MARKETPLACE THEORY
IN THE AGE OF AI COMMUNICATORS

Jared Schroeder[*]

INTRODUCTION

The growing presence of artificially intelligent communicators as actors among self-governing citizens, particularly since the 2016 presidential election in the United States, has raised substantial concerns regarding the theoretical assumptions that have traditionally undergirded the marketplace of ideas conceptualization of the First Amendment. These concerns do not so much arise from the longstanding fear of *deus ex machina*—that we would create a "god from the machine"—but rather *de mundi machina*, which means to create "a world from the machine."[1] In other words, artificially intelligent ("AI") entities bring with them the potential to substantially influence the world that humans *create* via the information and ideas each person encounters.

For this reason, AI communicators create concern because they increasingly influence the types and frequencies of ideas that individuals do and do not encounter within their virtual communities. These personal, self-selected online communities are characterized by individual decisions that citizens make regarding the types of information they wish to encounter.[2] When AI actors become both the originators and carriers of massive amounts of information with individuals' generally homogenous personal networks, the foundational theoretical framework of the marketplace of ideas theory—the Supreme Court's most popular and longest-enduring tool for communicating how it understands freedom of expression—is threatened. The theory's assumptions about the nature of truth, the nature of the human actors who take part in communicating

[*] Jared Schroeder is an Assistant Professor of Journalism at Southern Methodist University.

[1] Aside from being a popular literary tool that writers use to resolve difficult situations in their stories, *deus ex machina* can also be related more literally to the fear that humans will become subjects of the tools they create. German thinker Hannah Arendt discussed this concern in ARENDT, THE HUMAN CONDITION 145–47 (1998). This fear is also depicted in numerous films. *See, e.g.*, 2001: A SPACE ODYSSEY (Metro-Goldwyn-Mayer Studios Inc. 1968); THE TERMINATOR (Orion Pictures Corp. 1984); EX MACHINA (A24 2015).

[2] W. LANCE BENNETT & ALEXANDRA SEGERBERG, THE LOGIC OF CONNECTIVE ACTION: DIGITAL MEDIA AND THE PERSONALIZATION OF CONTENTIOUS POLITICS 24 (2013); CASS R. SUNSTEIN, #REPUBLIC: DIVIDED DEMOCRACY IN THE AGE OF SOCIAL MEDIA 76–79 (2017).

ideas, and the flow of information has been undermined; massive numbers of AI communicators are incompatible with the First Amendment's marketplace of ideas.[3]

AI communicators are incompatible with self-governing citizens in the marketplace of ideas because they do not sleep, have families, vote, or become emotional. They also do not have any concern for their mortality or for a system of ethics.[4] These communicators are, by their natures, an entirely new type of actor within the spaces philosophers and legal scholars have long conceptualized as a marketplace of ideas.[5] Within these spaces, generally rational individuals who are for the most part free from government limitations on expression are capable of discerning truthful or correct ideas from false or wrong ones. Such an assumption was at the heart of English author and philosopher John Milton's contention in *Areopagitica* that, "[w]here there is much desire to learn, there of necessity will be much arguing, much writing, many opinions; for opinion in good men is but knowledge in the making." [6] Quite similarly, Justice Oliver Wendell Holmes, in introducing the marketplace metaphor into the United States' legal vocabulary in 1919, concluded that "the best test of truth is the power of the thought to get itself accepted in the competition of the market . . . . That at any rate is the theory of our Constitution." [7] As legal scholar Edwin Baker explained, the theory assumes "people are basically rational. People must possess the capacity correctly to perceive truth or reality." [8] Crucially, the theory, and the assumptions that undergird it, was constructed based on assumptions about human processes regarding understanding and self-government that function substantially differently when AI communicators are taking part in the discourse.

Concerns about the marketplace theory itself are not new.[9] The presence of AI entities, which represent only the vanguard of what scholars expect is to come regarding AI

---

[3] *See* C. EDWIN BAKER, HUMAN LIBERTY AND FREEDOM OF SPEECH 3–7 (1989); FREDERICK SCHAUER, FREE SPEECH: A PHILOSOPHICAL ENQUIRY 15–17 (1982); Robert Post, *Reconciling Theory and Doctrine in First Amendment Jurisprudence*, 88 CAL. L. REV. 2353, 2363–66 (2000).

[4] GABRIEL HALLEVY, LIABILITY FOR CRIMES INVOLVING ARTIFICIAL INTELLIGENCE SYSTEMS 21 (2014).

[5] SCHAUER, *supra* note 3, at 16; W. Wat Hopkins, *The Supreme Court Defines the Marketplace of Ideas*, 73 JOURNALISM & MASS COMM. Q. 40, 41 (1996).

[6] JOHN MILTON, AREOPAGITICA AND OF EDUCATION 45 (George Sabine ed., Harland Davidson 1951).

[7] Abrams v. United States, 250 U.S. 616, 630 (1919) (Holmes, J., dissenting).

[8] BAKER, *supra* note 3, at 6.

[9] *Id.* at 3–5; JEROME BARRON, FREEDOM OF THE PRESS FOR WHOM?: THE RIGHT OF ACCESS TO MASS MEDIA xiii–xiv (1973); SCHAUER, *supra* note 3, at 16; Stanley Ingber, *The Marketplace of Ideas: A Legitimizing Myth*, 1984 DUKE L.J. 1, 15–18 (1984).

functionality in the near future, merely exacerbates longstanding concerns regarding the assumptions of the theory.[10] Scholars have long contended the theory's conceptualization of the nature of truth, which assumes it is objective and generally universal to all, cannot be supported, and has long been disregarded.[11] Others have emphasized that assuming individuals are rational and capable of making sense of the world around them fails to account for the vast array of human experiences that lead people to construct substantially different realities.[12] People's differing socioeconomic statuses, individual experiences, and societal roles can influence how individuals evaluate information.[13] Thus, though individuals may generally be rational, that rationality will not always lead to the same conclusions about what is true or right. Similarly, scholars have noted the substantial differences in the availability of information for different groups and the fact that some messengers have the power to communicate ideas that others do not, meaning that those who have the most resources—rather than those who communicate the "truth"—often dominate the marketplace.[14]

Exacerbating these concerns, the emergence and widespread adoption of networked technologies during the past few decades have provided AI communicators with an ideal environment in which to develop and interact with people in ways that were not possible in the past. The existence of such spaces has substantially shifted the nature of the marketplace itself. As much of political discourse has moved from physical forums to virtual ones, the way truth forms and the ways people create communities have changed along with them.[15] Freed from the limitations of geographic boundaries when forming communities, individuals are increasingly joining interest-based collectives, which often, within the broader, fragmented, and

---

[10] *See, e.g.*, *Solve Intelligence. Use It To Make the World a Better Place*, DEEPMIND, https://deepmind.com/about/; *Microsoft AI: Explore the Possibilities*, MICROSOFT, https://www.microsoft.com/en-us/ai/; Leah Burrows, *$28M Challenge To Figure Out Why Brains Are So Good at Learning*, HARV. GAZETTE (Jan. 21, 2016), https://news.harvard.edu/gazette/story/2016/01/28m-challenge-figure-out-why-brains-are-so-good-at-learning/.

[11] BAKER, *supra* note 3, at 6; Ingber, *supra* note 9, at 15.

[12] SCHAUER, *supra* note 3, at 20–21; Ingber, *supra* note 9, at 15; Lyrissa Barnett Lidsky, *Nobody's Fools: The Rational Audience as First Amendment Ideal*, 2010 U. ILL. L. REV. 799, 826–27 (2010).

[13] ROBERT L. SCHAICH, WILLIAM JAMES' PRAGMATISM 35–36 (1978); Ingber, *supra* note 9, at 15.

[14] *See* Jerome A. Barron, *Access to the Press: A New First Amendment Right*, 80 HARV. L. REV. 1641, 1641 (1967); L.A. Powe, Jr., *Mass Speech and the Newer First Amendment*, 1982 SUP. CT. REV. 243, 245 (1982).

[15] BENNETT & SEGERBERG, *supra* note 2, at 24; SUNSTEIN, *supra* note 2, at 108; Manuel Castells, *The New Public Sphere: Global Civil Society, Communication, Networks, and Global Governance*, 616 ANNALS AM. ACAD. POL. & SOC. SCI. 78, 84–86 (2008).

choice-rich overall marketplace, act as smaller, somewhat ideologically isolated community spaces.[16] These communities have become, in many instances, walled gardens, which are smaller and less diverse, but more comfortable spaces, in which individuals are the primary architects. These environments are substantially different than traditional, physical, and societally constructed environments in which individuals have less control over how they present themselves and are faced with greater likelihood of social isolation if they act outside of expected or perceived community norms and values.[17]

In other words, the choice-rich nature of online spaces has made it so that the broader marketplace has been replaced by fragmented, idea-based spaces where individuals often agree upon different *truths* than those in other communities. Across the Internet, for example, certain virtual communities have concluded that former United States President Barack Obama was born in Kenya and could not have legally been president.[18] People in other communities have come to quite the opposite *truth*, finding the birther movement to be a disproven conspiracy theory.[19] In this example, two versions of accepted realities persist, despite being in direct opposition to one another.[20] This scenario is more possible and likely than it has been in the past because of the fragmented, interest-based virtual communities in which individuals communicate. Individuals, particularly in such a choice-rich environment, are more likely to accept

---

[16] MANUEL CASTELLS, THE RISE OF THE NETWORK SOCIETY 3–4 (2000) [hereinafter CASTELLS, RISE OF THE NETWORK SOCIETY]; SUNSTEIN, *supra* note 2, at 59–67; W. Lance Bennett & Shanto Iyengar, *A New Era of Minimal Effects? The Changing Foundations of Political Communication*, 58 J. COMM. 707, 720 (2008).

[17] Zizi Papacharissi, *A Networked Self: Identity Performance and Sociability on Social Network Sites*, *in* FRONTIERS IN NEW MEDIA RESEARCH 207, 209 (Francis L.F. Lee et al eds., 2013). *See also* Caroline Haythornthwaite, *Strong, Weak, and Latent Ties and the Impact of New Media*, 18 INFO. SOC'Y 385, 386 (2002).

[18] Birther Report (@BirtherReport), TWITTER, https://twitter.com/BirtherReport; Dean Garrison, *2004 Flashback—Kenyan Newspaper Reported Barack Obama Born in Kenya*, FREEDOM OUTPOST (May 17, 2014), https://freedomoutpost.com/2004-flashback-kenyan-newspaper-reported-barack-obama-born-kenya/; Paul J. Watson, *Evidence Obama Born in Kenya Goes Beyond 1991 Brochure*, INFOWARS (May 18, 2012), https://www.infowars.com/evidence-obama-born-in-kenya-goes-beyond-1991-brochure/.

[19] *Barack Obama's Birth Certificate Is a Forgery: False*, SNOPES (Aug. 27, 2011), https://www.snopes.com/fact-check/birth-certificate/; J. Weston Phippen, *The Last of the Birthers*, ATLANTIC (Dec. 15, 2016), https://www.theatlantic.com/news/archive/2016/12/sheriff-joe-arpaio-the-birther/510857/; Eleanor Sheehan, *Aging Bigot Still Clinging To Birther Beliefs*, SPLINTER (Nov. 28, 2017, 11:38 PM), https://splinternews.com/aging-bigot-still-clinging-to-birther-beliefs-1820823358.

[20] *See* SUNSTEIN, *supra* note 2, at 98–101.

information that reinforces their preexisting understandings and reject information that does not.[21]

Thus, the marketplace metaphor, the dominant theoretical justification for freedom of expression protections in a democratic society, faces new problems regarding longstanding unresolved questions about its primary conceptual building blocks as we enter the fourth wave of the Internet. This fourth wave, Web 4.0, which has also been labeled the Symbiotic Web, is characterized by increasingly meaningful interactions and relationships between human and AI communicators.[22]

This Article consists of five parts: Part I begins by examining the nature of these non-human communicators, as well as the networked environments in which they are flourishing. Part II examines how human discourse, in the form of intentional communities and other concerns, is changing as a result of networked communication. Part III examines the fundamental assumptions, as well as the primary concerns, that have historically surrounded the marketplace approach. Finally, in the absence of any specifically AI-related legal precedents in this regard, Part IV considers the conceptual rationales courts have used, particularly in regard to corporate speech and animal rights decisions, when deciding cases that involve non-human actors who seek human-like rights. Ultimately, in light of each of these considerations, Part V proposes a process-based approach for how the marketplace theory can remain functional in the era of AI communicators.

I. Artificial Entities as Actors in Political Discourse

Although the *Declaration of Independence* promises that "all men are created equal," the same cannot be said for AI communicators. [23] Thus, while these entities have played substantial roles in the most recent major elections in the United States, France, and the United Kingdom, and are playing an increasing role in societal discourse, they cannot be understood as a homogenous group. In particular, substantial differences exist regarding whether AI entities are creating entirely new content or merely sharing or otherwise distributing existing messages. Similarly, these entities vary in their complexity, with

---

[21] Bennett & Iyengar, *supra* note 16, at 724–26.

[22] Younghee Noh, *Imagining Library 4.0: Creating a Model for Future Libraries*, 41 J. Acad. Librarianship 786, 789–90 (2015) (stating that Web 1.0 was characterized by massive information searchability and availability; Web 2.0 added increased content creation opportunities for citizen publishers, particularly via social media outlets; Web 3.0, the current wave, built upon these advancements, allowing for simpler connections between data and knowledge).

