CERTAINLY BIASED: TRUTH AND CONFIDENCE IN THE DIGITAL AGE

by

Andrew Armstrong
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DEDICATION

This is dedicated to Joseph and Ida Jaffe, whose love, wisdom, and kindness remain warm in my heart.

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his is the section I have been most looking forward to write; not simply since this project is drawing to a close—though that does add relish to the moment—but because it has been my great pleasure and good fortune to have wonderful support along the way. Words cannot fully capture my gratitude.

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ABSTRACT

CERTAINLY BIASED: TRUTH AND CONFIDENCE IN THE DIGITAL AGE

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National politics has come to resemble the far side of Alice's looking glass; contemporary debate has been turned on its head, marked by undertones of epistemological anxiety. From fake news to alternative facts, the very concept of what is "true" has become contentious. Set against this backdrop of dysfunction, this project explores how digital technology is complicating, rather than improving, the quality of democratic debate. The crux of the argument is that social and technological trends interact to form an information environment increasingly conducive to the creation and dissemination of unjustified conviction, half-truths, and outright lies.

CHAPTER ONE: A PYRITE AGE OF CERTITUDE

Truth is great and will prevail if left to herself, that she is the proper and sufficient antagonist to error, and has nothing to fear from the conflict, unless by human interposition disarmed of her natural weapons, free argument and debate; errors ceasing to be dangerous when it is permitted freely to contradict them.
– Thomas Jefferson

Truth is mighty and will prevail. There is nothing wrong with this, except that it ain't so.
– Mark Twain

National politics has come to resemble the far side of Alice's looking glass; contemporary political discourse has been turned on its head, marked by undertones of epistemological anxiety. Fake news. Alternative facts. Echo chambers. The embrace of malicious conspiracy theories. In an increasingly frenzied public sphere, it is often hard to know who, let alone what, to believe; indeed, the very concept of what is "true" has itself become a point of contention. Despairing of society's daily dysfunction, commentators are penning books like *The Death of Truth*, *Post Truth*, *How Democracies Die;* among scores with such fabulously fatalistic titles. Handwringing, however, only goes so far. The deeper question, the motivation behind this project, is to assess *why* social debate seems so disconnected from reality.

The driving premise of this dissertation is that the proliferation of unfounded certainty, an impulse rooted in psychology and exacerbated by new technologies, overshadows the real and muddies collective understanding. Thus, it is not that "truth" itself is in short supply—scientific inquiry has never been more capable—but rather that

the disconnect between what society *does know* and what the public *agrees we know* has never been greater. Digital mediums are gradually marginalizing measured debate in favor of straightforward and simple messaging, no matter how suspect. Truth on the digital frontier may not be dead, but it is in very real danger of being buried behind a deluge of misinformation, half-truths, and false confidence.

Despite attempts to reify the wisdom of democracy and free speech, the fact remains that humans are not rational automata. Cognitive limitations have always inhibited our ability systematically to separate fact from fiction. But the challenge extends well beyond individual foibles or isolated bad actors; *all* facets of society contribute to the problem of surfacing truth in the public sphere. From naive citizens, opportunistic politicians, to sensationalist journalists, each social stratum reinforces a systematic preference for certitude over circumspection. More troubling, the biases and incentives of each social group are deeply interconnected and mutually reinforcing. If politicians continually stretch or simplify truth, it is not (just) because they are manipulative; it is because they are all-too-happy to cater to a public clamoring for comforting confidence. When the media are charged with sacrificing accuracy for entertainment, it is because this narrative style drives viewership. The daily give and take of public discourse is increasingly driven by what *sounds* convincing rather than what is *actually* true. The resulting cycle of false prophecy is as old as human society itself, and if the story were to end here there would be little novel to add to the health of the public sphere.

But the story does not end here.

The second theme of this project, the crux of the argument, is that modern digital technology is magnifying these long-standing biases in a manner fundamentally different than previous technologies. The dawn of the digital era is not simply a new chapter in an age-old story of truth and falsity; it is a revolutionary break from the past. The impact of new mediums like the internet and social media are so profound, so far reaching, that old models of democratic free speech need more than superficial revision: they are due for a fundamental reconception. At an immediate level, new technologies dramatically increase the universe of information available to the public. This can make it hard for the wheat of truth to be separated from the fictitious chaff. But solely fixating on the sheer volume of newly available information, while important, misses the weightier issue.

The most profound consequence of these new technologies is their effect on the underlying dynamics of how knowledge is created, disseminated, and consumed. New mediums have led to new channels of communication, resulting in a public sphere fundamentally different than those that preceded it. Politicians, long beholden to journalists for exposure, can now communicate directly to the citizenry. Crackpots and conspiracy theorists can bask in echo-chambers of misplaced belief. And through it all the traditional watchdog of democratic theory, trained journalists, are increasingly marginalized. The mainstream media are no longer the privileged gatekeepers of information reaching the public sphere; rather, they must now contend with a torrent of information beyond their control. Thus, the crux of the project can be summarized as follows: *social and technological trends interact to form an information environment increasingly conducive to the creation and transmission of unjustified conviction*.

