BY DESIGN: THE RADICALIZATION OF THE FAR-RIGHT

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By

Kyle DeAnna

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A thesis written by:

Kyle DeAnna

B.S. University of Cincinnati, 2013

M.F.A. Kent State University

Approved by:

_____

Jessica Barness, MFA (Advisor)

_____

Daniel Alenquer, MFA (Director, School of Visual Communication Design)

_____

Amy Reynolds, PhD (Dean, College of Communication & Information)

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Abstract

The purpose of this research is to establish the threat of far-right extremist groups in the United States and draw a link between increased violence from these groups and their strong online presence on social media. According to the research far-right groups are far more likely to commit acts of violence currently, hence why they are the focus of this research. Social media sites and content created there are responsible for creating safe havens for extremists to produce and circulate their information. This leads to higher recruitment and a normalizing of extremist ideals. By identifying the types of memes and information shared on these platforms we are more capable of dealing with the threats these groups pose. This research is also a call to action for designers working in the world of social media to be more cognizant of the spaces they create. Solutions to this problem exist but they will require the cooperation of designers, corporations, and users of these sites. Radical groups existed before the internet, however the growing threat from the far-right, and their savvy use of internet message boards and social media, have increased the level of ferocity and violence these radical groups have and will commit.

Keywords: Far-Right, Radicalization, Social Media, Visual Rhetoric, Design Ethics

By Design: The Radicalization of the Far-Right

As of this writing, October 1st, 2021, 691 people have been charged in one of the most brazen and violent attacks on the U.S. Capitol in history[1]. Members of this mob were members of far-right militias, neo-Nazis, and xenophobic fascist groups[2]. Many other members of this mob were regular citizens without any overt or radical affiliations, and many didn't even realize they were standing shoulder to shoulder with violent extremists. Thousands of Pro-Trump supporters felt it was their patriotic duty to attempt and overthrow a democratic election. One rioter who entered the Capitol said, "We wanted to show these politicians that it's us who's in charge, not them."[3] According to a study done by CPOST and Dr. Robert Pape, what was even more surprising was the specific demographics of those that attended the insurrection. Compared to other far-right terrorist attacks those that attended the Jan. 6th insurrection, were older, wealthier, and came from counties with faster declining white populations then average[4]. The conclusion being that most attending were white citizens who feared their rights were being outpaced by non-whites. This was more than just a fringe political movement and demonstrates how once-fringe theories like the "Great Replacement" have become mainstream in today's conservative political landscape. This statement sounds outrageous without context. Before Jan. 6th, 2021, the idea of an attack

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[1] Madison Hall et al., "691 People Have Been Charged in the Capitol Insurrection so Far. This Searchable Table Shows Them All.," Insider (Insider, October 28, 2021), https://www.insider.com/all-the-us-capitol-pro-trump-riot-arrests-charges-names-2021-1.

[2] Bill McCarthy, PolitiFact.com. "Fact-Check: Are White Supremacists Responsible for Capitol Riot?" Statesman. Austin American-Statesman, February 24, 2021. https://www.statesman.com/story/news/politics/politifact/2021/02/24/tucker-carlsons-false-claim-downplayed-role-white-supremacists-capitol-riot/6800617002/.

[3] PolitiFact.com Bill McCarthy, "Fact-Check: Are White Supremacists Responsible for Capitol Riot?," Statesman (Austin American-Statesman, February 24, 2021), https://www.statesman.com/story/news/politics/politifact/2021/02/24/tucker-carlsons-false-claim-downplayed-role-white-supremacists-capitol-riot/6800617002/.

[4] Pape, Robert. "Understanding American Domestic Terrorism." CPost, February 2021. https://d3qi0qp55mx5f5.cloudfront.net/cpost/i/docs/americas_insurrectionists_online_2021_04_06.pdf?mtime=1617807009.

on the Capitol by U.S. citizens, killing 5 and wounding 140, would have sounded completely absurd, yet it has happened, and we are all left examining the horror of what has transpired. It seems unbelievable, but for those who have been paying attention to online discourse and the increasingly violent chatter on sites such as Facebook, Parlor, and 4chan prior to the 2020 presidential election this event seems almost inevitable. This event didn't happen unexpectedly and there are many human actors who should be held accountable. However, political speeches, terrorists, and the power plays of a few are not the only causes of this tragedy. Designers, programmers, and big tech executives play a significant role in building online communities that intentionally or unintentionally foster greater and greater radicalization within their online communities. The visual language of these sites are created to lead people further into radicalization through of propaganda and disinformation and put like-minded individuals together to hatch even more extreme ideas. This phenomenon is called Group-Polarization and the consequences, as we will see, can be dire.

Since the Jan. 6th attack many of the major tech companies, such as Twitter, YouTube, and Facebook, have taken a stand and banned or heavily moderated profiles directly connected to the insurrection. While these are perfectly acceptable reactions to the events that unfolded, many of them seem to be too little too late. Facebook in particular has known about the threat of Group-Polarization and has had a terrible track record policing extremist trends on their platform thus far. Three U.S. Senators, Mazie Hirano (D-HI), Mark Warner (D-VA), and Bob Mendez (D-NJ) wrote a letter to Facebook stating, "…the prevalence of white supremacist and other extremist content on Facebook—and the ways in which these groups have been able to use the platform as organizing infrastructure — is unacceptable."[5] Not only that but Italian researchers focusing on social media trends have reaffirmed that, "The Facebook environment is particularly suited for the emergence of polarized communities, or echo chambers."[6] To

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[5] Mark Warner, Mazie Hirono, and Robert Menendez (Menlo Park, California, n.d.).

[6] Del Vicario, M., Vivaldo, G., Bessi, A. et al. Echo Chambers: Emotional Contagion and Group Polarization on Facebook. Sci Rep 6, 37825 (2016). https://doi.org/10.1038/srep37825

fully understand how these sites are culpable in their design we need to back up and discuss the broader impact of the Internet and use Facebook as an example to explain how these extremist groups have taken root and proliferated across the internet and into the real world.

The purpose of this research is to lay out why this is a current issue, and analyze the tools (memes, posts, and websites) that lead to further radicalization. It is important to understand the context in which events are happening and understand how design and culture have accelerated extremist's reach online. The first part of this research will focus on the impact sites like Facebook, and more broadly the internet, have had on our society followed by a critique and examination of memes used by extremists to broadcast their message.

The Internet and its' Impact

What in our modern age can compare to the monolithic creation of something like the internet? So much has already been said about the subject, but the internet's rapid entrance onto the visual communication scene has designers, psychologists, politicians, and societies virtual heads spinning. As little as 25 years have passed since its inception and now 4.66 billion people use and have access to it daily.[7] No new invention in the history of the world has connected us to more shared images, information, and our fellow humans in as powerfully and as quickly a way as the internet has. The internet has already begun to match inventions and creations like the first Sumerian alphabet, the Gutenberg press, the first spoken language, and the combustible engine in terms of the effect it has had on our global culture, interpersonal, and intrapersonal reality. We can see it in the way it has worked its way into nearly every form of communication and information we consume, usurping even the once unrivaled television. TV

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[7] Johnson, Joseph. "Internet Users in the World 2021." Statista, September 10, 2021.
    https://www.statista.com/statistics/617136/digital-population-worldwide/.

screens are now mostly vessels for internet content to project from. The internet has become intertwined with business, education, politics, leisure, entertainment, and socialization. Detailed, visually stimulating information can be passed between each other instantly and, unlike TV, it is completely personalized toward the user, connecting us directly to friends and family as well as your local mega-corporation! Google profitably facilitates relationships between our personal data and companies like Nike and Disney to market the perfect shoe or movie directly to their most willing audiences.[8] The internet is truly a pervasive entity unrivaled in modern times by any other current invention. According to Dr. Elias Aboujaoude, nearly a quarter of all American adults admit to being on the internet "almost constantly."[9]

Beyond just entertainment, information, and most of our free time, the global economy has been consumed by the internet's growing gravity too. The entire world economy is having to adjust itself to the ripples of this new invention and the results so far have been mixed.[10] According to an in-depth study on the economic impact of the internet, Alice Rivlin and Robert E. Litan found signs of hope yet cautioned, "against assuming large economic gains resulting from the Internet until they are demonstrable."[11] There is of course the obvious; that we all have to now pay for this 'essential' service or be left behind in society (only a slight exaggeration) and the industry to support the infrastructure of the internet is costly to build and upgrade. The economic consequences outside of basic online commerce are where the larger changes to society have happened. Industries have been changed, created, or devastated to adapt to the internet.

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[8] Popken, Ben. "Google Sells the Future, Powered by Your Personal Data." NBCNews.com. NBCUniversal News Group, May 11, 2018. https://www.nbcnews.com/tech/tech-news/google-sells-future-powered-your-personal-data-n870501.

[9] ABOUJAOUDE, ELIAS. "Problematic Internet Use: An Overview." *World Psychiatry* 9, no. 2 (2010): 85–90. https://doi.org/10.1002/j.2051-5545.2010.tb00278.x.

[10] Rivlin, Alice M., and Robert E. Litan. "The Economy and the Internet: What Lies Ahead?" Brookings. Brookings, July 28, 2016. https://www.brookings.edu/research/the-economy-and-the-internet-what-lies-ahead/.

[11] Alice M. Rivlin and Robert E. Litan, "The Economy and the Internet: What Lies Ahead?," Brookings (Brookings, July 28, 2016), https://www.brookings.edu/research/the-economy-and-the-internet-what-lies-ahead/.

Amazon is a great example of a company exploding onto the retail scene and casting a shadow over the entire market. The accessibility and instant gratification of a service like Amazon makes it hard to resist. We see the benefits of this new logistical system through cheaper goods, faster service, and wider selection of products, but it's not all positive. Small businesses are being run over, workers at Amazon facilities have reported poor working conditions and pay, and the increased cost of energy for delivery services has increased global carbon emissions greatly.[12] Amazons carbon footprint rose by 15% in 2020 even after multiple "green pledges" according to journalist Joseph Pisani.[13] Yet nearly two-thirds of Americans say they've bought something off of Amazon, and the CEO, Jeff Bezos, has become the richest man in the world.[14] The drastic shift in the retail industry, brought on by online marketplaces such as Amazon, has created ripples across the economy and disenfranchised many small businesses. According to researchers Stacy Mitchell and Rob Knox, since the rise of Amazon 40% of the Nation's small apparel, toy, and sporting goods stores have disappeared, and Amazon makes up 50% of all online sales.[15]

Even down to our most personal connections and desires, the internet has taken root. We rely on the internet to communicate to each other now the way people used to with phones and letters. However,

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[12] LaVecchia, Stacy Mitchell and Olivia. "Report: Amazon's Stranglehold: How the Company's Tightening Grip on the Economy Is Stifling Competition, Eroding Jobs, and Threatening Communities." Institute for Local Self-Reliance, February 24, 2021. https://ilsr.org/amazon-stranglehold/.