[23] The Declaration of Independence para. 2 (U.S. 1776).

some including only rudimentary capabilities and others possessing human-like capabilities when it comes to communication.[24]

A. From Parking Tickets to Tinder Talk

AI entities are created for a variety of purposes. Joshua Browder created "the world's first robot lawyer," a computer program that can help people get out of parking permits and receive flight refunds.[25] Other programmers create AI actors to make money, such as those that sell followers for people's Twitter accounts or views on YouTube.[26] One of the largest contingencies of AI communicators in virtual spaces, however, are politics-related bots. These entities are created, at their most benign, to inform and persuade people about certain political beliefs and ideas.[27] At worst, however, they mislead and misinform.[28] As bots have become easier to make, more and more people are creating them and using them as tools to communicate or spread ideas.[29] Still, many of the political bots are attributed to domestic and foreign political actors who create and employ AI communicators to confuse or influence political

---

[24] The Ephemerides, for example, creates original poetry using words found in nineteenth-century books. The Ephemerides, TUMBLR, https://the-ephemerides.tumblr.com (last visited Nov. 13, 2018). Still more complex, picdescbot draws images from Wikimedia Commons and seeks to describe what it sees. Picdescbot, TUMBLR, https://picdescbot.tumblr.com (last visited Nov. 13, 2018). On the more basic end, Emoji Aquarium tweets collections of marine-life-related emojis every few hours. Emoji Aquarium (@EmojiAquarium), TWITTER, https://twitter.com/EmojiAquarium (last visited Nov. 13, 2018). It has almost 20,000 followers. *Id.*

[25] DoNotPay (@DoNotPayLaw), TWITTER, https://twitter.com/DoNotPayLaw (last visited Nov. 13, 2018); *see also* DoNotPay (2018), DoNotPay [Mobile application software], https://itunes.apple.com/app/id1427999657.

[26] Nicholas Confessore, Gabriel J.X. Dance, Richard Harris & Mark Hansen, *The Follower Factory*, N.Y. TIMES (Jan. 27, 2018), https://www.nytimes.com/interactive/2018/01/27/technology/social-media-bots.html; Michael H. Keller, *The Flourishing Business of Fake YouTube Views*, N.Y. TIMES (Aug. 11, 2018), https://www.nytimes.com/interactive/2018/08/11/technology/youtube-fake-view-sellers.html.

[27] *See* Jacob Shamsian, *There's a Bot on Tinder Trying To Influence Votes in the British Election*, BUSINESS INSIDER (June 8, 2017, 2:59 PM), http://www.businessinsider.com/united-kingdom-election-jeremy-corbyn-tinder-bot-labour-2017-6?r=UK&IR=T; *see also* Sara A. O'Brien, *Who's Donating to Trump? This Bot Will Tell You*, CNN (June 22, 2016, 10:07 AM), https://money.cnn.com/2016/06/22/technology/every-trump-donor-bot/index.html (during the 2016 presidential election, @EveryTrumpDonor, a Twitter bot, pulled public campaign contribution information and posted one campaign donor's name every thirty minutes).

[28] *See* Dave Lee, *The Tactics of a Russian Troll Farm*, BBC NEWS (Feb. 16, 2018), https://www.bbc.com/news/technology-43093390.

[29] Nick Bilton, *Social Media Bots Offer Phony Friends and Real Profit*, N.Y. TIMES (Nov. 19, 2014), https://www.nytimes.com/2014/11/20/fashion/social-media-bots-offer-phony-friends-and-real-profit.html.

discourse and remain relatively difficult to identify.[30] About one-quarter of all Tweets that were posted about the 2016 presidential election in the United States were generated by non-human account holders.[31] Similarly, just before the French presidential election in spring 2017, AI communicators posted thousands of Twitter messages, most of which were linked to false information.[32] A few months later, partisans in the United Kingdom employed tens of thousands of bots on Tinder, the dating and hook-up app, to encourage younger voters to support Jeremy Corbyn, the Labour Party candidate.[33] The Tinder bots automatically "swiped right," thus indicating an interest in a match, on countless human users' profiles.[34] If the user also swiped right, the bot engaged them in a political, rather than romantic, dialogue regarding the Labour Party's policies.[35] In one example, the bot messaged, "heyy [sic] lovely. You gonna [sic] vote in the election? & for who?" and followed this with "The vote is so close and under 25s [sic] could actually swing it!!"[36] Importantly, as with many interactions with AI communicators in networked spaces, the communicator impersonated a human and did not disclose its non-human nature.

AI communicators are doing more than working to influence elections. They are also producing substantial amounts of political rhetoric. During the debate in February 2018 that surrounded the Nunes memo, which accused the FBI of abusing its power while investigating Trump's connections to Russia

---

[30] *See* Ben Schreckinger, *Inside Trump's 'Cyborg' Twitter Army,* POLITICO (Sept. 30, 2016, 5:06 AM), https://www.politico.com/story/2016/09/donald-trump-twitter-army-228923; *see also* Max de Haldevang, *Russian Trolls and Bots Are Flooding Twitter With Ford-Kavanaugh Disinformation*, QUARTZ (Oct. 2, 2018), https://qz.com/1409102/russian-trolls-and-bots-are-flooding-twitter-with-ford-kavanaugh-disinformation/.

[31] Bence Kollanyi, Philip N. Howard & Samuel C. Woolley, *Bots and Automation Over Twitter During the U.S. Election*, COMPUTATIONAL PROPAGANDA PROJECT (Nov. 17, 2016), http://comprop.oii.ox.ac.uk/wp-content/uploads/sites/89/2016/11/Data-Memo-US-Election.pdf.

[32] Khatya Chhor, *As French Media Went Dark, Bots and Far-Right Activists Drove #MacronLeaks*, FRANCE 24 (May 9, 2017), http://www.france24.com/en/20170508-french-media-blackout-bots-far-right-activists-wikileaks-pushed-macronleaks.

[33] Robert Gorwa & Douglas Guilbeault, *Tinder Nightmares: The Promise and Peril of Political Bots*, WIRED (July 7, 2017), http://www.wired.co.uk/article/tinder-political-bots-jeremy-corbyn-labour.

[34] *Id.*

[35] *Id.*

[36] Shamsian, *supra* note 27 (quoting Jon Brady (@jonbradyphoto), TWITTER (June 8, 2017, 3:58 AM), https://twitter.com/jonbradyphoto/status/872739582915342336?ref_src=twsrc%5E tfw%7Ctwcamp%5Etweetembed%7Ctwterm%5E872739582915342336&ref_url=htt ps%3A%2F%2Fwww.thisisinsider.com%2Funited-kingdom-election-jeremy-corbyn-tinder-bot-labour-2017-6).

during the 2016 United States election, thousands of bot-based accounts retweeted messages using the hashtag #releasethememo.[37] Many of the posts tagged specific members of Congress, creating what could have easily appeared to be a real, grassroots effort by the public to call for the memo to be released.[38] In an eleven-day span, certain Republicans were tagged in #releasethememo posts more than a half a million times.[39] While the hashtag itself emerged organically, it was quickly picked up by bot programmers and used to create a unifying tool in certain partisans' efforts to essentially create a world using the machine, the very *et de mundi machina* discussed earlier.[40]

In response to these bots, humans would have a tough time contending with the deluge of regurgitation. When congressional staffers attended to lawmakers' social media accounts, they were flooded with tens of thousands of messages per day, most of them from non-human communicators, calling for the memo's release.[41] Conversely, it would be extremely difficult for human publishers to communicate differing ideas and to have them appear in any comparable quantity within such a forum. Thus, the bots essentially flooded the marketplace with their "product," pushing out human discourse and creating an alternate reality for those who viewed the messages in which their constituents wanted the memo released.

Bots were similarly weaponized after the March 2017 Westminster Bridge attack in London. As Great Britain reeled from the attack that killed five people and injured dozens more, bot-based accounts began to circulate a picture of a woman in a hijab who was walking by a crowd of people as they sought to help an injured person.[42] The message read, "Muslim woman pays no mind to the terror attack, casually walks by a dying man . . . #PrayForLondon #Westminster #BanIslam."[43] Of course, the words took the image out of context, a fact that news organizations later established by speaking with the woman.[44]

---

[37] Molly K. McKew, *How Twitter Bots and Trump Fans Made #ReleasetheMemo Go Viral*, POLITICO MAGAZINE (Feb. 4, 2018), https://www.politico.com/magazine/story/2018/02/04/trump-twitter-russians-release-the-memo-216935.

[38] *Id.*

[39] *Id.*

[40] *Id.*

[41] *Id.*

[42] Hayley Dixon, *Russian Bot Behind False Claim Muslim Woman Ignored Victims of Westminster Terror Attack*, TELEGRAPH (Nov. 13, 2017, 6:04 PM), http://www.telegraph.co.uk/news/2017/11/13/russian-bot-behind-false-claim-muslim-woman-ignored-victims/.

[43] *Id.*

[44] *Id.*

The initial tweet regarding the image, which came from an account called Texas Lone Star (@SouthLoneStar), was from a Russian bot.[45] The account had nearly 17,000 followers.[46] White nationalist Richard Spencer quickly retweeted and commented on the image, using it to fuel his followers' beliefs on social media.[47] His tweet was liked by nearly one-thousand others and, as information flows in networked spaces, was almost certainly shared across others' self-constructed, personal networks.[48] Thus, in these instances, AI communicators were manipulated by certain interests and used to flood the marketplace with ideas that appeared to be conveyed by humans. The ideas moved seamlessly into the information flows that take place within virtual spaces and were received by many people, including those in positions of power.

Broadly, these communicators, with their fundamentally non-human natures, are often indistinguishable from human speakers and capable of spreading misleading or false information. By doing so, AI communicators can overwhelm the marketplace with a single product or idea.

B. Content Sharers vs. Content Creators

The bots that were involved in the incidents discussed in the preceding passages, while important in considering the future of the marketplace, were relatively limited in their capabilities. They are best classified as content movers or communicators. These entities are more comparable to newspaper carriers than content creators or speakers, who share more in common with writers who craft messages.[49] Other types of bot-based accounts, however, are creating new content regarding matters of public concern and thus coming much closer to resembling the characteristics of human speakers. Every Trump-ette (@everytrumpette), for example, was a Twitter-based bot that was programmed to draw fifteen-second snippets from then-candidate Trump's speeches and combine them with a picture of the crowd from one of his rallies.[50] As the audio clip plays, the image focuses in on a single person in the crowd.[51] The profile's

---

[45] Gianluca Mezzofiore, *Troll Who Tweeted Fake Pic During Westminster Attack Is Russian*, MASHABLE (Nov. 14, 2017), https://mashable.com/2017/11/14/troll-fake-muslim-picture-westminster-attack-russian-bot/#ktkwDMYRSPq0.

[46] Dixon, *supra* note 42

[47] Richard Spencer (@RichardBSpencer), TWITTER (Mar. 22, 2017, 12:29 PM), https://twitter.com/richardbspencer/status/844632152692043776?lang=en.

[48] *Id.*

[49] *See* Tim Wu, *Machine Speech*, 161 U. PA. L. REV. 1495, 1506–12 (2013).

[50] Every Trumpette (@everytrumpette), TWITTER, https://twitter.com/everytrumpette, (last visited Nov. 13, 2018).

[51] *Id.*

description on Twitter reads: "looking into the eyes of every trump [sic] fan."[52] This AI content-creator is different in kind from AI content-movers.

Similarly, other AI content-creators are a degree more innovative. Erowid Sarah Palin (@SarowidPalinUSA) was programmed to take parts of the former Alaska governor's political speeches and combine them with entries from Erowid Experience Vaults, an online forum for people to describe what happened to them when they were high.[53] The combinations included "[o]ur government needs to begin to show the same kind of range and adaptability as the mind on hallucinogens" and "I wasn't nervous but as the colors began to waver I realized that everything was wrong. Crying. He isn't going to make America great again." [54] Comedian Stephen Colbert worked with programmers to create Real Human Praise (@RealHumanPraise), a bot that combines passages from movie reviews on Rotten Tomatoes with Fox News program names and personalities.[55] It tweets every two minutes with messages such as "Mike Huckabee skillfully guides the audience through Huckabee's fractured narrative, seeping his show in existential dread," and "[w]hen Sean Hannity's Hannity arrived in 1985, it set a benchmark in horror-comedy that few productions have matched since."[56]

In these instances, AI communicators were programmed to draw information from constantly changing pools of data to create content that reached thousands of followers. Thus, the original programmer did not determine the content of the messages, only the pools from which they were drawn and their maximum length. The growing presence of content-creating AI entities raises a variety of questions about the future of the marketplace theory. In the preceding section's examples, the primary concern was that the non-human communicators were effectively flooding the market with ideas, thus pushing out actual human discourse, and as a result, creating a world or conceptualization of the environment that would lead citizens to believe public opinion regarding a matter of concern is substantially different than it is in reality. The content-creating

---

[52] *Id.*

[53] *See* Erowid Sarah Palin (@SarowidPalinUSA), TWITTER, https://twitter.com/SarowidPalinUSA (last visited Nov. 13, 2018).

[54] *Id.* (Nov. 7, 2016, 7:57 PM), https://twitter.com/SarowidPalinUSA/status/795837654344617984.

[55] Dylan Stableford, *Colbert Launches Twitter Bot to Praise Fox News*, YAHOO NEWS (Nov. 5, 2013), https://www.yahoo.com/news/colbert-twitter-bot-fox-news-real-human-praise- 173740903.html.