This argument runs counter to a long literature concerning the function and benefits of democratic Marketplaces of Ideas (MOI). Since the days of John Stuart Mill, Jeremy Bentham, and Immanuel Kant, democratic republics have earned high marks for their presumed ability to translate public debate into sensible policy. The standard view is that competitive debate, enabled and encouraged by an independent press that shines light on government actions, serves to educate a prudent public, helping identify potential blunders and encouraging leaders to adopt wise policies. So persuasive is this concept today that the marketplace metaphor buttresses many attempts to quantify the benefits of democracy, ranging from the wisdom of the collective, democratic peace theory, as well as theories of free speech more generally (Bentham 1989; Owen 1994; Fishkin 1995; Barabas 2004).

The rosy picture of democratic deliberation embraced by theorists, however, is increasingly tenuous in practice. Even when objective issues achieve overwhelming scientific consensus—global warming, evolution, or the safety of vaccines—public opinion often appears stubbornly resistant to truth (Oreskes & Conway 2010; Otto 2016). More troublingly—and directly counter to market theory—there are numerous cases where time and attention actually move aggregate opinion *away* from expert belief (Tetlock 2005; Hoffman 2011; Biddle & Leuschner 2015; Rutjens et al. 2021). The shortcomings of democratic deliberation are particularly salient in this time of fake news, demagoguery, and proliferating conspiracy theories.

Rather than simply decry the failings of open debate, this project attempts to explain *why* democracies consistently fall short of the ideal. To this end, I advance an

alternative perspective of the public market; a one where belief is not solely motivated by achieving truth, but also by parallel factors like confidence, tribalism, and values. The intent is not to offer the final word on an issue as complex and rapidly evolving as the public sphere, but rather to offer a series of plausibility probes challenging the conventional wisdom of academics and democratic theorists. Each of the chapters focuses on sociopolitical and technological factors that inhibit the market's ability to efficiently separate fact from fiction. Truth may not be dead, but it is facing increasingly stiff competition in the public arena.

Truth, Facts, and Certainty

Given the deluge of delusion in the daily news, and the epitaphs written for truth in contemporary political debate, it is easy to lose sight of the broader arc of history. If there is "a moral" about social circumspection to be found, it is hardly a comforting one. In contrast to the sanguine picture of enlightenment-through-free-speech espoused by philosophers, society has *never* been firmly grounded in truth or thoughtful deliberation; the public sphere was *never* particularly wise or deliberative. Not in the heady days of the democratic enlightenment. Not in simpler times before the digital revolution. Not ever. Pundits, in short, wax nostalgic about a fantastical age of wisdom, as real as Camelot, and with as much value to understanding the current dysfunction in the news.

The tension between grasping underlying truth and expressing confidence during public debate was famously highlighted by former Secretary of Defense Donald Rumsfeld. When asked about the connection between Iraq's purported weapons of mass destruction program and terrorist groups he quipped:

> As we know, there are known knowns; there are things we know we know. We also know there are known unknowns; that is to say we know there are some things we do not know. But there are also unknown unknowns—the ones we don't know we don't know. And if one looks throughout the history of our country and other free countries, it is the latter category that tend to be the difficult ones. Rumsfeld 2002

The Secretary's ultimate grasp of reality aside, the quotation itself is an epistemological gem. Rumsfeld isn't *wrong;* the world *is* an awfully complex place, and uncertainty *is* an ever-present reality of modern politics. For every issue where all the variables are even *relatively* known, there are scores of others with inescapable ambiguity. If the rhetoric of political messaging and news coverage remains confident in spite of underlying complexity, it would seem to fly in the face of sound judgment. More importantly, since democratic theory assumes well-informed citizens are the bedrock of society, one would hope that public debate would embrace rhetoric sufficiently willing and confident to acknowledge uncertainty.

Truth, Certainty, and The Limits of Free Debate

Nothing about the public's inclination towards sound judgement, however, should be taken for granted. The pursuit of truth is messy and imperfect, and achieving an accurate truth-consensus rests on a complex web of social, political, and technological factors. Freedom of speech does not necessarily equate result in a correspondingly free or efficient marketplace of ideas. Democracy faces an ever-present danger that "big economic and governmental organizations" can use their disproportionate power to hijack the public sphere, using the "machines of advertising and political consulting agencies" to advance their narrow interests to the detriment of general society (Kellner 2001). These forces undermine collective wisdom, as public debate "loses its critical function in favor of a staged display; even arguments are transmuted into symbols to which again

one can not respond by arguing but only by identifying with them" (Habermas 1989, 206).” This tension between rational argument and identity echoes in today’s political disfunction. When desire to *win* in the public marketplace—whether it is interparty politicking, interest groups versus science, or indeed any contest between social factors—trumps motivation to be *right*, the MOI loses its ability to efficiently parse truth from falsehood.

Certitude *Matters*

Rather than simply critiquing which social beliefs are true or false—a sobering but ultimately unhelpful exercise—greater insight is possible by expanding the discussion to include complimentary factors like certainty which mediate an idea’s success in the public sphere.[1] Understanding congruent factors like certitude promises insight about how facts are formed, communicated, and evolve in a social context.

While truth and certitude are clearly distinct ideas—one can harbor a firm conviction about something that is demonstrably false—in the real-world context of political rhetoric they are inextricably intertwined. The persuasive power of sociopolitical messages is inseparable from the confidence of delivery. Should the public mobilize after listening to a dreamy-eyed astrophysicist muse about a potential alien invasion in an indeterminate future? Hollywood may leap at the idea, but the general public probably has more important challenges to attend to. Conversely, should a nation be spurred to action after a president forcefully warns of an imminent attack from a terrorist cell?