[13] Pisani, Joseph. "Despite Green Pledges, Amazon's Carbon Footprint Grew 15%." AP NEWS. Associated Press, June 23, 2020. https://apnews.com/95986c4ba779f1d35ac4ca2afdd745c3.

[14] Selyukh, Alina. "What Americans Told Us about Online Shopping Says a Lot about Amazon." NPR. NPR, June 6, 2018. https://www.npr.org/2018/06/06/615137239/what-americans-told-us-about-online-shopping-says-a-lot-about-amazon.

[15] Knox, Stacy Mitchell and Ron. "Fact Sheet: How Amazon Exploits and Undermines Small Businesses, and Why Breaking It up Would Revive American Entrepreneurship." Institute for Local Self-Reliance, October 6, 2021. https://ilsr.org/fact-sheet-how-breaking-up-amazon-can-empower-small-business/.

unlike those tools, we now can stay constantly up to date about each other lives in a way that would have seemed unimaginable and absolutely invasive two decades ago. Anyone can see what so and so ate for breakfast last Friday from anywhere in the world, and instantaneously. Even for the most aware and careful internet user, privacy can be nearly nonexistent. Today, 49% of the world has a social media account, including 72% of American adults that participate.[16] It's no real surprise that some of this detailed information and connection can sometimes lead to love. 12% of American adults say they are in a committed relationship or married to someone they met online (social media, dating sites, chat rooms). Researchers at the Proceedings of the National Academy of Sciences stated, "…the internet may be altering the dynamics and outcomes of marriage itself."[17] New inventions change many of our traditions and customs, but few have ever fundamentally altered the fabric of marriage and interpersonal relations in society as much as the internet has. The internet can be such a powerful communication tool that people are willing to meet and fall in love using only the features it provides. Unfortunately, the level of intimacy and detail we provide these social networks can leave us open to harm as well. Identity theft, and the release of emails and passwords is a common occurrence, and the security of our personal data is constantly under threat by hackers.

The list of radical changes to our society that the internet has caused is growing every day and we could spend another thesis trying to catalog them all, but what we as designers should focus on is the increased importance design has due to this new invention. Design has always been crucial to any visual medium. Designers and artists have been needed to set type on printing presses, create illustrations for

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[16] Mitchell, Amy. "Demographics of Social Media Users and Adoption in the United States." Pew Research Center: Internet, Science & Tech. Pew Research Center, April 26, 2021. https://www.pewresearch.org/internet/fact-sheet/social-media/.

[17] Cacioppo, J. T., S. Cacioppo, G. C. Gonzaga, E. L. Ogburn, and T. J. VanderWeele. "Marital Satisfaction and Break-Ups Differ across on-Line and off-Line Meeting Venues." *Proceedings of the National Academy of Sciences* 110, no. 25 (2013): 10135–40. https://doi.org/10.1073/pnas.1222447110.

advertisements, and design sets for plays and television, but today the demand for more and more consumers has shifted the path of many artists towards graphic design. Sites such as Facebook, Amazon, Uber, and Twitter have grown because of their design; including their purpose (practically and visually), user interface and experience design. Right now, we are at a crossroads as designers; will we use this unprecedented technology for good and design according to ethics? Or will we continue to exploit human psychology and our own design knowledge for further consumer exploitation?[18] The following research will explore how psychology plays a role in facilitating design and the consequences of unethical design choices. We will also examine how visual language and design aesthetics were used to grow Facebook to such great heights and how we can use its' example to change the direction design is currently headed. The use of design and psychology is deeply entwined within the internet, and we must understand the use of both if we want to fix the threat of violent online extremists.

Facebook: A Design Perspective

Facebook's Klavika font lowercase "f" in a blue square is one of the world's most recognizable logos. Facebook has the most users compared to any other social media platform, and its longevity allows us to analyze a lot about its success.[19] There are so many designed choices on a single Facebook page it's hard to even begin to break it down, so let's examine this more closely. Upon logging in a user is overwhelmed with options. Feeds, messages, stores, ads, groups, stories, and friends' lists are presented cleanly and straightforwardly. Every feature has something in common; they all revolve around creating a notification. A calendar reminder, a message from a friend, a new ad, they're all designed to increase user

[18] Orlowski, J. (2020, September 9). *The Social Dilemma*. Netflix Official Site.
https://www.netflix.com/watch/81254224?trackId=14277281.

[19] Ortiz-Ospina, Esteban. "The Rise of Social Media." Our World in Data, September 18, 2019.
https://ourworldindata.org/rise-of-social-media.

engagement and recapture their attention. Constant stimulus is key.[20] Designers understand the necessity of user engagement and the importance of legibility, tone, and composition to create an impactful piece, but what can be done to steer away from viewer manipulation and unethical representations? So much money can be made when harnessing these principles effectively it may be impossible to steer a capitalist economic model away from these temptations, but we as individuals can be conscious of the manipulative use of technology and stem the negative effects.

At first glance there is a lot to take in. A Facebook user is instantly hit with photos, ads, and new notifications. A reassuring blue search bar frames the top. Everything is presented to the user based on their friends and groups. However, there is a third party that is curating each feed as well. The algorithm. The algorithm decides how everything is shown; what time, what order, and what topic. Like a form of A.I., the algorithm knows exactly what to show on a feed, what ads will be most relevant to the user, and what types of content will keep the user on the site the longest. It does this by collecting a unique online fingerprint for each user that it records by watching what they click on, how long they read certain posts, and what products they buy. To the user the algorithm can be a satisfying care-free tool. It lets them see the most relevant posts they want without any real effort from them. The user can therefore be a passive observer or an active content creator. The beauty of Facebook is in its simplicity and customizable experience, but the behind-the-scenes direction of the algorithm can send users towards certain unintended topics and groups.

Facebook is also well known for updating its features and evolving regularly. They've bought out companies like Instagram, Messenger, and WhatsApp to continue to improve and expand their flagship site. Each of these acquisitions has further bolstered the interconnectivity of its' users and incidentally given more data to the algorithm. Facebook continues to improve the tools we use to

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[20] Orlowski, J. (2020, September 9). *The Social Dilemma*. Netflix Official Site.
https://www.netflix.com/watch/81254224?trackId=14277281.

communicate while simultaneously getting a more detailed model of who we are.[21] This is how Facebook

has become a nearly $600 billion-dollar company, by harvesting user profiles and selling the data to

companies wishing to market to Facebooks' users. The monetization model has been designed to

maximize the effectiveness of the algorithm and dictate the objective of the algorithm. But what if selling

wasn't the prime directive of the algorithm? What if the algorithm worked to educate its users above all

else? Or, more generally, designed to improve the happiness levels of its users without monetary intent?

What would a company with the resources of Facebook be able to accomplish if revenue generation

wasn't the goal? Facebook is a perfect case study on how to use the internet to effectively spread

information and designed in a visually simple way to capture users, but it isn't a great example of ethics.

Companies like Patagonia have proven that a company can exist ethically while still maintaining profits,

but neither Facebook, nor any other tech giant, has followed suit.[22]

The term simplicity has been used a few times now, and it really is one of the most important and

essential factors for user engagement in a digital medium. The amount of information presented per

screen on Facebook is astounding, but the layout itself is laid out as bare as possible. Each page consists

of three colors; blue for the search, home, and notification bar, gray boxes to house more specific links to

groups, calendars, and events, and large white boxes to distinguish your feed and ads. Everything is in its

place and nothing changes when switching pages. The only options for a user are to scroll their

personalized feed, create a post, or send messages. It's important to note Facebook wasn't the first to

recognize the power in this formula. Earlier sites like Myspace, AIM, and Friendster paved the way for

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[21] O'Flaherty, Kate. "All the Ways Facebook Tracks You and How to Stop It." Forbes. Forbes Magazine, June 30, 2021. https://www.forbes.com/sites/kateoflahertyuk/2021/05/08/all-the-ways-facebook-tracks-you-and-how-to-stop-it/?sh=818404c55836.

[22] Gardiner, Lisa. "From Synchilla to School Support." Patagonia and corporate responsibility, 1997. https://www.scu.edu/mcae/publications/iie/v8n1/synchilla.html.

Facebook, but Facebook owes its longevity to a few more specific tools that have become so powerful they've reshaped our subconscious and created shockwaves throughout our society.[23]

Figure 1 Facebook and Myspace home screen comparison

The most important factors that have contributed to Facebooks success are the concept of the site, and the content. Facebook has a limitless amount of user generated content. Every time you log on to Facebook you are bombarded with new pictures, texts, articles, and memes. And this is all part of the design, new content keeps bringing people back. It keeps people coming back so often that it has become common for people to become addicted to social media, especially Facebook. Studies have shown that the brain can go through large changes due to social media addiction and an increase in grey matter in the frontal cortex is one physical example. According to a recent study published in World Psychiatry, the brain goes through changes as severe as substance abusers do but in different areas of the brain, surprisingly.[24] However, similar to gambling and substance abuse addictions, social media is designed to trigger large amounts of dopamine release in users. The primary way this happens is through the

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[23] Oulasvirta, Antti, Tye Rattenbury, Lingyi Ma, and Eeva Raita. "Habits Make Smartphone Use More Pervasive." *Personal and Ubiquitous Computing* 16, no. 1 (2011): 105–14. https://doi.org/10.1007/s00779-011-0412-2.

[24] Firth, J., Torous, J., Stubbs, B., Firth, J. A., Steiner, G. Z., Smith, L., … Sarris, J. (2019, June). *The "online brain": how the Internet may be changing our cognition*. World psychiatry : official journal of the World Psychiatric Association (WPA). https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6502424/.

notification feature which was designed to alter the behavior and screen time of users.[25] By sending alerts to you even while you're not actively using the program it gets you back on, and conditions you to be aware of Facebook even when you're not online, therefore permeating into your 'real world' psyche.