[56] Real Human Praise (@RealHumanPraise), TWITTER, https://twitter.com/RealHumanPraise (last visited Nov. 13, 2018).

bots add another dimension to these concerns. The AI communicators are more autonomous in the messages they create and thus the nature of the ideas they contribute. When considered individually, such a concern might seem slight. When examined with the understanding that millions of these entities are performing such actions, however, it becomes clear the marketplace can easily be flooded by bot-based babble. These millions of messages by non-human entities substantially undermine the foundational assumptions of the marketplace metaphor: generally rational people will in most instances be capable of separating truth from falsity so long as the government has only limited influence in the marketplace.[57]

C. Weak AI vs. Strong AI

Despite these advancements in non-human communicators, fourth-wave iterations of these entities are generally classified as forms of "weak AI."[58] Scholars classify weak AI as entities that can only recreate certain aspects of human thought or activity online.[59] The #releasethememo and Westminster Bridge attack bots, for example, were capable of *sharing* information throughout networked environments. Erowid Sarah Palin and Real Human Praise added the capability of *creating* content and making it available to others.[60] Despite these emergent capabilities, these weak AI tools are limited in what they can accomplish, particularly regarding replicating human behavior. Strong AI, on the other end of the spectrum, represents entities that can exceed human capabilities and interact in social situations as a person would. [61] While corporations such as Microsoft and Google are working on entities that can teach themselves through interacting with their environments, strong AI technology, for now, generally remains more of an idea than a reality.[62]

---

[57] *See infra* Section III.

[58] STUART J. RUSSELL & PETER NORVIG, ARTIFICIAL INTELLIGENCE: A MODERN APPROACH 947 (2d ed. 2003).

[59] JOHN FRANK WEAVER, ROBOTS ARE PEOPLE TOO: HOW SIRI, GOOGLE CAR, AND ARTIFICIAL INTELLIGENCE WILL FORCE US TO CHANGE OUR LAWS 3 (2014).

[60] *See supra* Section I.A.

[61] *See, e.g.*, Anmar Frangoul, *Alphabet's DeepMind Uses A.I. To Detect Signs of Eye Disease*, CNBC (Aug. 14, 2018, 4:42 AM), https://www.cnbc.com/2018/08/14/deepmind-uses-ai-to-detect-signs-of-eye-disease.html; Douglas Heaven, *The World's Most Prolific Writer is a Chinese Algorithm*, BBC (Aug. 29, 2018), http://www.bbc.com/future/story/20180829-the-worlds-most-prolific-writer-is-a-chinese-algorithm.

[62] Heaven, *supra* note 61; s*ee also* DEEPMIND, *supra* note 10; picdescbot (@picdescbot), TWITTER, https://twitter.com/picdescbot?lang=en (run by Microsoft Cognitive Services, this AI draws images from Wikimedia commons and seeks to describe what is in the images. While it occasionally succeeds, it often fails terribly).

The limitations of weak AI entities do not make them easy to dismiss when considering the future of the marketplace of ideas. Although it is difficult to identify all account holders as human or non-human, such entities represent about 50 million, or 15 percent of all of Twitter's users. [63] The accounts are triggered to tweet at certain times, retweet certain messages, or to automatically respond to messages with certain key words or hashtags. [64] Similarly, about 25 million of the more than 700 million Instagram users are bots.[65] Bots on Instagram are often used to make certain accounts more prominent, to give them more legitimacy, or garner more interest online. [66] When Instagram users buy bots to increase their presence, they are essentially purchasing influence in the marketplace. The sharing-based bots can automatically like and spread everything a social media user posts, thus broadcasting posts throughout virtual spaces and increasing the apparent popularity of the messages and, as a result, the impact of the account holder in the network.[67] While such a process violates Instagram's terms of service agreement, these entities persist as difficult-to-pin-down operators in these spaces.[68] In short, the sheer volume of weak AI created material skews the market's supply of ideas toward non-human communicators.

Relatedly, algorithms, computer programs that can sift through and organize unprecedented amounts of data, are a form of weak AI but they cannot be dismissed as unimportant influencers in today's marketplace of ideas. [69] Algorithms are simply computer programs that provide step-by-step guidelines for resolving complex problems.[70] Search engines such as Google use algorithms to sort through countless potential results to present Internet users with the information they seek. [71] Of

---

[63] Michael Newberg, *As Many As 48 Million Twitter Accounts Aren't People, Says Study*, CNBC (Mar. 10, 2017, 1:09 PM), https://www.cnbc.com/2017/03/10/nearly-48-million-twitter-accounts-could-be-bots-says-study.html.

[64] *See, e.g.*, McKew, *supra* note 37; Mezzofiore, *supra* note 45.

[65] Alexandra Ma, *Millions of Instagram Users Are Just Spambots,* HUFFINGTON POST (July 2, 2015, 3:21 PM), http://www.huffingtonpost.com/2015/07/02/instagram-spambot_n_7708550.html.

[66] Sapna Maheshwari, *How Bots Are Inflating Instagram Egos*, N.Y. TIMES (June 6, 2017), https://www.nytimes.com/2017/06/06/business/media/instagram-bots.html.

[67] *Id.*

[68] *Id.*

[69] JOSÉ VAN DIJCK, THE CULTURE OF CONNECTIVITY: A CRITICAL HISTORY OF SOCIAL MEDIA 37 (2013).

[70] THOMAS H. CORMEN ET AL., INTRODUCTION TO ALGORITHMS 5 (3d ed. 2009); *Id.* at 30.

[71] *How Search Algorithms Work*, GOOGLE, https://www.google.com/search/howsearchworks/algorithms/ (last visited Oct. 15, 2018).

course, these algorithms do not simply gather all of the potential responses. They include considerations such as the searcher's location, the site's traffic numbers, and the user's past searches to organize the information.[72] Similarly, Facebook's news feed algorithm decides which items, out of countless possibilities, appear atop users' apps and browsers when they use the social media outlet.[73] One study, which was conducted by Facebook employees, explained that the social media giant's algorithm considers how often a viewer visits the site, which people and groups they interact with, and which links they click on.[74]

Social media algorithms have unprecedented control over how and what ideas are taken from the marketplace and presented to people. Facebook's algorithm, because of the way it interprets users' activities on the site, limits the range of political ideas people encounter.[75] Facebook's algorithmic choices have not gone unnoticed.[76] In 2016, Facebook was accused of deliberately suppressing conservative information in its trending topics section.[77] A year later, during the massive women's protest marches that coincided with President Trump's inauguration, Facebook was criticized for limiting attention to the protests in the same trending spaces.[78] In 2018, the corporation shifted the algorithm's preferences to place greater emphasis on posts from people with whom users are connected.[79] In each of these instances, these algorithms, computer programs that can sift through and organize unprecedented amounts of data, have

---

[72] *Id. See also* VAN DIJCK, *supra* note 69, at 37 (explaining how Google's "vertical integration of search engines, operating systems, browsers, user-based software systems, online advertising systems, content providers, and a host of other functions guarantees more control over the end-user experience and hence over user data").

[73] Will Oremus, *Who Controls Your Facebook Feed*, SLATE (Jan. 3, 2016, 8:02 PM), http://www.slate.com/articles/technology/cover_story/2016/01/how_facebook_s_news_feed_algorithm_works.html.

[74] Eytan Bakshy, Solomon Messing & Lada A. Adamic, *Exposure To Ideologically Diverse News and Opinion on Facebook*, 348 SCIENCE 1130, 1131 (2015).

[75] *Id.*

[76] *Id.* at 1130.

[77] Nellie Bowles & Sam Thielman, *Facebook Accused of Censoring Conservatives, Report Says*, GUARDIAN (May 9, 2016, 12:10 PM), https://www.theguardian.com/technology/2016/may/09/facebook-newsfeed-censor-conservative-news.

[78] Laura Sydell, *Facebook Tweaks Its 'Trending Topics' Algorithm To Better Reflect Real News*, NPR (Jan. 25, 2017, 5:36 PM), http://www.npr.org/sections/alltechconsidered/2017/01/25/511641939/facebook-tweaks-its-trending-topics-algorithm-to-better-reflect-real-news; Paul Bradley Carr, *Hundreds of Thousands of Women March in Protest Against Trump: Facebook News Tries to Silence Them All*, PANDO (Jan. 21, 2017), https://pando.com/2017/01/21/hundreds-thousands-women-march-protest-facebook-news-feed-tries-silence-them-all/.

[79] Jonah E. Bromwich & Matthew Haag, *Facebook is Changing. What Does That Mean for Your News Feed?*, N.Y. TIMES (Jan. 12, 2018), https://www.nytimes.com/2018/01/12/technology/facebook-news-feed-changes.html.

substantial power to determine which ideas become prominent and which ideas do not in the marketplace.[80]

These algorithms are different than bots in that they do not actively communicate messages. Instead, they are limited to acting as gatekeepers to the ideas individuals encounter. Since private corporations maintain and hold these tools, their actual instructions regarding how information is to be organized and communicated remain unavailable to the public. Private ownership of algorithms and the virtual spaces in which they function has led to congressional hearings and garnered substantial media attention regarding the power of corporations to act as relatively arbitrary store managers within the marketplace.[81] These corporations can decide which ideas will and will not be presented to individuals.[82] Scholars have already established that AI communicators can convey the biases of their creators or limit ideas in their efforts to learn from their interactions with individuals.[83] Thus, while algorithms might be considered one of the weakest forms of AI, they hold substantial power to determine the ideas that enter the marketplace.

II. INTENTIONAL COMMUNITIES AND AI ACTORS

Human ideas can spread if the right environment exists; non-human ideas are the same. Although the actions of algorithms and AI communicators, particularly within political discourse, are crucial to understanding the challenges the marketplace approach faces in the networked era, the environment in which these entities thrive must also be considered.

---

[80] *See* VAN DIJCK, *supra* note 69, at 37.

[81] John D. McKinnon, *Tech Firms Face Bias Accusations at Congressional Hearing*, WALL ST. J. (Sept. 27, 2018, 9:03 PM), https://www.wsj.com/articles/tech-firms-face-bias-accusations-at-congressional-hearing-1538086207; Dipayan Ghosh & Ben Scott, *Why Silicon Valley Can't Shake Accusations of Anticonservative Political Bias*, CNBC (Oct. 17, 2018), https://www.cnbc.com/2018/10/17/why-silicon-valley-cant-shake-accusations-of-anticonservative-bias.html.

[82] Farhad Manjoo, *What Jack Dorsey and Sheryl Sandberg Taught Congress and Vice Versa*, N.Y. TIMES (Sept. 6, 2018), https://www.nytimes.com/2018/09/06/technology/jack-dorsey-sheryl-sandberg-congress-hearings.html; Richard Waters, *Google Defends Search Algorithms Against Bias Claims*, FIN. TIMES (Sept. 24, 2018), https://www.ft.com/content/90c39058-c045-11e8-95b1-d36dfef1b89a; Jack Nicas, *Gatekeepers or Censors? How Tech Manages Online Speech*, N.Y. TIMES (Aug. 7, 2018), https://www.nytimes.com/2018/08/07/technology/tech-companies-online-speech.html. *See also infra* Section II.C.

[83] FRANK PASQUALE, THE BLACK BOX SOCIETY: THE SECRET ALGORITHMS THAT CONTROL MONEY & INFORMATION 40–42 (2015); Malte Ziewitz, *Governing Algorithms: Myth, Mess, and Methods*, 41 SCI., TECH., & HUMAN VALUES 3, 4–5 (2016).

For more than half a century, AI communicators were imprisoned in mainframes and on desktop computer hard drives. The widespread adoption and development of the Internet was their ticket to freedom.[84] It was the development of the World Wide Web, particularly since Web 2.0, which included the emergence of social media sites, that such entities have found an environment in which communication with people does not require human form.[85] Indeed, the lack of physical presence is one of the crucial aspects of the shift to discourse in networked spaces—for AI entities and human actors alike. As the famous *New Yorker* cartoon explained at the beginning of the networked communication revolution in 1993: "On the Internet, no one knows you're a dog."[86]

This shift has influenced both how individuals represent themselves and the types of information they encounter. Additionally, the lack of a physical presence online allows AI communicators to seamlessly interact with people and connects them to the much larger innovation, which is the ability of anyone with an Internet connection, anywhere in the world, to form a community with distant others. In other words, online communication made it so that time and space no longer limit the ideas and individuals that a person can encounter every day.[87] Such a shift has substantial consequences for discourse in democratic society, particularly regarding how individuals understand themselves, others, and the information they encounter. In shifting how individuals understand themselves and others, as well as empowering people to limit the ideas they encounter, the choice-rich online environment can substantially distort the flow of the marketplace of ideas. Much as Amazon creates personalized marketplaces when it tracks peoples' buying choices and searches and uses them to suggests future purchases, in the networked era, individuals essentially create their own marketplace of ideas. While convenient, both instances act to limit the spectrum of ideas individuals encounter.

A. Networked Identities

AI communicators fit more seamlessly into the marketplace of ideas and discourse in virtual spaces because

---

[84] *See* Emilio Ferrara et al., *The Rise of the Social Bots*, 59 COMM. ACM 96, 99 (2016).

[85] *See* Noh, *supra* note 22, at 790.

[86] Michael Cavna, *'Nobody Knows You're A Dog': As Iconic Internet Cartoon Turns 20, Creator Peter Steiner Knows the Joke Rings as True as Ever*, WASH. POST (July 31, 2013), https://www.washingtonpost.com/blogs/comic-riffs/post/nobody-knows-youre-a-dog-as-iconic-internet-cartoon-turns-20-creator-peter-steiner-knows-the-joke-rings-as-relevant-as-ever/2013/07/31/73372600-f98d-11e2-8e84-c56731a202fb_blog.html.