[1] Certitude, of course, is just one of many factors mediating receptivity to truth. Other psychological or social forces—negativity bias, tribalism, dissonance—influence how we process information. These are all important issues, and while each deserves the attention of a book in their own right, for the sake of scope the current discussion focuses on the specific issue of certainty.

Likely so. The issue, of course, is that average citizens do not possess expert knowledge about the actual probability of aliens, terrorists, or any other hypothetical danger. Rather, particularly when a topic first enters public debate, the public must rely on the certainty of elites as a proxy for truth (Baum & Groeling 2010).

This reliance, as with all principle-agent arrangements, is both necessary and precarious. Necessary, because there is simply no other way for citizens to track the infinity of all the challenges facing society. Precarious, because communicated certainty about a particular issue, and the public's contingent view of the truth, is easily distorted. Many factors—from cognitive biases to personal incentives—can skew the way certainty is portrayed. Like the childhood game of telephone writ-large, the transmission of confidence throughout the public sphere is rarely a pristine chain from inception to reception.

The extreme errors, the outright lies and egregious falsehoods, should be (relatively) easy for the public market to detect and eventually correct. Clearly, not everything in public life is conveniently black-and-white. The more profound challenge for the public sphere is that, even when the falsehood is not egregious, ideational marketplace is rarely an even playing field between certitude and circumspection.

There is reason to believe that certitude is susceptible to systematic bias in a society that shares a general preference for confidence over circumspection. Psychology has long understood that individuals, as quintessential cognitive misers, find it far easier to weigh arguments when issues are cast in black-and-white terms (Petty & Cacioppo 1986; Kahneman 2011). Nuance, in contrast, is a cognitive nuisance; in the busy bustle of

daily life, thinking critically appears more trouble than it is worth. With this cognitive bias as a social constant, the elites who steer public debate strategically balance ambiguity with certitude to serve political ends (Hart & Childers 2004; Barabas 2005). Finally, the media executives who have to distill the vast universe of elite rhetoric for mainstream coverage often prefer—out of necessity or expedience—messages that are clear and straightforward (Patterson 2013). Certitude is simply easier to package into tight-and-tidy stories than is either lengthy exposition or equivocation.

Finally, and most importantly, *certitude matters*. Reflecting on how certainty is portrayed in the public sphere is more than academic curiosity. Democratic theory rests on an informed citizenry, and it is critical that the public is given the best possible information (Lupia & McCubbin 1998). It is not simply a matter of *what* issues are discussed, but *how* analyses are presented. Accurately conveying the appropriate level of confidence is *essential* for a well-functioning society (Hart & Childers 2004; Barabas 2005). It is not simply that the probability of rain on the news influences one's weekend picnic plans. How the media conveys confidence or circumspection dramatically influences the public's perception of complex issues. Sensitivity to certainty helps citizens know which issues to prioritize and which may be less pressing. One would hope for a different public response if a politician released a statement that a nuclear war/global contagion/financial meltdown is possibly/likely/absolutely going to threaten the nation.

Public sentiment is, in fact, sensitive to changes in news coverage over time (Barabas 2005). Polling strongly suggests that variation in expert certitude regarding a

threat is followed, after a brief lag, by a shift in public concern. That's all well and good, and supports the theory of how democracy *should* work; new information *should* induce a corresponding change in belief. Of course, arguing that the public is sensitive to message certitude is a pretty low bar. Had it been otherwise—if people were genuinely tone-deaf to confidence in elite cues—civilization would have collapsed long before this sentence was written. Just because citizens broadly respond to variations in certainty does not mean political debate is not wrought with shortcomings.

Sensitivity to certainty is only helpful when the confidence is warranted and, logically, errors can lead to misguided public opinion. Too little confidence can cause the public to dismiss or underestimate genuine challenges and threats. The world may be burning from climate change, but as long as uncertainty persists in public debate countries are unlikely to take decisive action to combat it. Conversely, too much confidence might result in a diversion of resources to address a nonexistent problem. Like Aesop's lupine fable, not every fervent call to action is based on truth. If the news began blaring that all potential threats were imminent it would to paralyze society. Not simply because we might all want to curl up in terror, but because it would be difficult to assess the relative threat and allocate resources accordingly.

Confidence, Distorted

Without wanting to belabor the obvious: expert analysis is *hard*. Even the best and brightest make errors and misjudge their own capabilities (Mumpower & Stewart 1996; Tetlock 2005; French 2011). Even when experts achieve a reasonable understanding of truth, it can be difficult to communicate this knowledge to a public

lacking the time, interest, or specialized knowledge necessary for effective evaluation (Pollack 2003; Jensen et al. 2017). These baseline challenges of communicating knowledge and certainty immutable; the inevitable consequence of assessing and communicating complex issues.