As obvious as it seems, not all user created content is reputable either, or being created by good faith actors. "Trading up the chain" is a common tool used by misinformation creators.[26] By taking advantage of an ambiguous situation 'trolls' and far-right activists can plant a shocking or juicy claim that is difficult to fact check or verify. It's then spread wildly on less-moderated message boards, such as 4chan, and quickly adopted into more mainstream sites like Facebook or Twitter. From there the misinformation can reach national news level heights. We've seen this play out many times, from the Obama 'birther' conspiracy to conspiracies about Hillary Clinton's health prior to the 2016 election. It's all too easy to create a fake story and have it spread like wildfire throughout the internet. Donald Trump himself was influential in raising the legitimacy of many of these conspiracy theories. If he retweeted or mentioned a conspiracy theory at a rally it was automatically newsworthy by virtue of coming out of his mouth. Former FBI Agent Clint Watts testified to Congress that, "Every time a conspiracy is floated from the [Trump] administration, it provides every outlet around the world, in fact, an opportunity to amplify that conspiracy and to add more manipulated truths or falsehoods onto it."[27] Even after labeling a source as misinformation, as Twitter eventually implemented in May 2020, it's hard to overcome confirmation bias in readers. This becomes even more impossible when some of the most powerful people in the world parrot the same misinformation.

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[25] Orlowski, J. (2020, September 9). *The Social Dilemma*. Netflix Official Site. https://www.netflix.com/watch/81254224?trackId=14277281.

[26] Marwick, Alice, and Rebecca Lewis. *Media Manipulation and Disinformation Online*, May 15, 2017. http://www.chinhnghia.com/DataAndSociety_MediaManipulationAndDisinformationOnline.pdf.

[27] "DISINFORMATION: A PRIMER IN RUSSIAN ACTIVE MEASURES AND INFLUENCE CAMPAIGNS," 2017. U.S. Senate Testimony.

According to a recent Gallup poll, only 41% of Americans believe mainstream media and of that only 15% of Republicans believe it. This makes it even easier for unverified information to spread prolifically across the internet. The same people who create and spread misinformation also attack mainstream news sources or trick them into running false stories, further eroding trust in them.[28] Even when a mainstream news outlet broadcasts a conspiracy theory in order to debunk it the goal has already been accomplished. The goal of these provocateurs is to simply muddy the water, and any mention of the misinformation achieves that.

The algorithm used by Facebook to funnel like-minded people into groups isn't the only artificial tool being used to facilitate radicalization. "Bots" and AI pose as humans to spread and raise the frequency of misinformation. Bots are being used more and more to sway public discourse, influence political discussions, and attack dissidents. A study on the tweets generated during the 2016 presidential debate found nearly 20% of all Pro-Trump tweets were generated by bots while only making up 0.5% of users.[29] If that wasn't worrying enough, evidence suggests the use of these bots are nearly identical to the way Russia deploys their own propaganda-focused bots. Watts continued in his testimony stating, "What was being done by nation-states in the social media influence landscape was so much more significant than the other things that were being talked about," referring to the Islamic State recruiting soldiers on social media.[30] There has been little to no repercussions (i.e. legislation or regulations) in the use of bots in U.S. politics so far, and the sophistication and proliferation of these bots has only grown since 2016.

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[28] Brenan, Megan. "Americans' Trust in Mass Media Edges down to 41%." Gallup.com. Gallup, August 13, 2021. https://news.gallup.com/poll/267047/americans-trust-mass-media-edges-down.aspx.

[29] Marwick, Alice, and Rebecca Lewis. *Media Manipulation and Disinformation Online*, May 15, 2017. http://www.chinhnghia.com/DataAndSociety_MediaManipulationAndDisinformationOnline.pdf.

[30] O'Connor, Gabe, and Avie Schneider. "How Russian Twitter Bots Pumped out Fake News during the 2016 Election." NPR. NPR, April 3, 2017.

In 2018, M.I.T. studied the spread of misinformation on the internet and found that false information can spread six times faster than truth.[31] Meanwhile, 59% of individuals polled by PBS, NPR, and Marist Poll said spotting misinformation on the internet was nearly impossible.[32] It's not hard to come to the conclusion that the objectives of malicious bots, and extremist groups are being accomplished. By fostering distrust online, real facts and information can be disregarded, and any virtual disagreements can be cast aside and blamed on Russian bots. Open, good-faith debates online are becoming even more rare.

Sinister plots by foreign governments and poorly regulated online environments can breed extremist political groups but there's increasingly negative side effects of social media design separate from any political overture. Television has already proven to have many negative psychological effects on people. The New York Times recently published an article explaining the link between TV viewing and plummeting IQ scores.[33] The internet has simply ratcheted up these same problems. When we passively view television or social media we aren't actively engaging in the content, we're just consuming. It is true that commenting, sharing, and liking content is a way to participate online, but it's a superficial

https://www.npr.org/sections/alltechconsidered/2017/04/03/522503844/how-russian-twitter-bots-pumped-out-fake-news-during-the-2016-election.

[31] Vosoughi, Soroush, Deb Roy, and Sinan Aral. "The Spread of True and False News Online." *Science* 359, no. 6380 (2018): 1146–51. https://doi.org/10.1126/science.aap9559.

[32] Santhanam, Laura. "American Voters Worry They Can't Spot Misleading Information, Poll Finds." PBS. Public Broadcasting Service, January 21, 2020. https://www.pbs.org/newshour/politics/social-media-disinformation-leads-election-security-concerns-poll-finds.

[33] Rothwell, J. (2019, July 25). *You Are What You Watch? The Social Effects of TV*. The New York Times. https://www.nytimes.com/2019/07/25/upshot/social-effects-television.html.

connection. Even before the internet gained such a massive market share of our attention mass media was exacerbating self-esteem issues, mental, and eating disorders.[34]

The way Facebook changes users mentally can have extreme effects on the way we interact both interpersonally and intra-personally. The 'like' button is one of the greatest proponents on the effects of both of these ways of communication. Notifications keep us constantly buzzing with anxiety but what makes up these notifications ('likes') is what changes the way we interact. The invention of the 'like' button has made much of what people post a sort of informal competition for who can get the most points. This competition pushes us into a box that mainstream media suffers from too, we must try and appeal to the largest demographic we can. Not everyone is an internet celebrity or 'influencer' but even down to our genetic code, humans want to be liked and be a part of a group. Humans evolved to survive through cooperation and trade, this transcends into our online personas as well.[35] Even with only one other connection on Facebook we inherently desire to be accepted and admired. This inevitably leads to a homogenization of likes and a 'right' way to look, act, and feel about quite literally everything, but with Facebook it goes even a step beyond that. The homogenization of your beliefs isn't exactly connected with all of society but with the group you *choose* to be connected with. This important distinction creates a breeding ground for radicalization, bigotry, misinformation, and isolation. Journalists Max Fisher and Amanda Tuab at The New York Times (2018) stated,

> Everyday users might not intend to participate in online outrage, much less lead it. But the incentive
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> structures and social cues of algorithm-driven social media sites like Facebook can train them over
>
> time — perhaps without their awareness — to pump up the anger and fear. Eventually, feeding into

[34] Hesse-Biber, Sharlene, Patricia Leavy, Courtney E. Quinn, and Julia Zoino. "The Mass Marketing of Disordered Eating and Eating Disorders: The Social Psychology of Women, Thinness and Culture." *Women's Studies International Forum* 29, no. 2 (2006): 208–24. https://doi.org/10.1016/j.wsif.2006.03.007.

[35] Boyd, Robert, and Peter J Richerson. "Culture and the evolution of human cooperation." Philosophical transactions of the Royal Society of London. Series B, Biological sciences vol. 364,1533 (2009): 3281-8. doi:10.1098/rstb.2009.0134

one another, users arrive at hate speech on their own. Extremism, in other words, can emerge organically.[36]

It is easy to go deeper down a misinformed path if you have an insular culture to perpetuate those beliefs. Unfortunately, again, Facebook has been slow to react to these problems and is just now beginning to act against certain hate groups that have flourished within their echo chambers.[36]

In a less overtly harmful way even more mainstream homogenization can be detrimental to society. Depression, suicide, body dysmorphia, and eating disorders have all gone up drastically among teenagers and young adults in direct correlation with the rise of social media.[37] It is not hard to conclude that a global consensus in regard to taste adds unrealistic expectations onto everyone involved and limits our individualism. Our intrapersonal communication with ourselves has been wounded due to the pressures of Facebook and the need for constant, invisible approval. Recently, former data scientist and Facebook employee, Frances Haugen, has come out about the things she witnessed while working at Facebook. She declared that, "[Facebook] is causing teenagers to be exposed to more anorexia content. It is pulling families apart. And in places like Ethiopia, it's literally fanning ethnic violence." She also testified before Congress that Facebook is causing, "more division, more harm, more lies, more threats

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[36] Fisher, M., & Taub, A. (2018, April 25). *How Everyday Social Media Users Become Real-World Extremists*. The New York Times. https://www.nytimes.com/2018/04/25/world/asia/facebook-extremism.html.

[37] Orlowski, J. (2020, September 9). *The Social Dilemma*. Netflix Official Site. https://www.netflix.com/watch/81254224?trackId=14277281.

and more combat. In some cases, this dangerous online talk has led to actual violence that harms and even kills people."[38]

The Real-World Impact

It seems the more you look into the negative impacts of Facebook the darker it gets. Facebook isn't just a facilitator of our own intrapersonal breakdowns, but it's also having some extreme effects on how people are treating each other around the world. The 2017 genocide of the Rohingya people in Myanmar has been linked directly to Facebook posts calling for their extermination and a large number of fake accounts created by Myanmar military members to incite violence. After fake profiles were discovered on Facebook, some with over 1.3 million followers, the company was forced to acknowledge, "…that these seemingly independent entertainment, beauty and informational pages were linked to the Myanmar military." Nearly 700,000 people have been displaced, and tens of thousands have been killed in this ongoing humanitarian crisis.[39] Meanwhile in Ethiopia a potential genocide is brewing following a similar formula to Myanmar. Hundreds of new Facebook accounts have sprung up to fan the flames of hate towards some of Ethiopia's vulnerable ethnic groups set off by the assassination of popular singer, Hachalu Hundessa.[40] Simply put, the design of Facebooks isolated communities, and anonymity during account creation, creates very little resistance against these extremist movements. We've seen this in the

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[38] Allyn, Bobby. "Here Are 4 Key Points from the Facebook Whistleblower's Testimony on Capitol Hill." NPR. NPR, October 6, 2021. https://www.npr.org/2021/10/05/1043377310/facebook-whistleblower-frances-haugen-congress.

[39] Stevenson, A. (2018, November 6). *Facebook Admits It Was Used to Incite Violence in Myanmar*. The New York Times. https://www.nytimes.com/2018/11/06/technology/myanmar-facebook.html.

[40] Gilbert, David. "Hate Speech on Facebook Is Pushing Ethiopia Dangerously Close to a Genocide." VICE, September 14, 2020. https://www.vice.com/en/article/xg897a/hate-speech-on-facebook-is-pushing-ethiopia-dangerously-close-to-a-genocide.

United States with the previously mentioned Jan. 6th insurrection. Facebook seems to be blissfully unaware of the extremist groups percolating in chat rooms and groups on their platform until it's too late.