[87] MANUEL CASTELLS, COMMUNICATION POWER 33–36 (2009); CASTELLS, RISE OF THE NETWORK SOCIETY, *supra* note 16, at 500–03.

human beings have already come to understand and represent themselves differently in such forums.[88] The environments in which people communicate have always influenced identity and self-representation.[89] The choice-rich, global, sharing-based, and often anonymous nature of virtual spaces, however, has allowed individuals to both intentionally construct carefully selected identities and, less purposively, to adjust the type of discourse in which they engage. Sociologist Manuel Castells emphasized that the emergence of networked communication tools has essentially rearranged the identity-forming influences in society.[90] Castells concluded: "[a]lthough each individual human mind constructs its own meaning by interpreting the communicated materials on its own terms, this mental processing is conditioned by the communication environment."[91] Thus, the shift from identity forming interactions that were generally conducted in physical environments to interactions that occur in virtual spaces with unbounded geographical concerns has undermined locally and regionally based influences on identity formation. [92] These globally based identities challenge the assumption of locally influenced communities of understanding.

Individuals now find solidarity and support for their beliefs and ideas in virtual spaces, which do not include the same socializing and shared-experience-building ingredients as traditional influencing institutions in their physical environments. In other words, networked spaces substantially broaden the potential range of influences in their choice-rich forums and allow individuals to limit their exposures to the types of ideas they would normally encounter in physical spaces.[93] For example, a person in their physical environment might have found their belief in an extreme political or religious view unpopular and might have abandoned it. In networked spaces, they can find others who have similar beliefs and thereby further cultivate their otherwise unpopular understandings. [94] This emerging solidarity among otherwise historically geographically

---

[88] *See* Papacharissi, *supra* note 17, at 207–11; SHERRY TURKLE, RECLAIMING CONVERSATION: THE POWER OF TALK IN A DIGITAL AGE 23 (2015) [hereinafter TURKLE, RECLAIMING CONVERSATION].

[89] Erving Goffman, *The Presentation of Self in Everyday Life*, *in* CONTEMPORARY SOCIOLOGICAL THEORY 51, 51–53 (Craig Calhoun et al. eds., 2002).

[90] MANUEL CASTELLS, NETWORKS OF OUTRAGE AND HOPE: SOCIAL MOVEMENTS IN THE INTERNET AGE 5–7 (2015) [hereinafter CASTELLS, NETWORKS OF OUTRAGE].

[91] *Id.* at 6.

[92] MANUEL CASTELLS, THE POWER OF IDENTITY 7–10 (2010) [hereinafter CASTELLS, POWER OF IDENTITY]; HENRY JENKINS, CONVERGENCE CULTURE: WHERE OLD AND NEW MEDIA COLLIDE 27 (2006).

[93] JENKINS, *supra* note 92, at 27.

[94] CASTELLS, POWER OF IDENTITY, *supra* note 92, at 6–12 (2010); *see also* SUNSTEIN, *supra* note 2, at 9–10.

isolated ideological groups can embolden individuals to act out those beliefs where they live.[95]

The nature of virtual spaces is also influencing how individuals understand themselves. People have always been intentional about how they represent themselves to others.[96] In virtual spaces, however, individuals can manipulate their identities by taking advantage of the lack of physical presence, a factor that is also significant for AI communicators. People generally represent themselves favorably online, highlighting personal successes and ignoring failures and aspects of their identities that they interpret as being potentially unpopular.[97] Such carefully curated representations are more possible today because individuals generally act as gatekeepers to their identities in virtual spaces, whereas in physical spaces, people cannot as easily hide their negative behaviors, telling aspects of their appearances, or failures. In short, there are no Instagram filters for real life.

When individuals curate their online selves, they create feedback loops where those behaviors that are most consistently reinforced, via likes, shares, comments, and retweets, are repeated and highlighted on social media, while those behaviors that are not reinforced are ignored.[98] As Sherry Turkle, a pioneer in studying how networked tools influence human behavior, explained, "you train yourself to post what will please." [99] Cumulatively, when members of intentionally formed, interest-based communities online are repeating this process of self-representation and reinforcement on a daily basis with others, the virtual self can gradually become a relatively narrow, more two-dimensional version of a person's actual identity. Turkle found that, as we build our online selves, "[w]e recreate ourselves as online personae . . . . Our new media are well suited for accomplishing the rudimentary. And because this is what technology serves up, we reduce our expectations of each other."[100] Those who program AI communicators have become particularly adept at emulating such limited self-representation patterns online. As a team of computer scientists explained,

---

[95] CASTELLS, NETWORKS OF OUTRAGE, *supra* note 90, 5–7.

[96] Goffman, *supra* note 89, at 51–53.

[97] Nick Yee & Jeremy Bailenson, *The Proteus Effect: The Effect of Transformed Self-Representation on Behavior*, 33 HUM. COMM. RES. 271, 285–86 (2007); José van Dijck, *'You Have One Identity': Performing the Self on Facebook and LinkedIn*, 35 MEDIA, CULTURE & SOC'Y, 199, 199–204 (2013).

[98] TURKLE, RECLAIMING CONVERSATION, *supra* note 88, at 41.

[99] *Id.*

[100] SHERRY TURKLE, ALONE TOGETHER: WHY WE EXPECT MORE FROM TECHNOLOGY AND LESS FROM EACH OTHER 11–12 (2011) [hereinafter TURKLE, ALONE TOGETHER].

social bots can "infiltrate popular discussions, generating topically interesting—and even potentially interesting—content, by identifying relevant keywords and searching online for information fitting that conversation." [101] A curated online identity, influenced by AI communicators, can distort a person's real identity and subsequent contributions to the marketplace of ideas.

The types of messages and ideas individuals most often communicate in virtual spaces further reinforce this more two-dimensional nature of online identity and open the door to AI entities. People have less control over whom they speak with online.[102] Certainly, individuals generally construct networks of like-minded individuals online, but those networks, whether they include hundreds, thousands, or more, often include different constituencies. [103] Such constituencies can make fine–tuning a tweet or post with the intent of reaching a particular group of people difficult as the individual seeks to act out their online identity. Furthermore, people are aware their messages can be shared outside their immediate network, often without context or with comments that can change the nature of the intended message.[104] Hence, as communication scholar Zizi Papacharissi concluded, "[t]he individual must then engage in multiple mini performances that combine a variety of semiological references so as to produce a presentation of the self that makes sense to multiple audiences."[105] As a result, online communicators tend to limit the amount of subtlety and nuance people include in their messages. Rather than the more surgical efforts made in physical spaces with body language and other in-person social cues, they produce simpler, more blunt messages online. Broadly, online communication, by its nature, lends itself to being less personal and more limited in depth. Such simplified, less nuanced communication makes it easier for AI communicators to interact with humans without their knowledge.

B. Networked Communities

Taken as a whole, rather than as a series of individual identity and message decisions, the nature of human discourse in virtual spaces encompasses a continuous flow of interactions among individuals and ideas that are generally influenced by the unique self-representation efforts and limitations inherent in online discourse. When considered on a larger scale, the

---

[101] Ferrara et al., *supra* note 84, at 99.
[102] Papacharissi, *supra* note 17, at 209.
[103] *Id.*; *see also* Van Dijck, *supra* note 97, at 202–03.
[104] *See* Papacharissi, *supra* note 17, at 209.
[105] *Id.*

community level, these aspects of discourse in virtual spaces become particularly important when it comes to understanding the marketplace of ideas in the twenty-first century. In particular, virtual communities, by their nature, are different from more traditional communities in crucial ways.[106] These differences are substantially associated with the previous section's concerns regarding how individuals understand themselves and others in virtual spaces.[107] Network communication scholars classify the relationships individuals share within social networks, in person or online, in terms of strong and weak ties.[108] A "tie" refers to any type of relationship that exists "between communicators wherever they exchange and share resources such as goods, services, social support or information."[109] People who share enduring relationships exchange social capital by interacting with and helping each other. Those who have weak ties with others in their communities share limited social capital and are therefore less likely to trust others or interact with them in meaningful ways.[110] Crucially, scholars have found individuals do not establish the same types of bonds in virtual spaces as they have historically formed in physical spaces.[111]

Political scientist Robert Putnam explained how the nature of online tools changes how people interact.[112] He found people who play cards in person, for example, construct stronger ties by talking before, during, and after the games.[113] The social capital that is generated during these in-person interactions is more likely to lead to greater trust and a more meaningful understanding among such individuals.[114] In card games in virtual spaces, the talk is lost.[115] People focus on winning because the form of media generally limits the personal elements of the

---

[106] JENKINS, *supra* note 92, at 27; CASTELLS, RISE OF THE NETWORK SOCIETY, *supra* note 16, at 28–33; TURKLE, RECLAIMING CONVERSATION, *supra* note 88, at 19–25.

[107] *See supra* Section II.A.

[108] Haythornwaite, *supra* note 17, at 386.

[109] *Id.*

[110] ROBERT D. PUTNAM, BOWLING ALONE: THE COLLAPSE AND REVIVAL OF AMERICAN COMMUNITY 18–19 (2000).

[111] People are more likely to effortlessly join and leave online communities, such as forums, message boards, or Facebook groups. Joining and leaving online groups does not require the same amount of human interaction as in-person communities, where a person introduces you to others and offers to answer your questions. When people do not share strong bonds, they do not see others in the group as human and are less likely to trust them or consider their ideas seriously. *See* PUTNAM, *supra* note 110, at 104–05; Haythornwaite, *supra* note 17, at 386; TURKLE, ALONE TOGETHER, *supra* note 100, at 280–83.

[112] PUTNAM, *supra* note 110, at 104–05.

[113] *Id.*

[114] Haythornwaite, *supra* note 17, at 386; TURKLE, ALONE TOGETHER, *supra* note 100, at 280–83.

[115] PUTNAM, *supra* note 110, at 104–05.

interaction.[116] As in other instances, the nature of virtual forums provides ample opportunities for AI communicators to seamlessly join online communities and take part in discourse. When a person plays cards online with strangers, it hardly matters whether those unknown others are human or not. In fact, very little of the experience humanizes the other players. Of course, these concerns expand to interactions that are more consequential than online card games. The relatively weak ties that individuals share online make them less trustful of each other and lead to consistent turnover in online communities as lightly committed individuals disconnect and move on as their interests wax and wane.[117] In other words, virtual communities are generally weakly tied communities.

While individuals generally share less meaningful bonds with others in virtual spaces, the global, choice-rich online environment has allowed people unprecedented selectivity regarding whom they wish to engage with, which has led to widespread, interest-based engagement. Thus, the often-weaker bonds individuals share online does not limit engagement, it merely changes its nature. Importantly, the result of the combination between weaker ties and more choice has led to the formation of a multiverse of marketplaces in which individuals both intentionally and unconsciously limit the spectrums of ideas and other citizens they engage with.[118] Political scientists Shanto Iyengar and Kyu Hahn found such a choice-rich environment leads to citizen-constructed echo chambers where individuals "limit their exposure to news or sources that they expect to find agreeable. Over time, this behavior is likely to become habituated so that users turn to their preferred sources automatically no matter what the subject matter."[119]

Of course, the creation of such intentional communities raises significant concerns regarding the functionality of a conceptual, shared marketplace. When individuals self-select the information sources they interact with, the range of products, or ideas, in the marketplace becomes limited. In other words, fragmented communities can become relatively empty storefronts, where only a few generally accepted ideas are

---

[116] *Id.*

[117] JENKINS, *supra* note 92, at 57.

[118] CASS R. SUNSTEIN, REPUBLIC.COM 2.0 44 (2007) (identifying fragmentation and polarization, as well as the accelerated spread of false information); Shanto Iyengar & Kyu S. Hahn, *Red Media, Blue Media: Evidence of Ideological Selectivity in Media Use*, 59 J. COMM. 20–21 (2009) (concerned with the reemergence of selective exposure); BRIAN MCNAIR, CULTURAL CHAOS: JOURNALISM, NEWS, AND POWER IN A GLOBALISED WORLD 136–38 (2006) (conceptualizing networked technologies as creating a multiverse of public spheres).

[119] Iyengar & Hahn, *supra* note 118, at 34.

considered. Legal scholar Cass Sunstein made such a concern central to *#Republic*, in which he lamented the fading roles of the "general interest intermediaries," such as daily newspapers, and of shared experiences that bind a society together.[120] Both of these tools—the information sources that individuals once used to construct a common baseline of understanding about the world around them and the experiences that supported an idea of nationhood—have in many ways become casualties of the networked era.[121]

When individuals essentially construct their own personal marketplaces of ideas, limiting the spectrum of information and speakers they encounter, it becomes far easier for AI communicators to spread false information. While the Court has repeatedly expressed that protecting some false expression can protect the marketplace, and therefore should be safeguarded, echo chambers filled with belief-affirming information that is false causes fundamental harm to the assumptions that truth will rise and falsity will fail in the marketplace of ideas.[122] Such a conclusion aligns with the Court's conclusion in *Hustler v. Falwell*.[123] In its opinion, the Court emphasized, "false statements of fact are particularly valueless; they interfere with the truth-seeking function of the marketplace of ideas." [124] The nature of these self-made marketplaces align with concerns raised by Iyengar and Hahn. They concluded that when individuals turn their information networks into echo chambers, they come to expect the information to reinforce their existing understandings, rather than allowing their beliefs to be challenged by new information. [125] Thus, false information that aligns with the accepted narratives within the intentional community is far more likely to be accepted as truthful. For example, after seventeen people were killed and dozens more were injured in a school shooting in Florida in February 2018, AI communicators played influential roles in the gun-rights-related discourse that followed. [126] First, bots engaged with the existing hashtag,

---

[120] SUNSTEIN, *supra* note 2, at 41–44.

[121] For a discussion of how media help to influence how individuals construct understandings of nationhood, see generally BENEDICT ANDERSON, IMAGINED COMMUNITIES: REFLECTIONS ON THE ORIGIN AND SPREAD OF NATIONALISM 6–26 (2016).

[122] New York Times v. Sullivan, 376 U.S. 254, 271–72 (1964); United States v. Alvarez, 567 U.S. 709, 718–19 (2012); Gertz v. Welch, 418 U.S. 323, 339–40 (1974).