Society may never achieve absolute truth, but theory suggests free debate is our best shot at an accurate understanding of the world. In an idealized society, functioning under an efficient exchange of ideas, the best available knowledge from experts would be faithfully translated into corresponding public opinion. This shift may not be instant, it takes time to communicate and debate, but the hope for a steady and inexorable march towards truth. There is, of course, a world of difference between the theoretical and practice. On top of all the baseline challenges is the simple fact that not all errors in elite communication are innocent or well-intentioned. A reoccurring theme throughout this project is *why* elites—through a combination of personal, professional, and political factors—choose to distort their private confidence when communicating to the general public.

Towards a Broader Marketplace of Ideas

If overconfidence is defined as flying in the face of reality, the public sphere would put Icarus to shame. The frequent disconnect between underlying complexity and expressed confidence led economist Charles Manski (2013, 3) to reflect that "incredible certitude" has usurped "honest portrayal of partial knowledge" in the public sphere. One need only tune into a television broadcast, or peruse the web, to find an embarrassment of "incredible certitude" in the news. Given the complexity of the world, and the human

limitations of even the most well-intentioned, one might be left vainly hoping for a sincere dose of honest circumspection in political debate.

How did we get here? It is easy for social commentators to fixate on the headline-driving cases when society gets an important question completely and tragically wrong. Goodness knows there are plenty of outright falsehoods which undermine democratic theory, cause tangible harm, and resist attempts to create an accurate truth-consensus. Indeed, later chapters leverage these egregious failures—misplaced belief in Iraq's weapons program, climate change, and the 2016 election, among them—as illustrative examples of theories in context.

But these egregious cases only scratch the surface of society's troubled relationship with incredible certitude. Viewing politics through a binary lens of truth vs. falsehood, success vs. failure, threatens to overlook the underlying danger to the long-term health of the public sphere. These lies do not persist and perpetuate because they are incorrect; being false does not give an idea a competitive advantage in the cutthroat market of public opinion. Nor does the fact that a politician consistently lies, in-and-of-itself, render them compelling, let alone elevate them to the presidency. Rather, we are increasingly living in a world where the desire for truth must coexist and compete with our innate desire for certainty. This delicate balancing act—the ideational battlefield between circumspection and certainty—is inherently, unavoidably, tragically rigged.

A Pyrite Age of Certitude

The 21st century, by all indications, is shaping up to be a pyrite age of incredible certitude. Fierce belief that liberals suck the blood of children to maintain youth. Orbital

Jewish space lasers. “Vaccines” that are Trojan-horses for government mind control. Daily debate is deluged with a level of crazy that would seem unbelievable, except for the fact that it is all-too real. Today’s unhinged headlines, however, are not as unprecedented as they may seem. They are the culmination of a trend towards dysfunction decades in the making.

Candidate, and then president, Trump embodies the draw of unapologetic and unwavering confidence. Indeed, a host of books and op-ends have been penned over last several years lambasting Trumps embrace of incredible certitude. At face value, Trumpian proclamations like "I know more about ISIS than the generals do," or "nobody knows the system better than me, which is why I alone can fix it," are unequivocally absurd. One would like to think that the damn-the-torpedoes approach to falsehood in the face of evidence—an unapologetic confidence no matter the context or consequence—would be political suicide. The risk of getting caught in a lie, social scientists argue, is one of the chief reasons why politicians choose to equivocate (Fraser 2010; Jalilifar & Alavi 2011). It is a far safer option, tradition dictates, to be uninspiring than risk being false.

Yet Trump turned this collective wisdom on its head. Blatant, unequivocal, glaring overconfidence has not been Trump’s undoing. Rather, his success is driven by the appeal of unapologetic confidence; the power of his brand of politics is orthogonal to truthfulness. Given the continual daily deluge of crazy over the past several years it is no longer possible to dismiss these as passing fancies, the obsessions of a small-but-vocal cadre of foil-hatted quacks. Nor did his cavalier attitude towards truth appear to hurt his

core support. Quite the opposite: contempt for partisan "facts" was a central feature of his campaign and a central engine driving his success. Trump's damn-the-torpedoes braggadocio openly taunted the truth, daring audiences to question his view of realty. By many accounts even Trump's most fervent supporters don't take him literally (McCaskill 2016; Zito 2016).

For many, the 2016 presidential race carried consequences that extended far beyond the outcome of a single election. It was widely interpreted as the harbinger of a new and unsettling era of political rhetoric, one where objective truth takes a backseat to incredible certitude. In this hyper-partisan reality Trump's outsized personality and position atop the presidential pulpit makes him an obvious target for critique. And, of course, President Trump appears throughout the current project; in the present environment it is inconceivable that he would not. To channel Voltaire, had Trump not been present at this juncture in history, society would have invented him.

That said, while Trump may be the apotheosis of these contemporary trends, he is not a truly novel actor. Despite all the angst and op-eds, it would be misguided to assign any individual too much agency, or any single election too much consequence. Chronic overconfidence was a creeping problem well before Trump and will continue to challenge society long after he retires. Well before the last election, hyper-partisanship had warped American's perception of truth in society (Kahan et 2012). History is full of demagogues and lying cabals who have risen and fallen with the ages. While the contexts may vary over history, the underlying themes do not. Taken as a whole, the pantheon of demagogues shares a common foundation for their appeal: unapologetic, unquestioning

confidence.

In the midst of this period of change, it is helpful to contextualize the cultural, political, and technological trends that are reshaping the information environment. Not only does it put recent events in context, it also helps us understand the future of politics and news in the digital age. Each of the following chapters explores factors which influence the creation and dissemination of rhetorical confidence though the information environment.