The Russian misinformation campaign launched during the 2016 American Presidential race brought even more attention to Facebook and its' lack of effective countermeasures to these kinds of Psyop (psychological operation) attacks. In 2014 an analytics company named Cambridge Analytica hacked the Facebook data of 10 million users.[41] They then sold that information to Donald Trump's presidential campaign. The information provided to Trump's campaign was used to spread massive amounts of misinformation and propaganda directly to users most responsive to it. Facebook uncovered over 470 accounts connected to the dissemination of advertisements about political issues including immigration, racial injustice, and inequality designed to enflame tensions between the two political parties. Together, these accounts created over 2,200 ads.[41] Russian spies have been arrested on American soil and misinformation campaign revelations are coming out daily. The point of these social media-launched attacks is to undermine American democracy and sow doubt on all sides of the political spectrum. So far little has been done to quell these campaigns with repeated efforts from Russia ongoing.

Another powerful tool that Facebook created, the 'share' button, allowed this misinformation to spread like wildfire. The 'share' button allows users to repost articles, videos, and other posts while also adding their own caption. This allows users to rapidly spread information without the need for factuality or truth. That isn't to say that the free flow of ideas and information is wholly negative, but it can be dangerous when information is accepted as fact without research. To many, a platform like Facebook offers some credibility to whatever information they view on it. Even if a post is sent from an anonymous

[41] Confessore, N. (2018, April 4). *Cambridge Analytica and Facebook: The Scandal and the Fallout So Far*. The New York Times. https://www.nytimes.com/2018/04/04/us/politics/cambridge-analytica-scandal-fallout.html.

user it may still be seen as credible due to what medium it's being presented on (Facebook, the internet). This leads into a whole discussion about media literacy, ownership rights, and censorship, but the overall point is that Facebook has some responsibility towards protecting its' users and we as society as a whole. So much propaganda is spread throughout Facebook thanks to the power of notification triggers ('shares'-'likes'- 'tags') that they have some culpability and the responsibility to counter some of these psychological lures. Until extremely recently (2018), Facebook has done very little to attempt any form of curation on their site in regard to extremist groups.[42] A PBS poll found that 18% of Americans believe big tech companies are responsible for moderating this content and preventing the spread of misinformation.[43] To Facebook's credit, they have begun to hamper some radical movements propagating on the site. Most notably they've begun to censor the number of recommended groups it advertises to users about conspiracy theories like flat earth theory, QAnon, anti-vaccination, and links to American militia groups.[44] This has been an attempt to slow the growth of these harmful, and sometimes violent, ideologies. Many of these groups have become digital nomads and hop from platform to platform once they get shut down. Radical groups and ideas are out there and becoming more proficient in dodging de-platforming and oversight.

[42] Staff, CEP. "Updated: Tracking Facebook's Policy Changes." Counter Extremism Project, October 22, 2021. https://www.counterextremism.com/blog/updated-tracking-facebook%E2%80%99s-policy-changes.

[43] Santhanam, Laura. "American Voters Worry They Can't Spot Misleading Information, Poll Finds." PBS. Public Broadcasting Service, January 21, 2020. https://www.pbs.org/newshour/politics/social-media-disinformation-leads-election-security-concerns-poll-finds.

[44] Ingber, Sasha. "Facebook Bans White Nationalism and Separatism Content from Its Platforms." NPR. NPR, March 27, 2019. https://www.npr.org/2019/03/27/707258353/facebook-bans-white-nationalism-and-separatism-content-from-its-platforms.

The way Facebook has been intentionally designed has caused changes in the way we view ourselves and others. Through the use of features such as the 'like' and 'share' button Facebook has designed an extremely addictive product with the capability to reach billions.

So, what can we as UI/UX designers do to fix the problem? The main thing many designers are doing in the industry is educating their coworkers about human and user rights. That may seem like a deep topic or something not suited for the workplace but simply reminding team leads to respect the consumer can go a long way. We have the ability to create built in consumer protections like transparent data collection (showing users exactly how their data is being used) and make empathetic design decisions throughout a project. Dismantling the capitalistic economic model that rewards predatory business practices may still be a way off but until then we must educate one another. Ethical design choices also don't have to fly in the face of progress or profits, in fact, they can do the opposite. As we mentioned earlier, Patagonia has been extremely successful while putting ethical business decisions first and foremost in everything they do quoting "quality, innovation, and restrained growth as their guiding principles".[45]

Facebook has shown us the power of the internet and the consequences that a lack of ethics can cause. The classic Spiderman cliché that great power comes great responsibility cannot be stressed enough in this case. Overall, we haven't spent a lot of time on the positives of such a powerful communication tool throughout this research, but they deserve to be mentioned. Social justice causes have been gained representation and support, corruption has been exposed through community efforts, family members have been reunited with their loved ones, and people have been exposed to diverse cultures and ways of life that they may have never known before. The freedom of speech and expression is a right

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[45] Chouinard, Yvon (2013) "A Responsible Economy," The International Journal of Ethical Leadership: Vol. 2 , Article 6. https://scholarlycommons.law.case.edu/ijel/vol2/iss1/6

every human deserves. That being said, we as humans have never before been faced with a technology

like the internet. Computers grow in processing power every day and we are already greatly surpassed in

terms of quantitative power in comparison. What we as humans are ahead in is qualitative ability, and

creativity. We use that upper hand against ourselves, however. Designers and programmers have used our

social consciousness and emotional responses against us to generate profit. However, designers and

programmers are the ones on the front lines creating these digital experiences and are therefore positioned

to have the most power to change the way we interact digitally.

All of us must realize the harmful consequences of highly fluid information and forums with

nonexistent moderation. The danger inherent in insulated online communities is unfolding daily. We can't

shift the tide of hate and social unrest alone; we need the help of as many people as we can to spread the

message of ethical design. The power of social media is growing every day and we must meet it with

empathy, respect, and compassion for each other if we ever want to reduce the harm it is inflicting. The

truth is social media is a human creation built to exploit other humans. We can fix it the same way we

created it, by making intentional, ethical design decisions from the ground up.

Unfortunately, Facebook isn't the only tech company capitalizing on predatory design decisions

to build their user base. Twitter, Instagram, and Reddit use similar addictive models to increase user

engagement. These platforms aren't getting quite the same grilling as Facebook because of some of their

recent increases in moderation and suspensions. Twitter in specific has done a better job flagging

misinformation and banning outright hate groups. Twitter even went so far as to suspend former President

Trump.[46] There statement defending their decision sheds some light on why these social media platforms

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[46] "Permanent Suspension of @RealDonaldTrump." Twitter. Twitter, January 8, 2021.
    https://blog.twitter.com/en_us/topics/company/2020/suspension.

can be so harmful. They stated their main reason for the suspension was, "due to the risk of further incitement of violence." Twitter feared an increase in violence because of, "how [these messages] are being received and interpreted on and off Twitter."[46] The keyword there is interpreted. Radical groups on and off the internet were interpreting Trump's tweets as violent calls to arms and finally acted on these beliefs on Jan. 6th. It can be argued many other violent acts prior to the insurrection were also carried out because of similar provocateurs broadcasting false or vague instructions to their followers.

One of the more recent and horrific attacks provoked and applauded by far-right online communities was the Christchurch Mosque attacks. The shooter livestreamed much of the attack on 8chan, coincidentally home to the far-right conspiracy group QAnon and published a 74-page manifesto titled "The Great Replacement."[47] The gunman was radicalized on anonymous message boards and murdered innocent people at two separate mosques. His rant was a bizarre mix of memes, videogame references, and ramblings on the "Great Replacement." This xenophobic theory essentially boils down to the fear that minorities will someday overtake the majority rule of whites and then… something vaguely bad will happen. White supremacist icon, Renaud Camus, was the original author of "Great Replacement" theory but in truth he follows a long line of xenophobic racists throughout history. Regardless of the origin of this hateful belief many online have taken these ideas and taken it upon themselves to stop this imagined danger, as the Christchurch attacks demonstrate.

Online platforms have given conspiracy theories such as this new life. Algorithms make these wild theories easier to find, and dedicated groups reinforce and radicalize each other even further.

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[47] Coaston, Jane. "The New Zealand Shooter's Manifesto Shows How White Nationalist Rhetoric Spreads." Vox. Vox, March 15, 2019. https://www.vox.com/identities/2019/3/15/18267163/new-zealand-shooting-christchurch-white-nationalism-racism-language.

Stochastic terrorists have learned how easy it is to have their orders carried out by manipulating these platforms. Stochastic terrorism is a form of violence where the one broadcasting the violent message doesn't have to be the one acting out the violence itself. By constantly bombarding listeners with propaganda and fear they ensure their own ideas will be carried out by an unknown devout follower. The Christchurch attacks are a perfect example of this. Far-Right leaders in New Zealand such as Philip Arps, Daniel Waring, and many more have founded and supported openly neo-Nazi groups, that broadcast the fear of immigrants and the existential threat of their perceived white birthright, whatever that may be.[48] Before 2017, the far-Right neo-Nazi website *Stormfront* was the main disseminator of these ideas and many of these groups were contributors to the site. Since 2017, the site has been shut down, and these same individuals have proliferated their violent ideas throughout the internet in more inconspicuous ways. Far-right groups spawned from sites such as *Stormfront* revel in the violence that they cause with their ideas. Philip Arps was recently arrested for sharing video of the Christchurch attacks and clearly rejoicing in the aftermath of the massacre. It cannot be emphasized enough that this content is being distributed through anonymous message boards, radicalized online communities, and then, eventually, on your average person's Facebook feed in the form of memes and jokes.

