531545.

Gartenstein-Ross, Daveed, Andrew Zammit, Emelie Chace-Donahue, and Madison Urban. 'Composite Violent Extremism: Conceptualizing Attackers Who Increasingly Challenge Traditional Categories of Terrorism'. *Studies in Conflict & Terrorism*, 29 March 2023, 1–27. https://doi.org/10.1080/1057610X.2023.2194133.

Gill, G. 'Fascist Cross-Pollination of Australian Conspiracist Telegram Channels'. *First Monday* 26, no. 12 (2021). https://doi.org/10.5210/fm.v26i12.11830.

Hollewell, Georgia F., and Nicholas Longpré. 'Radicalization in the Social Media Era: Understanding the Relationship between Self-Radicalization and the Internet'. *International Journal of Offender Therapy and Comparative Criminology* 66, no. 8 (June 2022): 896–913. https://doi.org/10.1177/0306624X211028771.

Hutchinson, Jade, Julian Droogan, Lise Waldek, and Brian Ballsun-Stanton. 'Violent Extremist & REMVE Online Ecosystems: Ecological Characteristics for Future Research & Conceptualization'. RESOLVE Network, 25 August 2022. https://doi.org/10.37805/remve2022.5.

Kenyon, Jonathan, Jens Binder, and Christopher Baker-Beall. 'Understanding the Role of the Internet in the Process of Radicalisation: An Analysis of Convicted Extremists in England and Wales'. *Studies in Conflict & Terrorism*, 24 April 2022, 1–25. https://doi.org/10.1080/1057610X.2022.2065902.

Koch, Ariel. 'The ONA Network and the Transnationalization of Neo-Nazi-Satanism'. *Studies in Conflict & Terrorism*, 12 January 2022, 1–28. https://doi.org/10.1080/1057610X.2021.2024944.

Ofcom. 'Online Nation - 2021 Report', 2021, 185. https://www.ofcom.org.uk/__data/assets/pdf_file/0013/220414/online-nation-2021-report.pdf.

Peeters, S, and T Willaert. 'Telegram and Digital Methods: Mapping Networked Conspiracy Theories through Platform Affordances'. *M/C Journal* 25, no. 1 (2022). https://doi.org/10.5204/mcj.2878.

Royal Commission of Enquiry. 'Royal Commission of Inquiry into the Terrorist Attack on Christchurch Masjidain on 15 March 2019', 2020. https://christchurchattack.royalcommission.nz/.

Valentini, Daniele, Anna Maria Lorusso, and Achim Stephan. 'Onlife Extremism: Dynamic Integration of Digital and Physical Spaces in Radicalization'. *Frontiers in Psychology* 11 (24 March 2020): 524. https://doi.org/10.3389/fpsyg.2020.00524.

Zhang, Xinyi, and Mark Davis. 'E-Extremism: A Conceptual Framework for Studying the Online Far Right'. *New Media & Society*, 7 June 2022, 146144482210983. https://doi.org/10.1177/14614448221098360.

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