The opening chapters are theory-driven, reviewing the literature on democracy and free speech, and assessing how communication technology is exacerbating society's inclination towards certainty at the expense of circumspection. The second section compliments the theory with historical context. The first of these, focusing on climate skepticism, explores the counterpoint to incredible certitude: unjustified uncertainty in the face of overwhelming evidence. Beyond the specific case of climate change, understanding the dynamics of persistent uncertainty offers insight into many stubbornly persistent challenges including vaccine skepticism, the dangers of smoking, and even the integrity of the American electoral process. The next two chapters—focusing on the 2016 election, and the rise of digital propaganda—focus on the potential for of overconfidence and misplaced conviction to obfuscate the truth.

The project ends with a look to the future of truth and confidence in public debate. It assesses the leading proposals, from federal regulation to independent "content courts," aimed at improving the quality of information in the public sphere. Given the deep-seated nature of the challenges, there are no easy solutions, no simple fixes to curb the surfeit of

certitude in the public sphere. The fundamental challenge is how to curb the trend towards disinformation and demagoguery without overreacting, as attempts to control the public marketplace may prove more detrimental than the issues wanting address.

Chapter 2: The Economy of Certainty

This chapter offers an expanded view of the marketplace of ideas, emphasizing psychology, rather than democratic theory, as the primary force driving the proliferation of information through the public sphere. While truth and honesty do have a measure of intrinsic value, their appeal is hardly universal, nor are they the only currency which matters in the public market. Anyone who has heard aphorisms like "fear sells" or "if it bleeds, it leads," is all-too-aware that measured reflection isn't the only force driving headlines. Indeed, there are many linguistic and contextual attributes which are orthogonal to truthfulness—sensationalism, partisanship, negativity, etc.—influencing the transmission and reception of information. Fact is not simply locked in eternal competition with falsehood; it must also contend with factors which may have little do with demonstrable reality. In this broader market mix, certitude is one of the most important attributes mediating how information travels through the public sphere.

Attention then turns to understanding how each of the key social groups—the public, elites, and journalists—systematically prefers certitude to circumspection. Thus, while systematic certitude bias does not *create* falsehood per se, it does *enable* and *reinforce* the spread of confidence, without consideration for how well or poorly this spread is justified. In this perspective it is relative confidence, not just underlying truthfulness, which mediates the spread of knowledge through society.

Chapter 3: Truth on the Digital Frontier

This chapter explores how digital technology is fundamentally rewriting our understanding of the public sphere by broadening age-old channels of communication and adding new dimensions that would have been impossible to imagine even thirty years past. If the moral of Chapter Two was "things have always been bad" the theme of Chapter 3 is "they're getting worse." It is not for naught that so many commentators are writing about the "death of truth" in today's political forum. The digital revolution has plunged society into uncharted waters, forcing us to cross a rhetorical Rubicon where old models of communication no longer reflect the flow of information through the public sphere. These new forces are a double-edged sword for democracy. New mediums have broadened participation and exponentially increased the volume of information available to the public, ostensibly furthering the democratic ideals and the driving assumptions of traditional communication theory. In reality, however, the market has struggled to adapt to life on the digital frontier.

The problem is threefold. First, the market must contend with far more information than ever before. Even an idealized public sphere, working on efficient Bayesian principles, requires time to process new information and update beliefs. The sheer volume of newly produced content makes it difficult to sift the seeds of truth from the chaff of falsehood. The longer society takes to reach an accurate truth consensus, the more time the public remains vulnerable to tangible costs and suboptimal policy.

Second, compounding the challenge of volume, is the changing dynamic behind the creation of this information. The Internet has democratized the public sphere, but this

has proven to be a Faustian bargain for the quality of public debate. For the first time in history, citizens are not just consumers but also information creators and amplifiers. While this may be admirable in principle, in practice the contribution of Joe Sixpack is more likely to muddy an issue than elucidate truth. The consequence is that content in the digital sphere is not only growing exponentially. More challengingly, the *ratio* of suspect to sound information is increasingly skewed.

Third, and most significant, traditional quality-control mechanisms at the heart of the public sphere are struggling to maintain relevance in the digital era. The mainstream media is not the "enemy of the people," as repeatedly decried by Trump and echoed by many Republicans. In a traditional market theory model, they are the *most* important force promoting the quality of information in the public sphere. Professional journalism is democracy's bulwark against a tsunami of incredible certitude, keeping crackpots, false-prophets, and lying elites from interfering with society's pursuit of truth. Digital media are increasingly sidelining or circumventing journalists, making it difficult to preempt the entry of incredible certitude and outright quackery into the public sphere.

Chapter 4: Strategic Uncertainty

Social scientists and social commentators have often pointed to this issue, with a wagging finger and a sad shake of the head, to illustrate the gap between "elite" knowledge and public opinion. In this regard, the issue of climate change is one of the most striking examples of unjustified uncertainty about a largely settled debate. Starting in the 1970s, in the wake of the post-war industrial boom, scientists began to worry about humanity's impact on the global climate. Over the next decade there was growing

consensus around both the existence of the problem and an acceptance that human activity was a contributing factor. Today, there is near universal agreement in the scientific community that human activity is causing global warming (Cook et al. 2016).