This is a very real threat and has become even more prominent in recent years. Former President Trump has been responsible for disseminating far-right conspiracy theories on his own personal twitter account. He retweeted fourteen tweets from prominent Qanon twitter accounts and has done little to distance himself from extremist groups in his band of supporters. These retweets contained accusations of pedophilia by his political rivals, fomenting fear about the "Great Replacement", voter fraud accusations,

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[48] Spoonley, Paul. "Far-Right Extremists Still Threaten New Zealand, a Year on from the Christchurch Attacks." The Conversation, October 13, 2021. https://theconversation.com/far-right-extremists-still-threaten-new-zealand-a-year-on-from-the-christchurch-attacks-133050.

and much more.[49] The reach of these far-Right, fascist ideas, is being amplified by powerful people. No one is untouched by these conspiracy theories when powerful politicians and CEO's are raising the frequency and legitimacy of these violent ideas willingly or unwillingly. Until we find a solution to the way these sites are regulated, violent far-right attacks will continue. Far-right extremist groups have been growing in number and ferocity for decades. According to the Anti-Defamation League, in the past ten years 75% of every killing by a terrorist organization in the United States was done by a far-right extremist group.[50] Since 1994, 57% of all terrorist attacks have been committed by far-right groups, compared to 25% from far-left groups, and 15% by religious extremists.[50] Experts at CSIS (Center for Strategic and International Studies) have concluded these groups will continue to grow due to election fraud claims, COVID vaccine skepticism, and other conspiracy theories.[51]

The Washington Post investigated 377 people involved in the Jan. 6th insurrection and drew some interesting conclusions. 52% of the participants came from Biden-won counties and live-in close proximity to their ideological rivals. Also, of note is that counties with the fastest decline in white population had the most Capitol rioters.[52] There is clearly a link between those that consciously or unknowingly believe in the "Great Replacement" theory, and far-Right violence. However, the most

[49] Kaplan, Alex. "Thread: Trump so Far This Afternoon Has Amplified at Least 14 Times Accounts That Have Pushed Qanon and Amplified Qanon Content." Twitter. Twitter, July 4, 2020. https://twitter.com/AlKapDC/status/1279483145142898688.

[50] Pitcavage, Mark. "ADL Finds Domestic Extremist Murders in 2020 Overwhelmingly Linked to Far-Right Extremists." Anti-Defamation League, 2021. https://www.adl.org/news/press-releases/adl-finds-domestic-extremist-murders-in-2020-overwhelmingly-linked-to-far-right.

[51] Jones, Seth, Catrina Doxsee, and Nicholas Harrington. "The Escalating Terrorism Problem in the United States." The Escalating Terrorism Problem in the United States | Center for Strategic and International Studies, October 20, 2021. https://www.csis.org/analysis/escalating-terrorism-problem-united-states.

[52] Pape, Robert A. "Opinion | What an Analysis of 377 Americans Arrested or Charged in the Capitol Insurrection Tells Us." The Washington Post. WP Company, April 7, 2021. https://www.washingtonpost.com/opinions/2021/04/06/capitol-insurrection-arrests-cpost-analysis/.

important piece they uncovered was that of those who believed in the "Great Replacement" most admitted to high levels of social media exposure. There is a path from social media usage to conspiracy theories, to radicalization, and eventually real-world violence. It appears the cornerstone of this path is social media.

Living in split ideological communities can have radically different results as well. Being exposed to different ideas and people can sometimes broaden one's perception, or at least create an empathetic reaction, something antithetical to many far-Right ideas. Reporter Ruth Terry has studied the connection between travel and empathy.[53] She's discovered that travel may not make people more truly open-minded but not traveling can be much more damaging. He concludes travel and mixing of cultures does actually increase empathy simply by forcing interactions with strangers. However, the insurrectionists from these mixed counties are not mixing with their more politically diverse neighbors in the same way. Traveling to political rallies and protests introduces an individual to like-minded people and can reinforce already held beliefs, like a real-world example of Facebook's group feature.

It is human nature to dig in when confronted by conflicting information, especially if the belief has been held for a long time. The sunk-cost fallacy is also part of this phenomenon. The more invested an individual is in an idea the harder it is to let go of it. Even when presented with obvious facts to counter a belief it is very unlikely to sway a person. Social media sites exacerbate this issue even more. When confronted with challenging ideas it is easier than ever to retreat back to a message board or Facebook group and receive infinite amounts of support for your originally held belief. Also, it's important to note that these rioters from declining white population areas are likely witnessing a great deal of confirmation bias. When social media is showering users with the "Great Replacement" theory,

[53] Stone, George. "Does Travel Really Open Your Mind?" Newsletters. National Geographic, May 3, 2021. https://www.nationalgeographic.com/newsletters/travel/article/does-travel-open-your-mind-july-14.

and fear over the loss of white culture, it is easy to see why someone from these areas may actually believe there is an existential threat. Of course, this idea is easily disproven by the fact that there is no white genocide occurring nor any indication by demographers that the white population will ever cease to exist.

The opening line of the El Paso shooters manifesto is, "This attack is a response to the Hispanic invasion of Texas."[54] He went on to kill twenty-two people in a Walmart. It cannot be stressed enough how real these ideas are and how committed to them many people are. As mentioned earlier, the frequency of these attacks is increasing and show no signs of stopping. Systemic change needs to happen, and designers are on the front lines of this crisis. Ethical design choices are key to preventing the rapid dissemination of these ideas and it's up to the designer to build programs that don't parasitically leech onto humans' darkest tendencies, such as the desire to fit in, be a part of the 'in' group, and pit users against each other. It's tempting to create platforms such as Facebook, 4chan, and 8chan and allow unmoderated communication between users. It's clearly a very lucrative route. For example, according to the Federal Reserve millennials hold 4.8% of the wealth in America, if you subtract just Mark Zuckerburg's wealth that number goes down to 2%.[55] The creators of these sites have achieved wealth to a degree we haven't seen before in human history. It goes without saying companies have profited greatly off of these predatory design practices, but it's not sustainable.[55] These companies put our society at risk of destabilization due to their intentional or unintentional fostering of radical ideas.

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[54] Arango, Tim, Nicholas Bogel-burroughs, and Katie Benner. "Minutes before El Paso Killing, Hate-Filled Manifesto Appears Online." The New York Times. The New York Times, August 4, 2019. https://www.nytimes.com/2019/08/03/us/patrick-crusius-el-paso-shooter-manifesto.html.

[55] "Board of Governors of the Federal Reserve System." The Fed - Table: Distribution of Household Wealth in the U.S. since 1989, October 2021. https://www.federalreserve.gov/releases/z1/dataviz/dfa/distribute/table/#quarter:119;series:Net%20worth;demographic:generation;population:all;units:levels.

Facebook has been a main focus of this research so far, but it is not the main source of misinformation. Facebook is the most mainstream example of a misinformation aggregator, but most of the memes and propaganda spread there originate on unmoderated message boards such as 4chan and 8chan. 8chan in specific has garnered a lot of notoriety recently in connection with the Christchurch mosque attacks as well as being the home of the QAnon movement after it was kicked from 4chan.[56] QAnon supporters were some of the most eager participants in the Jan. 6th riot and the movement itself is a clear case study on how misinformation and malicious design can be used to spur real-world tragedies. The history of the QAnon movement is deep and complex, but it bears diving into as yet another example of how misinformation can spread rapidly and ruthlessly through the internet and eventually effect the real world.

QAnon: A Designed Cult

Before QAnon unleashed their torrent of misinformation and conspiracy theories there was Pizzagate and Gamergate. #Gamergate first began in 2014 and was essentially a massive troll attack on female videogame journalists and developers. The beginnings of the alt-right have been traced back to this movement as well.[57] It started when a female game developer was brought up by a vindictive ex-boyfriend on an unmoderated 4chan blog post. This small, private matter between two adults quickly spiraled into a crusade against all "outsiders" of the conventionally male-dominated world of videogames.[57] Death threats and continued harassment focused towards any professional woman within the videogame industry became extremely common on social media. The hashtag #Gamergate and

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[56] Keen, Florence. "After 8chan." Crest Research, December 4, 2020. https://crestresearch.ac.uk/comment/after-8chan/.

[57] Bezio KM. Ctrl-Alt-Del: GamerGate as a precursor to the rise of the alt-right. Leadership. 2018;14(5):556-566. doi:10.1177/1742715018793744

#GamersRiseUp became a rallying cry for intensely conservative, white male gamers to vent their frustrations towards an industry they felt was beginning to overlook them. Young male gamers felt disenfranchised and enraged. They believed game developers were instilling feminist agendas into their games and attempting to subvert the traditional masculine heroes and hyper-sexualized female characters in games. The movement didn't have a singular leader but those involved were highly organized in doxing and attacking anyone who weighed in on the sexist or misogynistic messages in games. They also became adept at deflecting any responsibility for ongoing threats and harassment campaigns, and mainly denied they were happening or downplayed the extent to which they were involved.

If a leader could be identified, it would have to go to alt-right icon Milo Yiannopoulos who wrote for the publication *Breitbart* and frequently lambasted videogame journalism for their fetish with feminism and multiculturalism.[58]. Milo's boss, Steve Bannon, eventually became Donald Trump's former campaign chief executive, who originally founded and was a key executive for *Breitbart*.[59] Spectacularly, the ideas behind Gamergate and those that manipulated the outrage, helped organize and eventually install people into positions of power that continue to parrot some of the same talking points Gamergate started. Disdain for feminism, multiculturalism, minorities, the LGBTQ+ community, and the media are still huge platforms within mainstream conservatism today.

Not much was actually accomplished despite all the vitriol of Gamergate. Some videogame review sites restated their ethics policies, and disclosed any conflict of interests when reviewing games,

[58] Hornshaw, Phil. "Milo Yiannopoulos' Rise and Fall, from Gamergate to Pedophilia Comments." TheWrap, February 21, 2017. https://www.thewrap.com/milo-yiannopoulos-timeline-rise-fall-gamergate-pedophilia-breitbart/.

[59] Noah Friedman, Josh Barro. "Here's How Steve Bannon Used Angry White Gamers to Build Himself up to Trump's Chief Strategist." Business Insider. Business Insider, July 21, 2017. https://www.businessinsider.com/steve-bannon-white-gamers-seinfeld-joshua-green-donald-trump-devils-bargain-sarah-palin-world-warcraft-gamergate-2017-7.

yet the groundwork and community was tapped for a new far-right movement to establish a foothold

within conservative politics much like other populist movements such as the Tea Party.

Eventually Gamergate died down (however there are still remnants hanging on and those who

still believe in the overall message of the movement) and Pizzagate filled the void and satiated a similar

demographics appetite for outrage and conspiracy theory. Unsurprisingly by this point, Pizzagate was a

conspiracy theory that proliferated throughout and began on 4chan.[60] After the Hillary Clinton Campaign

Chairman, John DePodesta, had his emails leaked during the 2016 Presidential election they were quickly

posted and dissected by anonymous users. According to 4chan researchers Marc Tuters, Emilija

Jokubauskaitė, and Daniel Back from the University of Amsterdam, "When #Pizzagate started trending

on Twitter on 4 November 2017, it became clear that much of the narrative, and in particular the 'pizza

connection', was based on arcane (if not simply ridiculous) interpretations of a cache of e-mails belonging

to Hillary Clinton's campaign manager John Podesta released by Wikileaks during the final weeks of the

campaign."[60] Users poured over the leaks and came to the conclusion that coded messages were being

sent among Democratic officials and Washington D.C. restaurants. Some very wild claims were made and

agreed upon within these digital echo chambers. For example, they deduced the term "cheese pizza" was

a reference to c. p. or child pornography, "hotdog" meant little boy, "cheese" for little girl and so on.