[123] Hustler Magazine, Inc. v. Falwell, 485 U.S. 46 (1988).

[124] *Id.* at 52.; *see also Gertz*, 418 U.S. at 340.

[125] Iyengar & Hahn, *supra* note 118, at 34.

[126] Sheera Frenkel & Daisuke Wakabayashi, *After Florida School Shooting, Russian 'Bot' Army Pounced*, N.Y. TIMES (Feb. 19, 2018), https://www.nytimes.com/2018/02/19/technology/russian-bots-school-

#Parklandshooting, spreading false information about the shooting suspect's interest in Islam and framing his work as that of a "lone wolf" rather than a part of a larger problem regarding gun violence in the United States.[127] Second, the bots were used to amplify extremist opinions that were created by human actors. One account, @Education4Libs, tweeted that the shooter was a registered Democrat and a member of Antifa.[128] The account has nearly 250,000 followers and researchers have identified it as one of the accounts that bots most target by retweeting and magnifying its messages as well as tweeting at it with similar ideas.[129] Essentially, the human-run account does the work of creating the messages and share bots simply spread it throughout their connections across networked spaces. Thus, discourse in these circumstances suffers both from the fragmented communities that are more susceptible to the false and misleading narratives that are spread by AI communicators and the magnification of otherwise limited ideas facilitated by sharing-focused bots. When a market of competing products is overrun with an avalanche of counterfeits, the market has failed.

As Sunstein contended, when individuals communicate only with like-minded others, as the choice-rich virtual spaces allow, they can only become *more* extreme in their positions, not less. [130] Furthermore, individuals' decisions to limit the expansiveness of their personal networks are not purely driven by their desire to be surrounded by like-minded individuals. The sheer size of virtual spaces, when considered without the communities' individuals construct, are too vast in terms of information and choice for individuals to avoid certain spectrum-limiting decisions. Thus, individuals must choose to construct a network, ultimately providing a semblance of locality to a space that lacks physical presence. In this regard, Castells concluded individuals shrink "the size of the human experience to a dimension that can be managed and defended by people feeling lost in the whirlwind of a destructured world."[131] It is in this effort to restructure a fragmented, choice-rich world that

---

shooting.html; Erin Griffith, *Pro-Gun Russian Bots Flood Twitter After Parkland Shooting*, WIRED (Feb. 15, 2018), https://www.wired.com/story/pro-gun-russian-bots-flood-twitter-after-parkland-shooting/.

[127] *Id.*

[128] Educating Liberals (@Education4Libs), TWITTER (Feb. 15, 2018), https://twitter.com/Education4Libs; Mary Papenfuss, *Russia-Linked Accounts Exploit Parkland Shooting on Twitter, Analysts Say*, HUFFINGTON POST (Feb. 15, 2018), https://www.huffingtonpost.com/entry/bots-exploit-parkland-tragedy_us_5a860acce4b05c2bcac91af0.

[129] Griffith, *supra* note 126; Papenfuss, *supra* note 128.

[130] SUNSTEIN, *supra* note 2, at 69–70.

[131] CASTELLS, POWER OF IDENTITY, *supra* note 92, xxiii–xxvi.

individuals limit the scope of the ideas they encounter and, at the same time, AI communicators become particularly influential in magnifying certain ideas, creating content, and engaging in discourse with citizens.

C. Ownership

Finally, before focusing on the marketplace metaphor itself, the nature of virtual spaces as forums for expression must be considered. Networked spaces, while they in many ways mimic the types of traditional public forums that for "time out of mind, have been used for purposes of assembly, communicating thoughts between citizens, and discussing public questions," are privately controlled by the corporations that provide the spaces.[132] They are thus more comparable to a department store than to a public park.[133] The owners welcome visitors to their property, but if someone becomes disruptive or communicates ideas that are unpopular, they will be removed. Search engines and social media sites, the primary spaces in which AI communicators function and where substantial amounts of democratic discourse now occur, can be regulated by the whims of those who own them.

While the owners of such spaces have generally professed support for freedom of expression,[134] they continuously face economic, political, and social pressures to limit expression in ways that would violate traditional conceptualizations of the First Amendment.[135] Twitter and Facebook, for example, regularly block and shut down accounts.[136] Facebook removed Myanmar's senior military leaders' accounts in August 2018

---

[132] Hague v. Comm. for Indus. Org., 307 U.S. 496, 515 (1939).

[133] *Id.*; *see also* Frisby v. Schultz, 487 U.S. 474, 480 (1988); Snyder v. Phelps, 562 U.S. 443, 458 (2010); McCullen v. Coakley, 134 S. Ct. 2518, 2528–29 (2014).

[134] Richard Allan, *Hard Questions: Where Do We Draw the Line on Free Expression*, FACEBOOK (Aug. 9, 2018), https://newsroom.fb.com/news/2018/08/hard-questions-free-expression/; *The Twitter Rules*, TWITTER, https://help.twitter.com/en/rules-and-policies/twitter-rules (last visited Nov. 20, 2018); *Community Guidelines*, SNAPCHAT, https://support.snapchat.com/en-US/a/guidelines (last visited Nov. 20, 2018).

[135] For examples where the Supreme Court interpreted the First Amendment as protecting speech that would often be removed from social media sites, see *Snyder*, 562 U.S. at 443; Texas v. Johnson, 491 U.S. 397 (1989); Cohen v. California, 403 U.S. 15 (1971).

[136] Julia Jacobs, *In Twitter Purge, Top Accounts Lose Millions of Followers*, N.Y. TIMES (July 12, 2018), https://www.nytimes.com/2018/07/12/technology/twitter-followers-nyt.html; Frances Bula, *Facebook Shuts Down Accounts Attacking Candidates in Vancouver Election,* GLOBE & MAIL (Sept. 18, 2018), https://www.theglobeandmail.com/canada/british-columbia/article-bc-candidates-targeted-by-anonymous-social-media-posts/; Jack Nicas, *Alex Jones Said Bans Would Strengthen Him. He Was Wrong*, N.Y. TIMES (Sept. 4, 2018), https://www.nytimes.com/2018/09/04/technology/alex-jones-infowars-bans-traffic.html.

and, in October 2018, took down more shadowy accounts in Myanmar that appeared to be entertainment-based, but were actually run by the military.[137] Of course, these actions were too late to help the more than 700,000 Rohingya Muslims who were forced from their homes after military attacks and ethnic violence, which many attributed to a propaganda effort that relied primarily on Facebook.[138] Twitter has worked with the government to delete millions of accounts that are believed to be associated with terrorist organizations.[139] The social media company has also purged countless accounts that were believed to be harmful political bots, a move which drew the ire of many conservative leaders.[140] Similarly, Instagram deleted millions of harassing or spamming accounts in 2014.[141] While the reasoning behind deleting these accounts might be generally agreeable, the companies' decisions reinforce the fact that these spaces are privately held and that traditional First Amendment barriers to limiting speech are not present.[142] Furthermore, the corporations that own such spaces are not motivated by the necessity for democratic discourse. Therefore, the emergence of virtual marketplaces in networked spaces brings with it a change in the general freedom of expression regime under which such democratic discourse functions.

---

[137] Paul Mozur, *A Genocide Incited on Facebook, With Posts from Myanmar's Military*, N.Y. TIMES (Oct. 15, 2018),
https://www.nytimes.com/2018/10/15/technology/myanmar-facebook-genocide.html.
[138] *Id. See also* Steve Stecklow, *Why Facebook is Losing the War on Hate Speech in Myanmar*, REUTERS (Aug. 15, 2018), https://www.reuters.com/investigates/special-report/myanmar-facebook-hate/; Casey Newton, *It Took a Genocide for Facebook to Ban a Country's Military Leadership*, VERGE (Aug. 28, 2018),
https://www.theverge.com/2018/8/28/17789202/facebook-myanmar-ban-genocide-military-leadership; Libby Hogan & Michael Safi, *Revealed: Facebook Hate Speech Exploded in Myanmar During Rohingya Crisis*, GUARDIAN (Apr. 2, 2018),
https://www.theguardian.com/world/2018/apr/03/revealed-facebook-hate-speech-exploded-in-myanmar-during-rohingya-crisis.
[139] Davey Alba, *Twitter Says It Suspended 360,000 Suspected Terrorist Accounts in a Year*, WIRED (Aug. 18, 2016), https://www.wired.com/2016/08/twitter-says-suspended-360000-suspected-terrorist-accounts-year/; Adam Satariano, *Twitter Suspends 300,000 Accounts Tied to Terrorism in 2017*, BLOOMBERG (Sept. 19, 2017),
https://www.bloomberg.com/news/articles/2017-09-19/twitter-suspends-300-000-accounts-in-2017-for-terrorism-content.
[140] Nancy Scola, *Twitter Purges Accounts, and Conservatives Cry Foul*, POLITICO (Feb. 21, 2018), https://www.politico.com/story/2018/02/21/twitter-purges-accounts-conservatives-357028; Abrar Al-Heeti, *White Nationalist Jared Taylor Sues Twitter Over Account Ban*, CNET (Feb. 22, 2018), https://www.cnet.com/news/white-nationalist-jared-taylor-american-renaissance-sues-twitter-for-account-suspension/.
[141] Vindu Goel, *Millions of Fake Instagram Users Disappear in Purge*, N.Y. TIMES (Dec. 18, 2014), https://bits.blogs.nytimes.com/2014/12/18/millions-of-fake-instagram-users-disappear-in-purge/.
[142] Allan, *supra* note 134; *The Twitter Rules*, *supra* note 134; *Community Guidelines*, *supra* note 134.

III. THE MARKETPLACE THEORY AND ITS PROBLEMS

Scholars have associated the marketplace approach with foundational assumptions that are based in Enlightenment-era understandings regarding truth, the rationality of individuals, and the role of citizens in democratic society.[143] Importantly, this theoretical framework was not explicitly provided in Justice Holmes's dissent in *Abrams*.[144] Furthermore, though justices have consistently turned to the metaphor to communicate how they understand freedom of expression, they have never explicitly defined it.[145] Instead, as time passed after Justice Holmes's initial use of the metaphor in 1919, and as justices turned to it in constructing their reasoning on nearly every type of First Amendment question—including defamation,[146] privacy,[147] commercial speech,[148] broadcast regulation,[149] and online[150] and corporate speech cases[151]—these Enlightenment-based assumptions came to be understood as the foundational underpinnings of the theory.

Such a marriage between Enlightenment thought and the ideas Justice Holmes introduced in his dissent in *Abrams* bears substantial historical and theoretical support. First, the marketplace approach overlaps significantly with Milton's seventeenth-century conceptualization of the competition between truth and falsity. He posited, for example, that "Truth be in the field, we do injuriously by licensing and prohibiting to misdoubt her strength. Let her and Falsehood grapple; who ever knew Truth put to the worse in a free and open encounter?"[152] Also, Justice Holmes wrote to a friend that he re-read John Stuart Mill's *On Liberty* in late February 1919, several months before the

---

[143] *See* Donna L. Dickerson, *Freedom of Expression and Cultural Meaning: An Analysis of Metaphors in Selected Supreme Court Texts*, 1 COMM. L. & POL'Y 367, 368 (1996); Philip M. Napoli, *The Marketplace of Ideas Metaphor in Communications Regulation*, 49 J. COMM. 151, 153 (1999); *see, e.g.*, Ingber, *supra* note 9, at 3.

[144] Abrams v. United States, 250 U.S. 616, 624–31 (1919) (Holmes, J., dissenting).

[145] Hopkins, *supra* note 5, at 40.

[146] *See, e.g.*, Milkovich v. Lorain Journal Co., 497 U.S. 1 (1990); Phila. Newspapers, Inc. v. Hepps, 475 U.S. 767 (1986); Gertz v. Robert Welch, Inc., 418 U.S. 323 (1974).

[147] *See, e.g.*, Time, Inc. v. Hill, 385 U.S. 374 (1967).

[148] *See, e.g.*, Cent. Hudson Gas & Elec. Corp. v. Pub. Serv. Comm'n of N.Y., 447 U.S. 557 (1980); Va. Pharmacy Bd. v. Va. Consumer Council, 425 U.S. 748 (1976); Bigelow v. Virginia, 421 U.S. 809 (1975).

[149] *See, e.g.*, Denver Area Educ. Telecomm. Consortium v. FCC, 518 U.S. 727 (1996); FCC v. Pacifica Found., 438 U.S. 726 (1978); Red Lion Broad. Co. v. FCC, 395 U.S. 367 (1969).

[150] *See, e.g.*, Reno v. ACLU, 521 U.S. 844, 885 (1997).

[151] *See, e.g.*, Citizens United v. Fed. Election Comm'n, 558 U.S. 310 (2010); Fed. Election Comm'n v. Wis. Right to Life Inc., 551 U.S. 449 (2007); First Nat'l Bank of Boston v. Bellotti, 435 U.S. 765, 810 (1978).

[152] MILTON, *supra* note 6, at 50.

Court heard the *Abrams* appeal that October.[153] Historian J. Salwyn Schapiro contended Justice Holmes drew from Mill's work in his opinion for the Court in *Schenck v. United States*,[154] which was announced in March 1919.[155] Schapiro also associated the marketplace metaphor with Mill's philosophy, contending the thinker did not believe freedom of expression was a natural right, but rather a necessity for rational individuals who sought to govern themselves.[156] Thus, the marketplace theory came to be associated with the notion that truth is generally objective and universal and that, in an environment in which the government does not significantly interfere with the flow of ideas, rational, free individuals are capable of identifying truth and rejecting falsehood.