One would think the issue of climate change would be a success story for democratic deliberation. After all, climate change seems to be an easy opportunity for a market-based approach to prove its ability to achieve accurate truth-driven public opinion. The central question at hand is both straightforward and wholly objective: is mankind significantly contributing to warming the earth, yes or no? Furthermore, the issue of climate change is not a fringe issue, but has been at the forefront of both expert and public debate for decades. There is now, and has been for over a quarter century, near universal expert acceptance of the reality of anthropogenic climate change. The fact that there is a superabundance of certainty is entirely appropriate. We *should* have enjoyed decades of books and opinion articles extolling the skill of our scientists to solve complex issues, the wisdom of the public to embrace an important truth, and the courage of politicians to rise to the challenge.

This, of course, was not to be.

Despite the fact that scientists have achieved near unanimous consensus about the issue, news coverage and public opinion polling more generally remains highly and unnecessarily uncertain. Clearly, there is a chasm separating what the news should cover based on the best available science and what is actually broadcast. This disconnect is not itself a novel concept: scholars from many disciplines have long lamented the public sphere's struggle with an ostensibly unambiguous truth (Pollack 2003; Boykoff 2008;

Feldman et al. 2012). This chapter explores why the climate change debate does not conform to the predictions of market theory. Particular focus is given to the political and economic forces which actively undermine the public sphere with unjustified doubt, false counter-narratives, and outright lies.

Chapter 5: Partisan Unreality

Partisanship is toxic to truth and undermines the quality of public debate. The potential danger of parties was not lost on America's founding fathers. Alexander Hamilton warned of the pernicious influence of factions, arguing in 1795 that parties were "the most fatal disease" threatening the new nation. History has proven Hamilton right. Not only can partisan loyalty divide a country, it has an equally powerful ability to fracture the public sphere. This type of deeply-held bias is not only socially divisive but highly corrosive to the quality of information in the public sphere. Partisanship and its cognitive baggage are key factors determining whether the public sphere is motivated, or is driven by alternative marketplaces trading in subjective factors like certainty.

This chapter explores the impact of the current era of hyper-partisanship on the flow of information through the public sphere. The nation's divide has carried over from politics into epistemology, and it is increasingly clear that partisans live in parallel realities, with different sets of facts and varying sensitivity to objectivity versus demagoguery. There is no competition when everyone on one side of the spectrum is insisting on same belief. There are no consequences for incredible certitude, lies, or demagoguery when beliefs are more driven by the desire to *beat* the other side, by ignoring evidence of its disadvantages to justify the partisan's victory, rather than

providing evidence of believing they are right. *right*.

With this in mind, the first half of the chapter explores the general consequences of partisanship on truth and certitude in public debate. The second part turns to the 2016 election as an example of the power and appeal of brash and unapologetic confidence in political messaging. Trumpism and its derivatives are fascinating because their adherents find them compelling despite the fact that by all measures, they have only a passing flirtation with objective truthfulness.

Chapter 6: A New Era of Misinformation

This chapter explores another consequence of new communication platforms: digital propaganda. In the wake of the 2016 presidential election, American intelligence services unanimously concluded that Russia used social media and other means in an effort to polarize the American electorate and to help Donald Trump win the election (ICA 2017). While there is no question these actions violate international norms of state sovereignty and international law, considerable debate remains as to whether these actions had any meaningful impact on the election's outcome and what danger such efforts pose in the future. The Russian intention to influence the American marketplace of ideas–and public behavior–is certainly real. But this addresses the more essential question: does it *matter*? Was 2016 the first salvo in the ideational battlefield of the future? Does Russian meddling pose an existential threat to Western democracy? Or is it simply an inexpensive low-risk gambit from an adversary too weak to engage in traditional forms of mischief?

The chapter's core argument is that, past the anger and indignation at a hostile act, Russia's actions had little effect on the domestic marketplace of ideas. The argument is threefold. First, the 2016 election—as well as 2018 and 2020 when Trump was a central figure in electoral politics—were best-case scenarios for outside influence. It is unlikely that future elections will suffer from the same perfect storm of a major party candidate so sympathetic to our adversaries, and general technological and sociological unpreparedness. While not impossible, it is highly improbable that future candidates will as willing to encourage and co-opt foreign misinformation as the Trump campaign.

The second reason not to overly fret about foreign disinformation is the sheer magnitude of the domestic public sphere. While it is easy to fixate on the millions of dollars spent by Russia to influence the 2016 campaign, it is important not to lose perspective of the *billions* of dollars spent domestically, to say nothing of the vast universe of online attacks, half-truths, and outright lies generated domestically in the time-honored spirit of partisan warfare. The exact values spent in-and-around the 2016 by Russia and domestic sources are hard to calculate with precision. However, even the roughest estimates suggest that foreign spending was orders of magnitude less than American sources. Estimates from publicly released figures from the Muller report suggests the Russians spent approximately $1.25 million per month on their digital campaign.[2] This is in contrast to the estimated $14 *billion* spent from domestic sources.[3]

[2] An online copy of the Muller report is available at: https://www.justice.gov/archives/sco/file/1373816/download
[3] https://www.opensecrets.org/news/2020/10/cost-of-2020-election-14billion-update

What is more, digital adversaries face the same quandary as commercial advertisers: did their efforts actually change any minds, let alone lead to tangible shifts in behavior? Once again, the reality is less alarming than many of the headlines. Sure, Russia may have changed some minds, and mobilized some citizens to action… but these efforts are trivial next to domestic political forces. In the spirit of damming-with faint praise, the reason not to worry about Russia is because they did not create our deep social divisions; decades before the 2016 election American faith in the political process, media, and partisan cooperation had been in steady decline (Brewer 2005; Abramowitz & Saunders 2006; Marietta & Barker 2019). In short, Russia's efforts were only a small trickle in comparison to the tsunami of our own disfunction.