References in the emails to Washington D.C. pizzeria, Comet Ping Pong, became a focal point of this

frantic deciphering. The owner was connected to many Democratic politicians and hosted Democratic

fundraisers. Adherents to this theory began to visit Comet Ping Pong looking for secretive pedophile

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[60] Tuters, Marc, Emilija Jokubauskaitė, and Daniel Bach. "Post-Truth Protest: How 4chan Cooked up the Pizzagate
Bullshit." *M/C Journal* 21, no. 3 (2018). https://doi.org/10.5204/mcj.1422.

rooms and ritual halls. The situation came to a head when an armed follower of the PizzaGate movement fired three shots at Comet Ping Pong and searched, to no avail, for secret torture rooms.
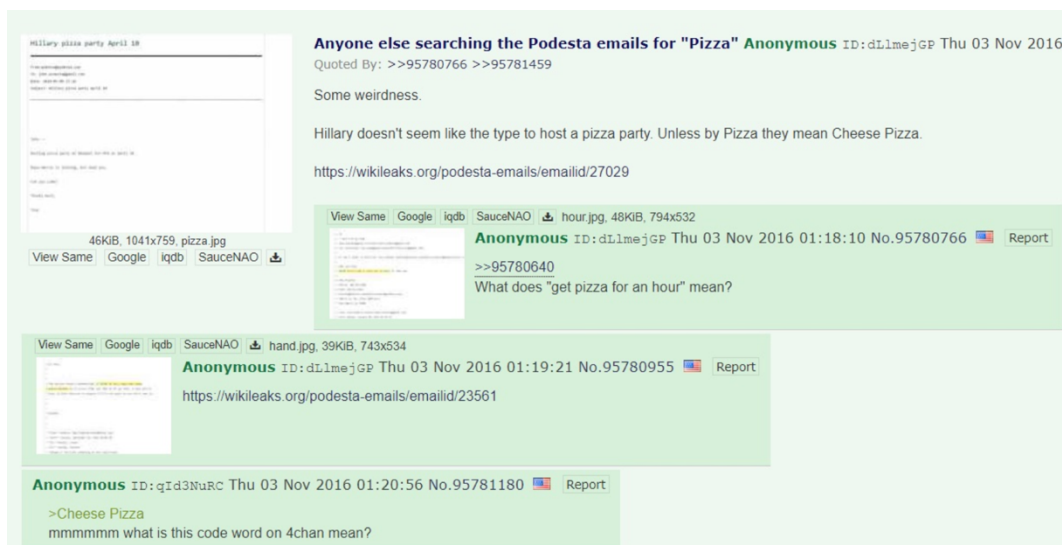

Figure 2 Screenshot of 4chan users discussing "pizza" in Hillary Clinton's leaked emails

What's so shocking about this story is how quickly it escalated from 4chan to Facebook to mainstream media. It's also not anything new. This exact conspiracy has been used many times. Blood libels and ritualistic satanic cabals have been used to scapegoat numerous groups in the past, especially against Jews. History repeats itself and a centuries old conspiracy can regain traction from a simple email when twisted by social medias lens and a group intent on demonizing a specific group. The connection between antisemitic Nazi propaganda shouldn't be overlooked either. The infamously plagiarized and entirely false book, *The Protocols of the Elders of Zion* laid the groundwork for these antisemitic conspiracies of Jewish world domination and child cannibalism. PizzaGate was just another in a long line of rehashed, repackaged antisemitic falsities. Thankfully no one was hurt in the attack on Comet Ping Pong, but the violence and misplaced anger surrounding these lies set a dangerous blueprint for what was to come and continued to escalate the pace set by Gamergate.

Within this toxic and agitated digital space the mysterious Q first appeared. 4chan had proven to be a hot bed for new and dangerous far right movements and Q leveraged the susceptible userbase,

specifically the /pol/ board within 4chan, to make their entrance. To clarify further, /pol/ is short for politically incorrect and is the home to many fringe far-right theories and a common starting point for users to create content to "move up the chain". Users on 4chan are anonymous and refer to each other as "anons" hence the title Qanon. Q appeared as a high-level government official with a "Q" level clearance, and quickly gained a following by alleging the government and many elite members of society were part of a satanic pedophilic cannibal ring (eerily similar accusations to Pizzagate). Q's posts were consistently enigmatic and relied on the Socratic method to push followers to come to their own vague conclusions on what Q was trying to divulge. ARG (augmented reality game) designer Reed Berkowitz compared the tactics Q used to what he does when designing ARG's.[61] Berkowitz states, "QAnon grows on the wild misinterpretation of random data, presented in a suggestive fashion in a milieu designed to help the users come to the intended misunderstanding".[61] Like a game, QAnon "dropped" vague clues and prodded followers to find the meaning within, the more outrageous, the more it was accepted by the community. Berkowitz continues stating, "When players arrive at the 'correct' answers they are showered with adoration, respect, and social credit. Like a teenage RP (role-player), the 'correct' answer is the one that the group respects the most and makes the story the most enjoyable. The idea that bolsters the theory."[61] Using these ARG-inspired tactics, QAnon directed their followers towards more and more hysterical conclusions. Memes, propaganda, fuzzy photos, and schizophrenic conclusions pushed this movement into the mainstream. Donald Trump himself referred to the movement and said, "I don't know much about the movement other than I understand they like me very much, which I appreciate" and later stated, "I've heard these are people that love our country, and they just don't like seeing it (referring to the Black Lives

[61] Berkowitz, Reed. "A Game Designer's Analysis of Qanon." The Street. Phil Davis, January 21, 2021. https://www.thestreet.com/phildavis/news/a-game-designers-analysis-of-qanon.

Matter protests in Portland.)"[62] Attention toward QAnon reached a fever pitch around the 2020 presidential election. When Trump lost the election, QAnon riled up their followers for "the storm". This "storm" culminated in the attack on the U.S. Capitol. Average Americans were radicalized by an anonymous stranger on a website notorious for hosting child pornography and snuff films (4chan and 8chan) to attack their own Capitol. There is so much more to this story, but the overall point is that these websites, specifically unmoderated or lightly moderated sites, can be immensely dangerous. The "storm" has yet to happen for Q's supporters and their radical ideas still circulate across the internet. The threat of this group acting out of desperation or impatience is a very real possibility.

Recent events have proven a completely open and unmoderated free-speech platform can foment bloody events and radicalize even the most level-headed. Staying vigilant against online communities radicalizing and understanding the visual rhetoric they use is key to preventing future tragedies. The following research will dive into some of the visual patterns, styles, and messages far-right propaganda uses and what we can do as designers to recognize dangerous images and learn tactics to subvert extremists' intentions. The goal of cataloging these images is to find consistent design choices and how the repetition of these designs aid radicalization. The challenge will be finding recent examples and finding images that haven't been outright banned from social media platforms like Twitter. New social media sites, such as Gettr and Telegram, have gained popularity by filling the void that these banning's have left. Gettr, Facebook, Telelgram, and archived Reddit pages will be the main source of these images as well as 4chan and 8chan due to their part in laying the groundwork for many of these ideas.

[62] Vazquez, Maegan. "Trump Again Refuses to Denounce QAnon." CNN. Cable News Network, October 16, 2020. https://www.cnn.com/2020/10/15/politics/donald-trump-qanon-town-hall/index.html.

Image Analysis

The main sources of radicalization on social media platforms comes from three general areas: written posts, memes, and shared news articles. Many posts are a combination of written posts and memes, or written posts and articles, however I have chosen to focus on the visual rhetoric of the memes shared, and the photos used in news article headlines (ie. the use of color, photo manipulation, font choice, etc). Before getting into more of the image analysis it should be noted that written posts are an important part of this expression of ideas. Many times, an image is posted with an assessment of the image by the poster. This can be used to frame an image and express outrage or support on a topic and should not be overlooked in further research on social media radicalization. How the meaning of images changes when offered a lens through which to view them is an important tool of persuasion, but one that I hope to cover more in future research.

A large amount of research has been done on the history of internet memes and the societal impact they have had. Memes, that once started out as small inside jokes, have exploded onto the pop culture scene and are now being used frequently in corporate advertising, on social media, and all forms of digital media. Simple drawings, repeated imagery, and a quickly understood hieroglyphic-like language allow memes to be easily recognizable and understood. The flexibility of memes is also crucial to their proliferation. A single meme format, such as the Admiral Ackbar "IT'S A TRAP!" meme, can be used to cover topics as small as describing a prank to critiquing international foreign policy.

The versatility and readability of memes are just some of the ways they have flourished and proliferated across the internet and culture. Pop culture researcher B.T. Williams explains, "the relationship between producer, text, and audience is a complex mixture of acceptance and resistance" and memes embody this subversive and participatory communication method completely.[63] Memes exist

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[63] Williams, Bronwyn T. and Amy A. Zenger, Editors. New Media Literacies and Participatory Popular Culture Across Borders. New York: Routledge, 2012. Print.

outside of the mainstream, and thus attract dissenting ideas, and give a template to express counterculture ideas. It's no surprise then that radical movements can thrive behind the communicative mask of memes. Much more can be said about the history and growth of memes, but the main point is that they are a real cultural pillar, and a powerful means of communication that can be used to broadcast many different ideas.

News articles and their thumbnails are an often-overlooked tool of persuasion and influence on social media. According to a 2016 study on what gets read on twitter, 50% of Americans claim to get their news from social media.[64] Of that 50%, only 45% spent more than 15 seconds reading an article. What that means is most people are reading headlines and skimming thumbnails.[65] Article headlines are being crafted to maximize clicks and sensationalize their contents for the most views because of this trend.

The simple, user-friendly design of most social media sites make written posts, articles, and images (memes) the most common form of communication on their respective platforms. Most of what is shared has nothing to do with extremist groups, but their presence is growing. I've collected over 100 memes from radical groups on Facebook, Twitter, and Reddit, as well as archived images from banned websites. The following will be a sample of images from that collection that best represent the radicalization pipeline. To assess these memes, I ordered them from 'not radical' to blatant 'calls for violence'. What I found was a clear march towards radicalization and many of the least radical memes

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[64] Maksym Gabielkov, Arthi Ramachandran, Augustin Chaintreau, Arnaud Legout. Social Clicks: What and Who Gets Read on Twitter?. ACM SIGMETRICS / IFIP Performance 2016, Jun 2016, Antibes Juan-les-Pins, France. ffhal-01281190f

[65] Haile, Tony. "Chartbeat CEO Tony Haile: What You Get Wrong about the Internet." Time. Time, March 9, 2014. https://time.com/12933/what-you-think-you-know-about-the-web-is-wrong/.

were shared right next to extremely radical posts, sometimes by the same user. There is no straight line to radicalization but by ordering them this way it was also easier to assess their design merit and identify repeated design choices in each group. Much of the categorization can be labeled subjective, but I did my best to take each meme literally and tried to base my critique of them on what they explicitly state, and not what they could imply. Many of the memes are aggressively anti-LGBTQ+, anti-liberal, and anti-vaccination and could imply violence towards specific groups, however I did not label them radical unless there was an explicit call for action. Some of the following images may be offensive or disturbing to some readers. I've done my best to censor some of the more disturbing images of child abuse, racism, violence, and death.