Since Justice Holmes's time on the Court, Justices have, whether they intended to do so or not, generally associated such Enlightenment-founded assumptions with their uses of the marketplace theory.[157] The Court rationalized its unanimous decision in *Hustler Magazine Inc. v. Falwell*,[158] for example, by stating "[a]t the heart of the First Amendment is the recognition of the fundamental importance of the free flow of ideas and opinions on matters of public interest and concern."[159] The Court quoted and cited Justice Holmes's marketplace-of-ideas-based reasoning a few sentences afterward.[160] Later in the decision, Chief Justice John Rehnquist reasoned "it is a central tenet of the First Amendment that the government must remain neutral in the marketplace of ideas."[161] Similarly, in *Red Lion Broadcasting Co. v. Federal Communications Commission* in 1969, Justice Byron White explained that "[i]t is the purpose of the First Amendment to preserve an uninhibited marketplace of ideas in which truth will ultimately prevail . . . ."[162] Two years later, in *Cohen v. California*, the Court reasoned when the government restricts ideas based on the merits of their content, it takes away the ability of citizens and society more broadly to

---

[153] Letter from Justice Oliver Wendell Holmes to Harold Laski (Feb. 28, 1919) (on file with Harvard Law School Library Digital Suite), http://library.law.harvard.edu/suites/owh/index.php/item/42882402/12.

[154] 249 U.S. 47 (1919).

[155] J. Salwyn Schapiro, *John Stuart Mill, Pioneer of Democratic Liberalism in England*, 4 J. HIST. OF IDEAS 127, 157 (1943).

[156] *Id.* at 154.

[157] *See, e.g.*, Hustler v. Falwell, 485 U.S. 46 (1988); Cohen v. California, 403 U.S. 15 (1971); Red Lion Broad. Co. v. FCC, 395 U.S. 367 (1969).

[158] *Hustler,* 485 U.S. 46, 50 (1988).

[159] *Id.* at 50.

[160] *Id.*

[161] *Id.* at 56 (quoting FCC. v. Pacifica Found., 438 U.S. 726, 745–46 (1978)).

[162] Red Lion Broad. Co. v. Fed. Election Comm'n, 395 U.S. 367, 390 (1969).

decide what is true and best for society.[163] Justice John Harlan wrote that free expression was designed with the "hope that use of such freedom will ultimately produce a more capable citizenry and more perfect polity and in the belief that no other approach would comport with the premise of individual dignity and choice upon which our political system rests."[164] In each of these examples, the justices leaned upon assumptions about a generally objective, universal nature of truth and the rationality of citizens in constructing their rationales. Similarly, in *Gertz v. Robert Welch, Inc.*, three years after *Cohen*, Justice Louis Powell constructed his reasoning for the Court's opinion upon these assumptions, concluding that "[h]owever pernicious an opinion may seem, we depend for its correction not on the conscience of judges and juries but on the competition of other ideas."[165]

Finally, in Chief Justice Rehnquist's detailed dissent in *Central Hudson & Electric Corp. v. Public Service Commission of New York*, he explicitly associated the marketplace theory with Enlightenment thought, citing Adam Smith's *Wealth of Nations*, Milton's *Areopagitica*, Mill's *On Liberty*, and Justice Holmes's dissent in *Abrams*.[166] Having intertwined the marketplace theory with Enlightenment thinkers and their works, he concluded "[w]hile it is true that an important objective of the First Amendment is to foster the free flow of information, identification of speech that falls within its protection is not aided by the metaphorical reference to a 'marketplace of ideas.'"[167] Thus, though the Chief Justice ultimately questioned the validity of the marketplace approach in deciding whether the First Amendment should protect commercial speech, he clearly intertwined it with Enlightenment thought. Each of the preceding examples helps to communicate ways that Supreme Court justices have used the marketplace approach to communicate their understandings regarding the First Amendment. More importantly, however, these cases highlight that the fundamental, Enlightenment-oriented assumptions about truth and the rationality of individuals in democratic society have come to be conceptualized as being synonymous with the marketplace theory.

---

[163] Cohen v. California, 403 U.S. 15, 24–25 (1971).

[164] *Id.* at 24.

[165] 418 U.S. 323, 339–40 (1974).

[166] Cent. Hudson Gas & Elec. Corp. v. Pub. Serv. Comm'n of N.Y., 447 U.S. 557, 592 (1980) (Rehnquist, C.J., dissenting).

[167] *Id.*

A. Scholarly Dissents

     While Chief Justice Rehnquist critiqued the marketplace theory in his dissent in *Central Hudson*, the Court has generally employed the marketplace approach sans critical questions about its assumptions. [168] Communication law scholar W. Wat Hopkins concluded justices have historically "accepted without question that the metaphor is effective because [of] the rationale upon which it is built . . . ."[169] Unlike the majority of the justices who have served on the Court since Justice Holmes, legal scholars have raised substantial concerns regarding the theory's assumptions. [170] Such concerns are particularly important in examining how the marketplace theory can or should function in the era of AI communicators. In particular, scholars have attacked the theory's assumptions about the nature of truth and the rationality of individuals.[171] Scholars have also questioned how information flows and reaches citizens. Legal scholar C. Edwin Baker concluded broadly the theory's rationale is "not persuasive" and that it is "unworkable, dangerous, and inconsistent with a reasonable interpretation of the purpose of the first amendment."[172]

     Scholars have paid particular attention to the approach's assumptions regarding the nature of truth. Put simply, they have concluded truth is subjective and self-created rather than objective and universal. [173] Such a conclusion substantially undermines one of the bulwarks of the marketplace approach. As legal scholar Stanley Ingber reasoned, "[i]f truth is to defeat falsity through robust debate in the marketplace . . . truth must be an objective rather than a subjective, chosen subject."[174] If truth is not objective, Ingber concluded, the marketplace theory fails.[175] In contrast, legal scholar Frederick Schauer came to a similar conclusion regarding the nature of truth, but added that replacing such an assumption with a subjective approach to truth does not necessarily harm the theory itself.[176] He explained "[i]f we reject the possibility of attaining objective knowledge, and reject as unsatisfactory any method of discovering truth, defining

---

[168] *Id.* at 592–93. Chief Justice Rehnquist also questioned the marketplace theory's assumptions in his dissent in Texas v. Johnson, 491 U.S. 397, 429 (1989).

[169] Hopkins, *supra* note 5, at 40.

[170] BAKER, *supra* note 3, at 6; BARRON, *supra* note 9, at xiii–xiv; SCHAUER, *supra* note 3, at 16; Ingber, *supra* note 9, at 15–18.

[171] Martin Redish, *The Value of Free Speech*, 130 U. PA. L. REV. 591, 617 (1982); Ingber, *supra* note 9, at 15; BAKER, *supra* note 3, at 12–13.

[172] BAKER, *supra* note 3, at 3.

[173] Redish, *supra* note 171, at 617; BAKER, *supra* note 3, at 12–13; Ingber, *supra* note 9, at 15.

[174] Ingber, *supra* note 9, at 15.

[175] *Id.*

[176] SCHAUER, *supra* note 3, at 20 (emphasis added).

truth as a *process* rather than a standard becomes compelling."[177] Such an approach aligns with more discourse-based theories of how knowledge and truth emerge through interactions among individuals in democratic society.[178] Baker held less hope for the theory. He bluntly concluded "truth is not objective."[179] He explained that if truth is objective, if there is a shared reality that would lead to citizens accepting truth and rejecting falsehood, then the theory could potentially function.[180] If truth is subjective, however, the theory must account for "why and how the usually unequal advocacy of various viewpoints leads to the 'best choice.'"[181]

Baker's concern regarding the unequal nature of the marketplace represents another reoccurring concern regarding the theory. Most famously, legal scholar Jerome Barron contended the marketplace theory was "romantic" and "if ever there were a self-operating marketplace of ideas, it has long ceased to exist."[182] Barron concluded the marketplace fails to account for the fact that not everyone has equal access to the marketplace.[183] Individuals are not necessarily able to get their ideas into the crowded information marketplace.[184] Similarly, not all messages receive the same amount of attention. Some communicators have the tools necessary to broadly communicate their messages or to package them in a way that makes them more interesting to citizens. Baker noted that traditional media outlets give greater attention to "dominant groups' interests and reflects their view of reality."[185] Soon, the dominant group in the marketplace could become AI entities.

Finally, in a related sense, scholars have questioned the assumption that individuals are generally rational and, in most cases, capable of discerning truth from falsity. As individuals encounter some ideas and not others and they encounter some ideas at higher and more intensive frequencies than others, it is difficult to imagine a certain, shared truth will win out in the marketplace. Scholars have also found that repeated exposure to ideas, even if an individual initially rejected the ideas as false,

---

[177] *Id.* (emphasis added).

[178] Jared Schroeder, *Shifting the Metaphor: Examining Discursive Influences on the Supreme Court's Use of the Marketplace Metaphor in Twenty-First-Century Free Expression Cases*, 21 COMM. L. & POL'Y 383, 395–401 (2016); JARED SCHROEDER, THE PRESS CLAUSE AND DIGITAL TECHNOLOGY'S FOURTH WAVE 28–36 (2018).

[179] BAKER, *supra* note 3, at 12.

[180] *Id.*

[181] *Id.* at 6.

[182] Barron, *supra* note 14, at 1641.

[183] *Id.* at 1644.

[184] *See* Jerome A. Barron, *An Emerging First Amendment Right of Access to the Media*, 37 GEO. WASH. L. REV. 487, 491 (1968); BAKER, *supra* note 3, at 17.

[185] BAKER, *supra* note 3, at 16.

can lead to eventual acceptance or, in the least, attitude change about the ideas.[186] Furthermore, Ingber posited that citizens' varying socioeconomic statuses, personal experiences, and roles in society will very likely influence the way in which they come to determine what is true and false among the ideas they encounter.[187] Furthermore, in a diverse society, citizens are unlikely to accept ideas as truthful, no matter how strongly founded in rationality, if the ideas run counter to their personal or communal beliefs, interests, or biases.[188] Such a concern is particularly relevant in an era when individuals construct idea and interest-based communities, while limiting their exposure to opposing ideas in virtual spaces.

B. Justice Holmes and Pragmatic Truth

Before examining the existing legal precedents that relate to freedom of expression rights and AI communicators, it is important to consider Justice Holmes's legal and scholarly writings, as well as his voluminous personal correspondence. His extensive writings highlight that, despite introducing the marketplace theory, which would ultimately be undergirded by Enlightenment-era assumptions regarding truth and the rationality of individuals, he did not believe in absolute truth.[189] In fact, Justice Holmes quite explicitly expressed in many instances he did not believe truth was objective and universal.[190] In a 1929 letter to his friend Harold Laski, a British economist, he characterized truth as "the system of my intellectual limitations."[191] In the same letter, he concluded "absolute truth is a mirage."[192] Similarly, seventeen years earlier, as part of an extensive interaction with his friend Patrick Sheehan, an Irish Catholic priest, Justice Holmes explained:

> [A] general fact rather is to be
> regarded   like   a   physical

---

[186] John T. Cacioppo & Richard E. Petty, *Effects of Message Repetition and Position on Cognitive Response, Recall, and Persuasion*, 37 J. PERSONALITY & SOC. PSYCHOL. 97, 105 (1979); John T. Cacioppo & Richard E. Petty, *Persuasiveness of Communication Is Affected by Exposure Frequency and Message Quality; A Theoretical and Empirical Analysis of Persisting Attitude Change*, 3 CURRENT ISSUES & RES. ADVERT., 97, 117 (1980).

[187] Ingber, *supra* note 9, at 15.

[188] *Id.* at 25–26.

[189] Oliver Wendell Holmes, *Natural Law*, 32 HARV. L. REV. 40, 40 (1918) [hereinafter Holmes, *Natural Law*]; Letter from Oliver Wendell Holmes to Harold Laski (Jan. 11, 1929), *in* THE ESSENTIAL HOLMES 107 (Richard A. Posner ed., 1992); Letter from Oliver Wendell Holmes to Patrick Sheehan (Oct. 18, 1912), *in* THE ESSENTIAL HOLMES 7 (Richard A. Posner ed., 1992).

[190] Letter from Holmes to Sheehan, *supra* note 189, at 7; Letter from Holmes to Laski, *supra* note 189, at 107; Holmes, *supra* note 189, 40–41.

[191] Letter from Holmes to Laski, *supra* note 189, at 107.

[192] *Id.*

> phenomenon—accepted like any other phenomenon so far as it exists—to be combated or got around so far as may be, if one does not like it, as soon as fully possible. I always say yes—whatever is, is right—but not necessarily will be for thirty seconds longer.[193]

In both instances, Justice Holmes communicated an understanding that truth is dependent upon the availability of information, which can be different from person to person.

In "Natural Law," which appeared in *Harvard Law Review* in 1918, just a year before he authored the Court's opinion in *Schenck v. United States* and penned the dissent in which he introduced the marketplace approach in *Abrams*, Holmes wrote "we all, whether we know it or not, are fighting to make the kind of world that we should like—but that we have learned to recognize that others will fight and die to make a different world, with equal sincerity or belief." [194] He continued, "when differences are sufficiently far reaching, we try to kill the other man rather than let him have his way. But that is perfectly consistent with admitting that, so far as it appears, his grounds are just as good as ours."[195] In these passages, as is the case in many of the Justice's writings, he included war imagery to communicate his point. Justice Holmes contended that his experience fighting in the Civil War, in which he was shot three different times, changed his life. [196] In his personal correspondences with friends, he in many ways blamed the outbreak of the war on the rigid positions the North and South held regarding their differences.[197] In short, the war made him far more skeptical of any person's claim that they possessed absolute truth. To Justice Holmes, truth was a process. Therefore, if a person claimed to have obtained absolute truth, that simply

---

[193] Letter from Holmes to Sheehan, *supra* note 189, at 7.

[194] Holmes, *supra* note 189, at 41.