Finally, the very nature of digital mediums limits their potential usefulness as tools of disinformation and propaganda. At first blush, social media appears to be the ideal vector for misinformation: it has low cost of entry, and allows the quick proliferation of (mis)information within one's network. However, these very factors that make online attacks so attractive also constrain their effectiveness. By design and algorithm, social networks promote sharing among like-minded individuals. Thus, while digital propaganda may spread rapidly within discrete communities, it is harder for these messages to reach a general audience. Moreover, it is important not to conflate online communities with the public sphere at-large.

Chapter 7: The Uncertainty of Certainty

The project's original plan was to compliment the theoretical discussion of the preceding chapters with quantitative analysis. The intent was to run a pair of automated

content analyses to assess whether, and to what degree, certitude bias effects TV news coverage. Data was collected, and high-level results assessed, but it quickly became apparent that limitations of the methodology could not accomplish the task. From sample collection, research design, to the analytical tool, compounding errors in each of the components made the results inherently unreliable.

However, the shortcomings of this initial foray into quantitative support does not necessarily mean that certitude bias does not exist, nor that it is beyond our ability to measure. Far from it. The lack of cohesive findings speaks more to the limitations of the methodology than offer any insight—whether confirmation or refutation—regarding the effects of certitude bias in the news making process.

Moreover, in a broader perspective, the effort was not all in vain. Though the initial studies failed to yield valid results, the lessons learned have the potential to inform and improve attempts in the future. This chapter, therefore, is not a typical discussion of research methods and design. Rather, it serves a dual role of research summary and project post-mortem. The hope is that the experience in running these initial studies, however imperfect in their own right, will pay dividends informing future research.

Chapter 8: Towards an (un)Certain Future

The project closes by reflecting on the future of truth and certitude in the public sphere. The proliferation of misinformation has underscored the threat to the democratic public sphere. From Russian interference in the 2016 election, partisan propaganda masquerading as journalism, the unchecked proliferation of conspiracy theories; the market is under siege from without and within. There is a growing chorus among pundits

and politicians to do *something* to restore the health of the market. But exactly *what* should be done is a matter of considerable debate. This chapter joins the ongoing debate, assessing whether initiatives like increased federal regulation, online "content courts," or deplatforming will ultimately help or harm the public sphere.

We have to accept that there is no "solving" the problem of incredible certitude. Pandora's digital box has been opened, and we should not expect or force the future of public debate to resemble an idealized past. The more productive discussion is to cautiously mitigate, rather than attempt to eliminate, the flood of misinformation entering the public sphere. This is not a straightforward calculous: doing nothing is dangerous, but so too is the threat from overreaction.

The current sense of urgency should not cloud our judgement or lead to impulsive policy. Targeting specific outlets or individuals can devolve into a cycle of political whack-a-mole, squelching one bad actor just to see another take its place. Furthermore, overregulation carries the risk of unintended consequences. Reflexively exorcising "bad" actors from the public sphere can undermine the very mechanisms—free and open completion—at the heart of democratic market theory. This risks the slippery slope of government or corporate censorship, with even less transparency and electoral accountability than the status-quo.

Most importantly, many of the leading proposals address the symptoms, not the underlying causes, of the market's dysfunction. If lasting progress is going to be made, we need to address the social and psychological factors biasing debate towards incredible certitude, demagoguery, and misinformation. There is no "solving" this problem—

struggling with truth and confidence is part of the human condition—until the nation return to more civil and measured debate.

CHAPTER TWO: THE ECONOMY OF CERTAINTY

The human intellect... is more moved and excited by affirmatives than by negatives.
- Francis Bacon, 1620

Nobody knows the system better than me, which is why I alone can fix it.
- Donald Trump, 2016

Surprise at Trumpian demagoguery, crackpot conspiracy theories, science denialism—the general outcry that society has lost its way in a sea of falsehood—is the inevitable disappointment of unrealistic expectations. Though there is no single culprit for this disillusion, as likely a suspect as any goes under the compelling name of the *Marketplace of Ideas* (MOI). For over a century, academics and theoreticians of democracy have argued that ideas are bartered in the public sphere and, through free speech and vigorous competition, fact ultimately triumphs over fiction. Placing truth in the starring role, however, is the MOI's fundamental flaw. Humans are not rational automata, and the psychological factors driving belief are far more varied and complex than a single-minded pursuit of fact (Stich 1990; Green & Shapiro 1994; Kahneman 2011). This chapter explores the consequences for market theory when truth loses its unique role and must compete in a varied and complex ideational market.