1a.

Figure 3 Joe Biden Meme

This is a simple, non-radical meme found on a far-right social media site. Much of what is shared is similar to this meme: political, implying conspiracy, and easily interpreted. As you will see, simple photoshop edits like this are very common. Anyone with access to a computer and basic photo-editing skills can create a meme like this. This meme in specific is low on the radicalization scale because it can be seen bluntly as a political meme with no real threat, hate towards a specific group, or calls for violence. The implication has some obvious red flags however and starts the viewer on the path to further

radicalization by introducing conspiracy theory acceptance as a starting point. There are some subtle uses of visual rhetoric at play here too. The comic sans-like font used on the sign Joe Biden is holding suggests he is childish, unintelligent, or not fit to lead. Also, the fact that Biden is the one holding the sign suggests he knows he isn't the duly elected president. It may be surprising that the least radical meme being shown is calling the sitting President illegitimate, but as you will see this is a very common right leaning meme and shouldn't be considered radical at this point.
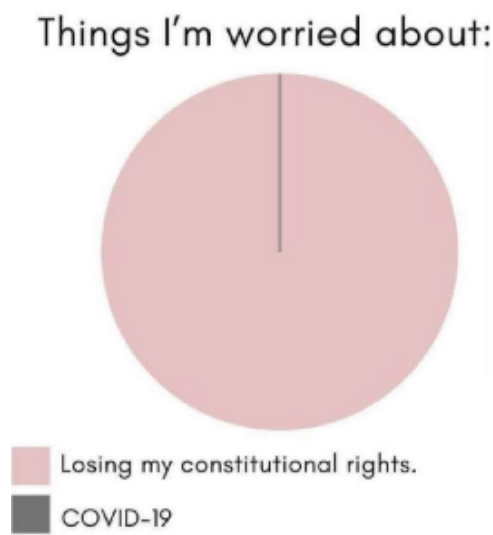
1b.

Figure 4 COVID-19 Pie Chart

I chose this meme to, again, highlight the simplicity memes use to convey complex ideas. This pie chart quickly expresses to the viewer that COVID isn't a big deal, and that you should fear losing your rights over the pandemic. It does all of this with nine words, a circle and two squares. Memes are a powerful tool of communication and, many times, the simpler the better. The COVID-19 pandemic is also a common topic discussed in these memes and seems to be a sort of gateway topic towards radicalization, and anti-government sentiment. Misinformation experts warn that, "online extremists are rebranding their conspiracy theories around current events to draw in new followers" and, "Users share misinformation about [COVID] prevention and treatment, making it difficult for individuals to tell science from

fiction."[66] Quick, easy to decipher memes such as this are some of the ways misinformation spreads

quickly throughout social media. The sheer volume of these kinds of posts make it difficult to mark or

flag them as misinformation, and the basic design of them make them accessible for anyone to create.

2.
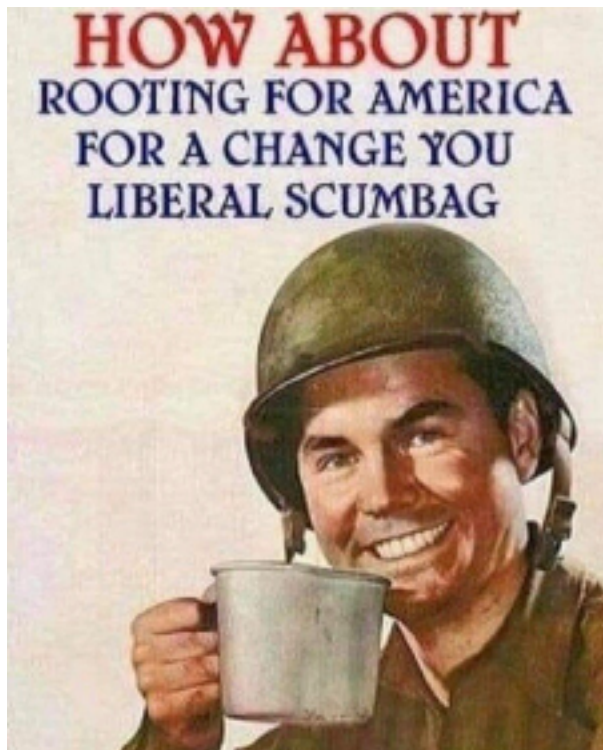
Figure 5 Modified WWII Propaganda Poster

 This meme was chosen not so much for its textual message but for the image selection. World War II era

propaganda posters are a popular aesthetic used in memes across the political spectrum. It is a powerful

message due to the historical significance of the era, but it takes on even more meaning when expressed

through a conservative/ right-leaning lens. The popular Trump slogan "Make America Great Again"

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[66] Velasquez, Nicolas, Rhys Leahy, Nicholas Johnson Restrepo, Yonatan Lupu, Richard Sear, Nicholas Gabriel, Om Jha, Beth Goldberg, and Neil Johnson. "Online Hate Network Spreads Malicious COVID-19 Content Outside the Control of Individual Social Media Platforms." *Scientific Reports*, 2020. https://doi.org/10.21203/rs.3.rs-110371/v1.

harkens back to an abstract time imagined in posters like these. However abstract, the mythical past when things were perfect has been a part of conservative beliefs for a long time and it's interesting seeing memes try and encapsulate this ideal. Framing this happy soldier as a strong conservative man calling out liberals reinforces an "us vs. them" mentality. It also frames conservatives as masculine defenders and liberals as anti-American. The reason I am highlighting this meme in particular is because these types of memes are usually much darker. As you will see as we progress through these memes, many memes of this style are overtly calling for violence and revolution.
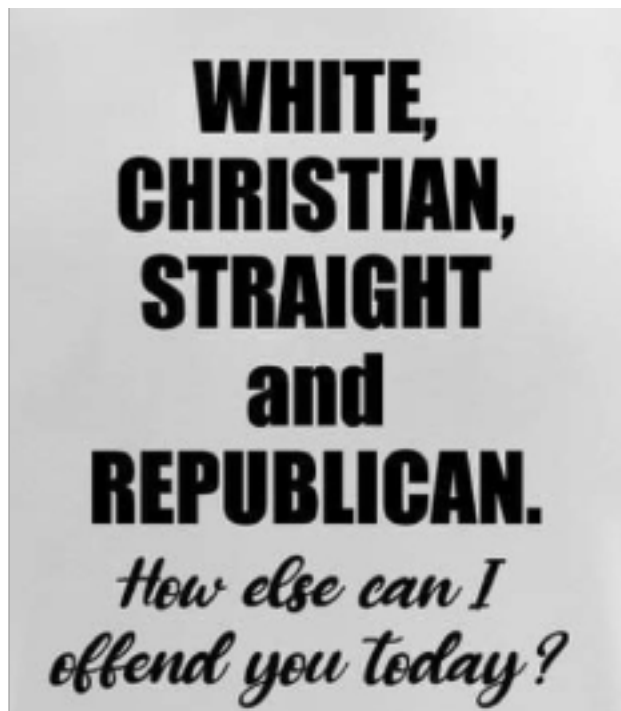
3a.

Figure 6 Typographic Meme

This meme was chosen for its use of a straw man argument. According to Merriam-Webster a straw man is, "a weak or imaginary opposition (such as an argument or adversary) set up only to be easily

confuted."[67] The creator of this meme is assuming someone would be offended by these characteristics when in reality that person doesn't exist. It's easy to portray a person who would be offended by this as crazy or irrational, and an adversary who only reacts emotionally. The bold, centered, sans-serif font used to list the characteristics of this person draw your attention and radiate confidence and assertiveness. This person is proud of these qualities and is boldly proclaiming them. The airy, hand drawn font used for the question expresses smugness and juxtaposes the attributes of the characteristic's font. This meme is clean, simple, and creates an enemy that doesn't exist. The other side "being offended" is a key part of many of the memes I've collected, and further entrenches people in their beliefs by creating an adversarial relationship with their political rivals.

3b.

Figure 7 Terminator Meme

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[67] "Straw Man." Merriam-Webster. Merriam-Webster, 2021. https://www.merriam-webster.com/dictionary/straw%20man.

This meme is a continuation on the previous meme. This is a popular meme format image and this one specifically reinforces a straw man argument that perpetuates "Great Replacement" theory at the same time. The message is pretty straight-forward, society wants to "terminate" straight white males, however I've highlighted this meme in specific because it captures just how quickly these memes can be made and spread. This meme features uniform sans serif font, spelling mistakes, and a popular pop-culture image format. All of this combined creates a quickly digested meme that is easily interpreted and spread. Spelling mistakes are not uncommon, whether they're intended or not, and can be used intentionally to create a more laidback feel to the meme. As stated earlier, memes are mostly without pretentiousness. Anyone can create and spread memes and this gives them a grassroots/ counter-culture aura. Memes are used by all sides of the political spectrum because of this relatability and ease of legibility, however as we'll see, the further right we go the more uniform and easily distinguishable the memes become.

4a.

Figure 8 Mask Slavery Comparison Meme

As we get further into more and more radical memes this type of meme style becomes more common. A theme that will begin to arise is the use of white text on a black background. Many of these memes

completely forego images at this point or use them very minimally. The stark contrast between the white text and black background creates a more serious tone and subconsciously cues the viewer that this is a serious topic. The actual subject matter of the text can be changed drastically but the overall presence and serious tone of the meme remains the same with this style. The content itself is extreme and is an evolution of many of the covid denialism memes we've seen previously.

4b.