[195] *Id.*

[196] *See* Oliver Wendell Holmes, Remarks from the Meeting of the 20th Regimental Association: The Fraternity of Arms (Dec. 11, 1897), OLIVER WENDELL HOLMES, SPEECHES 11 (2006); Letter from Oliver Wendell Holmes to Alice Stopford Green (Oct. 14, 1911), *in* THE ESSENTIAL HOLMES 3 (Richard A. Posner ed., 1992); see also Justice Holmes's own journal entry after he was wounded in the war: Oliver W. Holmes, Ball's Bluff Diary (May–June, 1864), *in* TOUCHED WITH FIRE: CIVIL WAR LETTERS AND DIARY OF OLIVER WENDELL HOLMES, JR. 25–28 (Mark DeWolfe Howe ed., 2000).

[197] *See* LOUIS MENAND, THE METAPHYSICAL CLUB: A STORY OF IDEAS IN AMERICA 61–62 (2001); Mark DeWolfe Howe, *The Positivism of Mr. Justice Holmes*, 64 HARV. L. REV. 529, 535 (1951).

meant they had decided to hold fast to their own personal prejudices and biases rather than to evolve as new experiences and information became available. These themes can also be found in Justice Holmes's dissent in *Abrams*, where he concluded that "when men have realized that time has upset many fighting faiths, they may come to believe even more than they believe the very foundations of their own conduct that the ultimate good desired is better reached by free trade in ideas."[198]

Ultimately, late in his life, Justice Holmes described his understanding of truth by identifying himself as a "bettabilitarian."[199] He explained that, since he did not believe in absolute certainty, the best he or any other person could do is *bet* on what is true, using past experiences and the information available.[200] Such a conceptualization of truth is primarily process-based, noting that individuals make conclusions based upon their experiences and the information they have available and that these "truths" can evolve as time goes on. Justice Holmes's bettabilitarian approach is not substantially different from his conclusion in *The Common Law* in 1881, far earlier in his career, when he explained that the "life of the law has not been logic: it has been experience."[201] Importantly, Justice Holmes's dissent in *Abrams* included substantial references to the bettabilitarian approach. He concluded "all life is an experiment. Every year if not every day we have to *wager* our salvation upon some prophecy based upon imperfect knowledge."[202] Thus, the author who introduced the marketplace concept into the Supreme Court's vocabulary conceptualized truth as something that evolves based on experience and available information, making it different for each person. Therefore, while the marketplace approach, as outlined in *Abrams*, does not include any citations regarding Justice Holmes's influences in constructing it, he surrounded it with themes that, when placed in context with his other writings, represented how he conceptualized truth.

---

[198] Abrams v. United States, 250 U.S. 616, 630 (1919) (Holmes, J., dissenting).

[199] *See, e.g.*, Letter from Oliver Wendell Holmes to Frederick Pollock (Aug. 30, 1929), *in* THE ESSENTIAL HOLMES 108 (Richard A. Posner ed., 1992); Felix S. Cohen, *The Holmes-Cohen Correspondence*, 9 J. HIST. IDEAS 3 (1948); *see also* David Luban, *Justice Holmes and the Metaphysics of Judicial Restraint*, 44 DUKE L. J. 449, 474 (1994).

[200] Letter from Holmes to Pollock, *supra* note 199, at 108 (attributing the "bettabilitarian" idea's foundation to Chauncey Wright, a member of the Metaphysical Club who died in 1875).

[201] OLIVER WENDELL HOLMES, JR., THE COMMON LAW 1 (1881).

[202] *Abrams*, 250 U.S. at 630 (Holmes, J., dissenting) (emphasis added).

IV. AI Speech Rights: From Corporations to Cats

AI entities present a challenge to Justice Holmes's marketplace theory and his conceptualization of truth. The Supreme Court has never explicitly addressed First Amendment rights as they might apply to AI communicators. State and federal courts have made only limited references to such concerns.[203] Perhaps two of the most relevant cases so far regarding the rights of AI communicators and their place in democratic discourse dealt with the Google search engine's algorithm-based outputs. In *Search King v. Google*, a 2003 federal district court case from Oklahoma, an online advertising firm sued Google after its placement in the company's "PageRank" system suddenly dropped.[204] The advertising firm sued for an injunction against Google, as well as damages, contending the company maliciously adjusted its algorithms so it would not appear as prominently in searches.[205] Google argued the search results its algorithms produce are essentially opinions, which are protected by the First Amendment.[206] Despite Search King's contention that algorithms, since they are based on computer programs, are not capable of producing subjective results, the Court sided with Google. The judge reasoned while the algorithm "is objective in nature[,] . . . the result, which is the PageRank—or the numerical representation of relative significance of a particular web site—is fundamentally subjective in nature."[207] The court compared PageRanks with the ratings that financial lenders such as Moody's publish, explaining that these ratings are based on complex formulas, but are, in the end, a representation of the lender's opinion.[208] Thus, the First Amendment protected the algorithmic outputs because they represented the company's opinion.

Four years later, in another district court, an online publisher sued Google for refusing to allow advertising for his websites and for removing the sites from the search results that its algorithm produced for users.[209] Google contended it would violate its First Amendment rights for the government to compel it to "speak" by forcing it to publish information. The judge agreed with Google, concluding the First Amendment provides

---

[203] *See, e.g.*, In re Ashley Madison Customer Data Breach Litig., 2016 U.S. Dist. LEXIS 46893 (E.D. Mo. 2016); ACLU v. Gonzales, 478 F. Supp. 2d 775 (E.D. Pa. 2007); Indiana v. Econ. Freedom Fund, 959 N.E.2d 794 (Ind. 2011).

[204] 2003 U.S. Dist. LEXIS 27193 (W.D. Okla. 2003).

[205] *Id.* at 3.

[206] *Id.* at 9–10.

[207] *Id.* at 10.

[208] *Id.* at 9–10.

[209] Langdon v. Google, 474 F. Supp. 2d 622, 626–27 (D. Del. 2007).

individuals the right to decide what "to say and what not to say."[210]

While both cases raised questions about algorithms and their power to influence what individuals see and do not see when seeking information online, the judges did little to address the extent to which First Amendment protections might be extended to computer-program-based, non-human communicators. Instead, the judges in both cases firmly associated the algorithmic outputs with the corporation's speech. In other words, the AI communicators, which were the relatively weak AI found in algorithms, were not addressed as independent communicators, thus little light was shed on how judges might understand their rights in the future. In the absence of AI-specific rulings, we must turn to two other areas in which the Courts have made clear rulings regarding the rights of non-human communicators—animals and corporations.

A. Blackie the Cat Says "I Love You"

Animals, with the help of owners and activists, have raised many legal challenges that have required courts to determine the extent to which non-human actors can claim protections that have historically been purely associated with humans. Of course, while animals are a type of non-human actor that the courts have considered in terms of human rights, they do not pose the same challenges to the foundational assumptions of the marketplace of ideas theory as AI entities. However, the cases in which they have claimed human-like rights—or at least lawyers and activist groups have on their behalf—have challenged judges to articulate rationales regarding the extent to which non-human actors should and should not receive human rights. In the most relevant case, *Miles v. City Council of Augusta*, the owners of Blackie the Cat contended that being compelled to purchase a business license in order to collect donations from their pet's performances violated both theirs and the cat's First Amendment rights.[211] Blackie the Cat was capable of saying "I love you" and "I want my Mama" on command.[212] The Eleventh Circuit rejected the owners' First Amendment claim and, in a footnote in the final lines of the case, scoffed at extending First Amendment rights to a cat.[213] The court wrote it would "not hear a claim that Blackie's right to free speech has

---

[210] *Id.* at 630 (quoting Riley v. Nat'l Fed'n of the Blind of N.C., 487 U.S. 781, 796–97 (1988)).
[211] 710 F.2d 1542, 1543 (11th Cir. 1983).
[212] Miles v. City Council of Augusta, 551 F. Supp. 349, 350 n.1 (S.D. Ga. 1982).
[213] 710 F.2d at 1544 n.5.

been infringed." [214] The court continued, "although Blackie arguably possesses a very unusual ability, he cannot be considered a 'person' and is therefore not protected by the Bill of Rights."[215]

Other animal-related cases have resulted in similar conclusions by courts. Animals, as non-human actors, have generally been found to lack standing because they lack personhood and therefore cannot succeed in their claims. Most recently this reasoning was a part of a federal district court's decision in the "monkey selfie" case in 2016.[216] Naruto, a six-year-old crested macaque, took pictures of himself using a camera that David John Slater had left unattended.[217] Slater used the photos, which led PETA and other animal rights groups to claim he had violated Naruto's copyright. The judge concluded the Copyright Act was only intended to apply to humans.[218] The judge cited *Cetacean Community v. Bush*, one of two other recent cases that involved animal rights questions, in constructing his reasoning.[219] In *Naruto*, as well as in *Tilikum v. Sea World*, the federal courts reasoned the animals simply lacked standing.[220] Importantly, in *Tilikum*, the Court concluded that killer whales could not succeed in a Thirteenth Amendment-based suit against Sea World—which argued that keeping the whales in confinement constituted slavery—because they were not human.[221] The court reasoned the amendment "applies to humans, and not orcas."[222] In *Cetacean*, the court emphasized if Congress wished to extend existing or future laws to animals, it could do so, but no such wording, or evidence of intent regarding the inclusion of animals, was present in the relevant laws involved in the case.[223] Thus, courts have consistently rejected claims made on the behalf of animals, which represent a type of non-human actor. These decisions, however clear they appear to be regarding the rights of non-human actors and how applicable they may seem regarding the rights of potential claims made by AI communicators, do not represent the only set of court decisions in this area.

---

[214] *Id.*

[215] *Id.*

[216] Naruto v. Slater, 888 F.3d 418 (9th Cir. 2018).

[217] *Id.* at 420.

[218] *Id.* at 4.

[219] *Id. passim* (citing Cetacean Cmty. v. Bush, 386 F.3d 1169 (9th Cir. 2004)).

[220] *Naruto*, 888 F.3d at 420; Tilikum v. Sea World, 842 F. Supp. 2d 1259 (S.D. Cal. 2012).

[221] *Tilikum*, 842 F. Supp. 2d at 1264.

[222] *Id.*

[223] *Cetacean*, 386 F.3d at 1179 (quoting Citizens to End Animal Suffering & Exploitation, Inc. v. New England Aquarium, 836 F. Supp. 45, 49 (D. Mass. 1993)).

B. The Corporate Speech Argument

Though fundamentally different than Blackie the Cat in nearly every way, corporations and the talking cat share one crucial aspect in common—they are both non-human communicators. Importantly, where Blackie the Cat, or at least his owners, failed to succeed in claiming First Amendment protections, corporations have succeeded. The reasons for their success are crucial to the central question of this Article. Beginning in the 1970s, first with *Buckley v. Valeo* and then with *First National Bank of Boston v. Bellotti* two years later, the Supreme Court concluded that the First Amendment protects corporate speech.[224] In *Bellotti*, corporations challenged a Massachusetts law that limited their ability to communicate ideas about a ballot initiative that would have affected them and their interests.[225] Importantly, the Court reasoned in the case that the identity of the speaker should not matter in First Amendment cases. Calling upon its reasoning from *Mills v. Alabama* in 1966, the Court explained that "a major purpose of the First Amendment was to protect the free discussion of governmental affairs."[226] Following this line of logic, Justice Louis Powell, in writing for the Court, concluded that "[i]f the speakers here were not corporations, no one would suggest that the State could silence their proposed speech."[227] Finally, and crucially, he highlighted that "[t]he inherent worth of speech in terms of its capacity for informing the public does not depend upon the identity of its source."[228]

The Court's decision in *Bellotti* overturned the Supreme Judicial Court of Massachusetts's ruling in the case from the year before. The Massachusetts court had substantially based its conclusions upon its analysis of the nature of corporations and whether or not they should have rights that are afforded to human citizens. In referring to Article IV, Section 2 of the Constitution and the Fourteenth Amendment, the court concluded that corporations were not protected by the First Amendment because, much as was the case in the animal-related decisions, they were not citizens.[229] The Massachusetts court drew from a 1906 Supreme Court ruling, which concluded the Fourteenth Amendment only extends to "the liberty of natural,

---

[224] 435 U.S. 765 (1978); Buckley v. Valeo, 424 U.S. 765 (1978); *see also* Robert L. Kerr, *Subordinating the Economics to the Political: The Evolution of the Corporate Speech Doctrine*, 10 COMM. L. & POL'Y 63 (2005) (presenting a comprehensive examination of the corporate-speech movement's history).

[225] *First Nat'l Bank*, 435 U.S. at 767–69.

[226] *Id.* at 776–77 (quoting Mills v. Alabama, 384 U.S. 214, 218 (1966)).

[227] *Id.* at 777.

[228] *Id.*

[229] First Nat'l Bank of Boston v. Attorney General, 371 Mass. 773, 783 (1977), *rev'd sub nom.* First Nat'l Bank of Boston v. Bellotti, 435 U.S. 765 (1978).

not artificial, persons."[230] Thus, the Supreme Court had this line of reasoning from Massachusetts's highest court in front of it when it considered the appeal, but chose to go a different direction, ultimately concluding that the First Amendment protected corporations.

The Court reaffirmed this approach in 2010 in its decision in *Citizens United*. Importantly, Justice Anthony Kennedy, writing for the Court, emphasized that "[o]n certain topics corporations may possess valuable expertise, leaving them the best equipped to point out errors or fallacies in speech of all sorts, including the speech of candidates and elected officials."[231] The Court reasoned that, therefore, not only should corporations have a right to speak because political matters might affect their interests, as was the focus of the Court's justification in *Bellotti*, but corporations are uniquely qualified to contribute to discourse in democratic society more generally. Chief Justice John Roberts, in a concurring opinion in *Citizens United*, emphasized that the First Amendment was "written in terms of 'speech,' not speakers. Its text offers no foothold for excluding any category of speaker."[232] Thus, the Court in these corporate-speech decisions communicated that an artificial entity that can contribute to discourse in democratic society should be protected by the First Amendment.