Figure 9 Lion Meme

This is another example of the white-on-black text-based meme. I placed it higher up on the radicalization scale because it solidifies an "us vs. them" theme and dehumanizes political rivals. It's still not all the way up on the scale because it's not calling for direct violence but we are getting closer. I also wanted to highlight this meme due to its vagueness and adaptability. This meme can represent anything from mask resistance to election fraud to any number of other conspiracies. The vagueness of this meme can shield it from being flagged as misinformation and can matriculate back and forth between social media sites. A major problem with combating online misinformation and hate speech is the way memes and posts circulate across social media platforms. It's very difficult to completely eradicate a meme when it can jump from one site to the next if it gets banned. This diagram created by the same misinformation experts

(Nicholas Velasquez and Robert L. Leahy) shows how posts and memes can spread back and forth between platforms.[68]
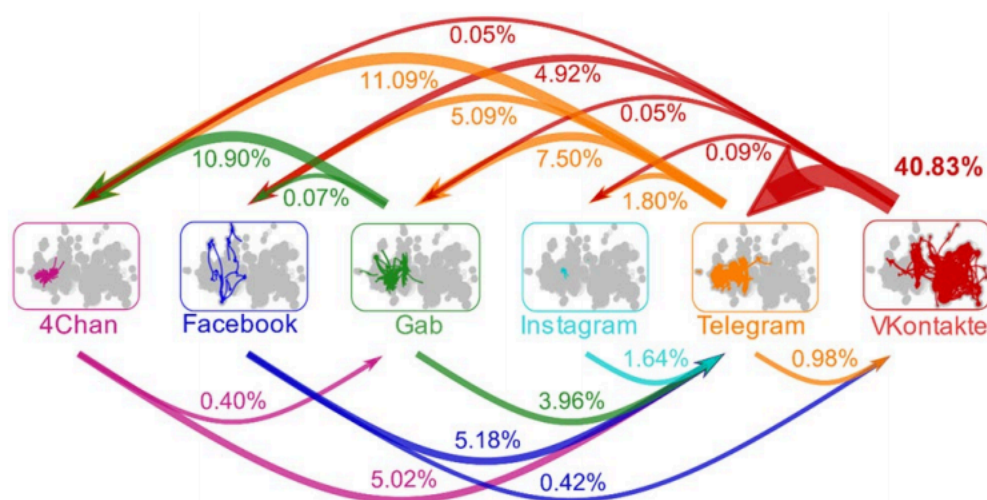

Figure 10 Spread of Memes Between Platforms

The percentages show how much (covid misinformation) content is shared between each of these platforms and how they circulate back to other platforms. As you can see it is very difficult to stop blatantly false misinformation from spreading, vague posts like this meme are even harder to stop.

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[68] Velasquez, Nicolas, Rhys Leahy, Nicholas Johnson Restrepo, Yonatan Lupu, Richard Sear, Nicholas Gabriel, Om Jha, Beth Goldberg, and Neil Johnson. "Online Hate Network Spreads Malicious COVID-19 Content Outside the Control of Individual Social Media Platforms." *Scientific Reports*, 2020. https://doi.org/10.21203/rs.3.rs-110371/v1.

5.

Figure 12 Family Attack Meme

Figure 11 Original Soviet Poster "Be On Guard"

Further up on the radicalization scale we find memes like this. There is a lot to unpack with this meme but the actual content of it is very simple. It is a variation on a famous Soviet propaganda poster "Be on Guard" but eschews any text for more apparent symbolism. Through the lens of the modern far-right movement this meme represents some of their deepest fears. A fearsome black hand, also representing the LGBTQ+ community with its rainbow sleeve, threatens a red (possibly representing conservative) nuclear family. The only one protecting this family is the strong white hand of America. This meme clearly has some racist and homophobic overtones, but the lack of words gives it some measure of plausible deniability about its racist roots and uses this to continue to circulate. Again however, this is a very simple meme that can be made by anyone with some basic editing knowledge. The power of these memes are their volume and ease of proliferation. The irony of using a Soviet-era meme for far-right beliefs could be intentional as well. Irony, humor, and trolling are a big part of many far-right communities online and twisting a meme from a politically opposite group could have been the point behind this meme format. Without speculation, this meme clearly represents our departure into more radical waters.

6.

Figure 13 Lady Gaga Conspiracy Meme

As we go further along we find memes such as this. Elaborate, Qanon inspired conspiracy theories are a veritable goldmine for these types of memes. This meme in specific harkens back to the Jewish blood libel conspiracy we discussed earlier. In order to be able to include this meme I had to crop a large portion of this image to exclude traumatic depictions of child abuse and death. The original, uncropped meme is 80% image with just this small bit of text to give more context to the images. Shock value is being used to illicit a primal response from the viewer. It's impossible to see this graphic meme and not have an emotional response to it. However, because of its graphic nature memes like this can really only be spread on minimally moderated social media sites such as 4chan. This does not stop people from sharing this peer to peer over email or text message, and as we've seen, the results of Pizzagate can attest to how powerful conspiracy theories, even obscure ones such as this can become.

7.

Figure 14 George Orwell Meme

This meme is high on the radicalization scale because it implies violence with the armed hooded person

and includes the logo of the far-right group, The Proud Boys. The Proud Boys were involved in the

"Unite the Right" Rally in Charleston, N.C. that left one dead and dozens injured.[69] They were also

involved in violent attacks in Washington and Oregon in 2018 and were part of the Jan. 6th insurrection

which earned them the designation of terrorist group by the Canadian government.[70] This is a well-known

white-nationalist group in America and their memes are circulating on message boards throughout the

conservative social media digishpere. The iconography is foreboding but the text used is also a clue to its

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[69] Katz, Andrew. "Charlottesville: 'Unite the Right' Rally, State of Emergency." Time. Time, 2017.
https://time.com/charlottesville-white-nationalist-rally-clashes/.

[70] "Proud Boys." Southern Poverty Law Center, 2021. https://www.splcenter.org/fighting-hate/extremist-
files/group/proud-boys.

violent intent. "The truth is treason in an empire of lies" shows they believe they are being persecuted for speaking their version of truth. According to The Proud Boys, the truth is the "Great Replacement" theory and other misogynistic, Islamophobic, homophobic, and racist ideas.[71] This may seem obvious, but this meme is very dark in hue and continues the trend of dark, ominous memes becoming more common as we creep towards more overt calls for violence and hate.

8.

Figure 15 Typographic Meme II

The Jan. 6th insurrection at the Capitol is a common theme amongst far-right memes. They are split into camps between those calling it a hoax or false flag, and those saying it really wasn't that big of a deal and those who are facing charges for trespassing in the Capitol are being held as political prisoners. This meme falls into the latter group. I chose to rank it so high up the radicalization scale because making light

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[71] SPL. "Proud Boys." Southern Poverty Law Center, 2021. https://www.splcenter.org/fighting-hate/extremist-files/group/proud-boys.

of the events on Jan. 6th are a common tactic of extremist groups that were present and those that wish to downplay the violence that took place that day. As you can see this is another example of white text on a solid black background. As you can also see as we move further up into more radicalization many of these memes lose their original meme qualities of pop culture references and light-heartedness and begin to look more like propaganda posters. We saw this in some earlier memes such as examples # 2 and #5 as well, however they seem to get even more concise and forego images entirely in many cases.

9.

Figure 16 "We Will Not Be Erased" Meme

The final meme I chose to highlight is radical for its implications and a culmination of many of the themes we've discussed in previous memes. The typography is the classic white text on a black background we've come to see indicates seriousness. The images all depict white men doing heroic things from the past and proclaiming that these deeds and achievements should not be erased. This is a common "Great Replacement" trope and warns the viewer that the white race is being erased. It's interesting that all the images chosen are of classical paintings and fits the conservative mold by simultaneously declaring the white race is being erased and harking back to a time when things were "better". This meme touches on a lot of what we found with far-right memes typographically as well as visually. There are a lot more

radical memes calling for violence, telling viewers a revolution is coming, and projecting overt hatred towards many groups, however I chose this as the culmination of radicalization because of its implications and adherence to a completely flawed theory of white genocide.

What We Can Do

This may sound like a simple conclusion, but after reviewing over a hundred of these memes it seems the main changes that occur as we get more radicalized are darker images, calls for violence, and a regression back to classical paintings and propaganda. I created a survey to see if respondents could identify the political leanings of a meme without being able to decipher the words. The results confirmed that far-right memes are much more easily recognizable then far-left and more moderate memes. Even without words the images themselves can be read as radical. The visual rhetoric of memes can be decoded and understood like hieroglyphs even without the help of words. Overall, I believe this fits the conservative political movement in the US and its fascination with the past and a fear of persecution. As we saw with those that attended the Jan. 6th insurrection, many people falling prey to this rhetoric are from areas with declining white majorities and these memes reinforce those feelings of loss and change. The far-right movement has created their own visual language and even those outside of the movement can easily identify their memes and posts.

The far-right movement has taken root in many corners of the internet and many of the tech giants are still grappling with the best way to safeguard their platforms. Unfortunately, the damage may have already been done. Radical groups have become so prolific online that layman can identify their visual style even without words. Yet in the future programmers and designers need to think about how extremist groups could potentially infiltrate their projects and create safeguards to prevent radicalization from occurring.

So much has already been written about the psychology of extremism, the impacts of social media, and the science of visual rhetoric, but I argue that ultimately, we as designers need to be more educated about the consequences of the user experiences and interfaces we design. It's our duty to be more cognizant of the way people use the online platforms we create. The fact is a violent far-right movement has been flourishing online and isn't likely to go away unless we act to change the way we design and moderate online platforms. My research has led me to the conclusion that we as the creators of these platforms need to be the first line of defense against any groups that wish to use our creations for harm. I applaud the work that has been done on many online platforms to curtail this influx of hateful posts but there is still much work to be done. A total solution to this problem is not going to be easy or simple, but the first step is educating those that are creating these platforms. There are a lot of serious issues in our world that need to be addressed, but until we can halt the advance of violent ideology in our society it will be difficult to tackle these problems as a unified nation and world.

In the future I wish to continue this research and start diving into more of the specifics on how we as designers can instigate change online. I've seen enough to reconfirm the seriousness of the threat of online extremism. I hope the work I've done can be seen as a rallying cry to my peers and a call to create online spaces more ethically. We have a lot more work to do.

Appendix A.

Each meme discussed in the previous research (pgs. 34-46) was taken from Reddit, Twitter, 4chan,

Telegram and Gettr between March 1- October 1, 2021. Most of the images were taken directly from hate

groups or sites sympathetic to the far-right. I don't think it's appropriate to link sources to these sites and

give hate groups increased traffic. New memes, such as those shown and critiqued, are being created daily

and if you wish to discover your own then those sites are the main aggregators.

Appendix B.

The survey cited on page 47 is linked here: https://forms.gle/G6v2dAVnCAiYvz3C8. Images were

distorted and students were tasked with guessing where the memes fell on the political spectrum.

Appendix C.

I've collected all of the memes I gathered into this Google Drive image:

https://drive.google.com/file/d/17t_0bCP1_xUxe5wXyhm24wc6TuaZUTrz/view?usp=sharing

There are many more memes gathered here then I was able to dissect in my research. I organized my

memes this way and it allowed me to quickly identify the visual rhetoric and styles as they became more

radical.