C. Reconciling Corporate Speech Rights with Blackie the Cat's Failure in Court

The animal rights and corporate speech cases appear, on the surface, to represent two separate lines of thought regarding the extent to which First Amendment rights should be extended to AI communicators. The natures of the two different types of non-human actors in these cases, however, highlight important aspects of this Article's larger questions regarding the future of the marketplace approach. If First Amendment protections are extended to AI communicators, then one effect will be that the spectrum of potential solutions for safeguarding the marketplace becomes substantially narrower. Therefore, the differences between the corporate speech and animal-related cases contribute important building blocks to this Article's central question.

The first important difference between the lines of rulings is that corporations are collections of citizens. While they are "artificial legal entities," each member of the corporation is

---

[230] Northwestern Nat'l Life Ins. v. Riggs, 203 U.S. 243, 255 (1906).
[231] Citizens United v. FEC, 558 U.S. 310, 364 (2010).
[232] *Id.* at 392–93 (Roberts, C.J., concurring).

human, and humans are protected by the First Amendment. This observation aligns with the Supreme Court's reasoning from *Bellotti* and *Citizens United*, where justices emphasized that corporations can contribute to discourse. Animals, however, generally lack the ability to contribute to discourse and are therefore not protected by the First Amendment.[233]

Second, and in a related sense, the nature of the messengers and their potential intents in communicating are different than the animal and corporation cases. Blackie the Cat was not actually expressing a meaningful message when he made noises that sounded like "I love you."[234] The cat was merely executing an action it was trained to perform when prompted. Similarly, Naruto the monkey unlikely intended to express himself when he took a picture using the photographer's camera.[235] As the judge explained, Naruto had seen many tourists and photographers operate cameras and was merely reenacting those behaviors.[236] Conversely, corporations, as collections of individuals, can consider a variety of factors when constructing messages. Corporations, via those who work for them, select and create messages that are conveyed with specific purposes. Thus, as legal scholar Tim Wu highlighted, a distinction can be drawn between AI actors that *communicate* and those that *speak.*[237] Wu explained "[t]hose who merely carry information from place to place (courier services) generally don't enjoy First Amendment protection, while those who select a distinct repertoire, like a newspaper . . . do."[238] Blackie the Cat and Naruto, much like many forms of Weak AI, were certainly *communicating*, but they were not *speaking* in the sense that they intended to contribute ideas to the marketplace.

It is therefore reasonable that the question of First Amendment rights for AI communicators could come down to the nature of the communicator. If the entity merely provides information or automatically shares content, such as an algorithm or a bot that retweets every message a human account holder publishes, then it can be classified as more of a communicator than a speaker and should therefore not receive First Amendment protections. Conversely, if an AI entity is constructing original messages that contribute to democratic

---

[233] *See* Naruto v. Slater, No. 15-cv-04324-WHO, 2016 U.S. Dist. LEXIS 11041, at *9–10 (N.D. Cal. Jan. 28, 2016), *aff'd,* 888 F.3d 418 (9th Cir. 2018); Miles v. Augusta, 710 F.2d 1542, 1544 (11th Cir. 1983).

[234] *Miles*, 710 F.2d at 1543.

[235] *Naruto*, 2016 U.S. Dist. LEXIS 11041 at *3.

[236] *Id.*

[237] Wu, *supra* note 49, at 1506–07.

[238] *Id.* at 1497.

discourse, the Supreme Court's reasoning from the corporate-speech cases strongly support the conclusion that they should be protected. Justice Powell in his opinion in *Bellotti* and Chief Justice Roberts in his concurring opinion in *Citizens United* both emphasized that the First Amendment should focus on the speech and not the speaker, and it is clear that some AI communicators can contribute to discourse with their messages.[239]

V. TOWARD A PROCESS-FOCUSED MARKETPLACE

The marketplace of ideas, while it has persisted as the Supreme Court's dominant rationale for freedom of expression for nearly a hundred years, faces new challenges in the twenty-first century. In addition to longstanding questions about the very foundational assumptions with which it has come to be associated, primarily those regarding the nature of truth and the rationality of citizens, the theory now faces substantial concerns about how it can function in an era when individuals—human actors—are often forming substantially fragmented communities of like-minded individuals and, at the same time, hordes of AI communicators are moving within these virtual communities, spreading false information and drowning out the exchanges of ideas that are taking place among citizens by overwhelming the forums with ideological messages.

In other words, networked technologies have allowed citizens to create a vast multiverse of relatively limited marketplaces that offer few ideas and even fewer challenges to the agreed upon "truths." It is within these limited marketplaces that AI communicators are entering discourse with citizens and are finding substantial power to spread falsity and misinformation that reinforces pre-existing narratives. Beyond simply sharing untrue information, weak AI entities are being used to overwhelm these marketplaces with certain ideas and, in doing so, are drowning out other voices and ideas. This process was evident in the discourse that surrounded the Nunes Memo as bots were employed to take up the organically created #releasethememo hashtag and flood politicians' Twitter feeds with a certain idea.[240] Ultimately, the fundamentally inhuman nature of the AI communicators—the amount of data they can process and the speed at which they operate—allows them to fill the marketplaces with only their product. If other ideas were

---

[239] *See* First Nat'l Bank v. Bellotti, 435 U.S. 765, 777 (1978); *see also* Citizens United v. FEC, 558 U.S. 310, 392–93 (Roberts, C.J., concurring).
[240] *See supra* Section I.A.

expressed, few, if anyone, could find their "product" amongst the crowded shelves of ideas that were expressed by the AI entities and the people who programmed them.

Thus, as indicated earlier, while it is unlikely we face the dilemma that comes from creating a "god from the machine," *deus ex machina*, the capability that AI communicators have to essentially create our world, *et de mundi machina*, by influencing the ideas and information we encounter as individuals immerse themselves in discourse in virtual spaces, requires a careful look at the foundational assumptions of the marketplace of ideas. Considering these concerns, this Article has questioned how the marketplace approach can remain a dominant justification for freedom of expression, as well as a workable model for how the process of a free exchange of ideas functions, as the Fourth Wave of networked technology nears.

A. The Process-Based Marketplace

Ultimately, this Article proposes that two important steps must be taken. First, we must revise the foundational marketplace assumption that truth is generally universal and absolute and replace it with a more process-based approach. Such a revision allows for the theory to focus on being a justification for protecting the *process* through which citizens come to understand the world around them and, ultimately, govern themselves. In practice, this approach means that, rather than finding that freedom of expression was created to protect the ability of the truth to be discovered or to vanquish falsities, as the traditional marketplace approach has been understood, the process-based approach emphasizes that the First Amendment safeguards the *process* through which individuals come to their understandings. This approach can also be reconciled with recent speech cases regarding corporations and animals. Thus, when the courts face a First Amendment question, their concern should not be as much upon the outcome—the truth winning out amidst falsities—as the process that leads to understanding. This approach aligns more closely with Justice Holmes's more pragmatic conceptualizations of how truth functions and, most importantly, situates the theory in a way that more adequately explains how free expression functions in the networked era.[241]

This process-based approach opens the door to the second important change. When protecting the process of information discovery and truth formation, information becomes a *public*

---

[241] *See, e.g.*, Letter from Holmes to Sheehan, *supra* note 189, at 7; Holmes, *Natural Law*, *supra* note 189, at 40; *Abrams*, 250 U.S. at 630 (Holmes, J., dissenting).

good, something that has a certain inherent value.[242] Such a realization is crucial. When the objective truth requirement is removed from the marketplace's foundational assumptions, the idea that truth will always win when it "grapples," as Milton contends, becomes less salient as a justification for protecting the exchange of ideas. Thus, we no longer need to protect the ideas, so truth and falsity can battle. Instead, the exchange of ideas must be protected because truth is a process. If truth is a process, then the provision of truth becomes a *public good*, something that is justified by its contribution to the marketplace of ideas.

B. Reclaiming the Marketplace

The combination of the *process*-based understanding of truth and the *public-good* assumption that goes along with it provides the necessary building blocks for constructing a justification for safeguarding the marketplace in the era of AI communicators. The courts have generally rejected First Amendment and other claims by non-human entities in which the communicator merely repeated information, rather than creating and expressing ideas. Conversely, the Supreme Court has constructed a relatively strong precedential foundation for protecting the rights of non-human communicators that do convey ideas, particularly if those ideas hold the potential to be a *public good* that can contribute to the *process* of truth discovery.[243] This dichotomy was seen in the animal-related cases, where Blackie the Cat and Naruto the Monkey, despite executing communicative acts, failed to receive protection for their expression.[244] Conversely, the Supreme Court contended corporate speech should be protected because these artificial entities can contribute important ideas to discourse.[245] Justice Kennedy in his opinion in *Citizens United* emphasized that "[t]he Court has thus rejected the argument that political speech of corporations or other associations should be treated differently under the First Amendment simply because such associations are not 'natural persons.'"[246]

If these understandings are applied to AI communicators, the process-based, public-good model would allow for some

---

[242] Jared Schroeder, *The Holmes Truth: Toward a Pragmatic, Holmes-Influenced Conceptualization of the Nature of Truth*, 3 BRIT. J. AM. LEGAL STUD. 169, 195–97 (2018).

[243] *See supra* Sections IV.A–B.

[244] Naruto v. Slater, No. 15-cv-04324-WHO, 2016 U.S. Dist. LEXIS 11041, at *10 (N.D. Cal. Jan. 28, 2016), *aff'd,* 888 F.3d 418 (9th Cir. 2018); Miles v. Augusta, 710 F.2d 1542, 1544 (11th Cir. 1983).

[245] Citizens United v. FEC, 558 U.S. 310, 343 (2010); First Nat'l Bank of Boston v. Bellotti, 435 U.S. 777 (1978)

[246] *Citizens United*, 558 U.S. at 343.

regulation of those entities that merely repeat information but would protect those that construct and convey innovative ideas. The line between these two types of entities is, admittedly, not completely clear. The courts, however, could incorporate the originality test that was constructed in *Feist v. Rural Telephone*. In that case, the Supreme Court concluded that for a work to be protected under the Copyright Act, it must have a modicum of creativity.[247] Using similar logic, in order for AI-based messages to be protected, the courts could require such works include a certain amount of originality. Thus, bots that draw from existing pools of information to create new posts, such as Every Trumpette (@everytrumpette), would be protected while bots that simply automatically retweet other tweets would not. Importantly, the original messages that are being shared, whether humans or AI entities publish them, would be protected under this approach. The retweeted or otherwise shared messages that are conveyed by AI entities, however, could be regulated, since they are simply communicating rather than speaking.

Similarly, this approach would allow some regulation of AI communicators that spread false and misleading information rather than factual information.[248] Certainly, in many cases, such expression, if communicated by a human, would be protected unless it was defamatory or ventured into another area of already unprotected speech.[249] The courts, however, have not indicated that non-human communicators have the *same* rights as humans. The animal rights and corporate-speech cases conveyed the understanding that non-human actors only receive First Amendment protections if their expression contributes to discourse and is, thus, a public good. For this reason, it makes sense some regulation that purely halts intentionally false information that is communicated by AI entities would not violate the First Amendment under this conceptualization of the marketplace approach. In particular, messages that merely repeat misinformation could be regulated, since there is no originality and since they lack the *public good* of contributing to

---

[247] *See* Feist Publ'ns Inc. v. Rural Tel. Serv. Co., 499 U.S. 340, 345 (1991).

[248] The Court has specifically delineated between regulation of false factual statements and ideas and opinions people believe to be false. In *United States v. Alvarez*, for example, the Court explained, "[l]aws restricting false statements about philosophy, religion, history, the social sciences, the arts, and the like raise such concerns, and in many contexts have called for strict scrutiny. But this case does not involve such a law. The dangers of suppressing valuable ideas are lower where, as here, the regulations concern false statements about easily verifiable facts that do not concern such subject matter." 567 U.S. 709, 731–32 (2012).

[249] *See* Miller v. California, 413 U.S. 15, 18–19 (1973); *see also* Chaplinsky v. New Hampshire, 315 U.S. 568, 571–72 (1942); *Alvarez*, 567 U.S. at 747.

the truth-discovery process. While a challenging, difficult area to regulate, careful work in these areas could help address the spread of intentionally false information within fragmented, echo-chamber-dominated virtual communities without limiting First Amendment protections.

More conceptually, the proposed revisions to the marketplace metaphor would provide the courts with a justification for freedom of expression that would guide them in such cases. Identifying this dividing line, while difficult to draw, would provide a path to eliminate the problem that arises when AI communicators, by their fundamentally non-human natures, flood the marketplace with countless thousands of messages, whether they are truthful or false, thus eliminating the ability for other ideas to be heard and creating the potential perception that one idea is more accepted or popular than others. At the same time, this approach avoids the First Amendment problems that would arise if the government sought to eliminate all AI-based communicators.

Without these revisions to the foundations of the marketplace approach, the theory will fail to remain relevant in the twenty-first century. AI communicators are, by their natures, fundamentally different than the human actors that were on the minds of the theory's authors and the justices that have employed it during the past one hundred years. The process and public good revisions to the marketplace theory provide slight adjustments to how expression is justified. By focusing on protecting a process that leads to truth formation, the approach retains a strong foundational interest in protecting freedom of expression, but at the same time is clarified in a way allows for limited constraints on AI communicators that do not contribute to creating a marketplace that is focused upon protecting the development of truth for each citizen. If truth is a process, then that process must be protected.