A False Metaphor About Truth

The MOI does more than reaffirm the normative appeal of free speech; market-driven theory promises to explain *how* open competition between ideas allows truth to ultimately overcome falsehood. To this end, the MOI approach marries two popular tenants of Western society: free speech and capitalist competition. Legal scholar Karl

Coplan observes that the conviction that free debate will eventually uncover truth "reflects a libertarian, laissez-faire approach to speech, which embraces the idea that the same 'invisible hand' that guides unregulated economic markets to maximum efficiency will guide unregulated markets in ideas to maximum discovery of truth." (2012, 548). As with economic theory, contextual factors—censorship, imperfect competition, et cetera—may inhibit the efficient operation of the market. But these are pragmatic obstacles to be overcome, not fundamental challenges to the core of the model.

In this traditional view of the MOI, truth is the alpha and omega of discourse, serving as both the end *and* the means of advancing public knowledge. The goal of debate appears straightforward: vigorous competition between ideas until only the best ones remain in the collective conscious. Objectivity also provides the *means* to achieve this end; in the MOI the relative value of each idea is judged based on its relative truthfulness. Political spin or everyday ignorance may temporarily obfuscate the facts, but in the end irrepressible reality determines which arguments in the marketplace are closer to truth—and by extension, better—than others. This view of the inevitability of truth may make for a compelling story, but it is also pure fiction; an unhelpful tautology based on a flawed interpretation of human nature (Rosen 2020).

Rather than attempt a patchwork repair of the MOI, this chapter outlines and proposes a broader approach to a market-based model of communication. The discussion is divided into three sections. The first component explores how truth-driven markets, while certainly possible, function most effectively under specific conditions. In fact, in the complex world of politics, this type of rational market function is likely the *exception*

to the norm. The second section argues that a broader model—one that is sensitive to certainty as well as truthfulness—better explains communication in the real world. The final section suggests that in the current ideational marketplace certitude and circumspection are valued at equivalent price points. From top to bottom, through all participants in the public sphere, society is systematically rigged in favor of certitude. This predisposition for confidence, traceable to the start of civilization, has undermined truth's ability to succeed in the public market.

I. Truth Should Not Be Uniquely Privileged

A comfortably-sized library of scholarship has been devoted to exploring how psychological factors—sensitivity to loss, predisposition to negativity, dogmatic adherence—may mediate receptivity to truthfulness, if not overshadow it altogether. When there are multiple factors at play, of which truth is just one of many competing considerations, "neither markets nor people can be counted on to tend toward the rational or the true" (Rosenfeld 2020). Truth may often win in the end, but it is not nearly as reliable or inevitable a victor as free-speech advocates and democratic theorists would have us believe.

To be clear, the present argument is not some nihilistic decree that truth never matters, or that citizens are immutably insensitive to hard facts. If society didn't place *any* value on truthfulness civilization would have long since collapsed under the weight of its own obdurate ignorance. It would be similarly absurd to argue that being *demonstrably false* in-and-of-itself assures a competitive advantage. But despite a deck

apparently stacked against untruth, and in direct defiance to the predictions of democratic theory, lies and demagoguery are not just *surviving* but *flourishing.*

The question for social commentators is why the public sphere remains deluged with misinformation. MOI advocates may chalk up falsehood as an unfortunate but not fundamental shortcoming, one of many inevitable growing pains as the market slowly but steadily working to separate fact from fiction. In this spirit, like good Bayesians, free-speech devotees might wave a hand abstractedly at *more*: as if all the market requires is more freedom, more participation, more time to deliberate, more *anything*, until truth finally gains widespread acceptance. This perspective acknowledges practical challenges, but accepts the general premise behind MOI theory that greater involvement is generally helpful in the quest for truth. However, at some point the thoughtful must abandon a foundering metaphor and acknowledge that additional inputs will not save a model that, at its foundation, is theoretically unsound and functionally unhelpful.

Markets of Many Currencies

A central theme of this chapter, and the project more broadly, is that a market-based perspective is handicapped when it single-mindedly focuses on truth. All too often truth proves a specious species in the broader Marketplace of Ideas. Rather than trade on a universal currency, many compelling ideas coexist—occasionally complimentarily, often contradictorily—in the boisterous and competitive public sphere. Thus, truth must not only contend with falsity, but also compete with a tangled skein of political, psychological, and contextual factors whose appeal is not contingent on objectivity.

As outlined in the introductory chapter, *certitude* is one such factor, deeply intertwined with truth and the proliferation of information. Confidence influences how messages are assessed. Its presentation can be easily skewed as it travels through the public sphere. Most critically, society shares in and mutually reinforces a common bias for high-certainty information. In the public sphere, the desire for confidence competes with and often confounds interest in objective truth.

This tension between truth and falsity, certitude and circumspection, remains as relevant today as ever. Conspiracy theorists, false-prophets, and demagogues are *not* popular because they are objectively wrong; erroneous ideas do not proliferate because falsity provides a competitive advantage. Their power and appeal lies in an orthogonal dimension: *rhetorical certitude.* Certitude is cognitively streamlined and emotionally stirring; circumspection invites doubt and unease. In the blood-sport of politics it is often sufficiently compelling to believe something is right without having to anguish over something as inconvenient as objectivity.

The pragmatic question is not whether contemporary public debate suffers from a surfeit of certitude (spoiler alert: it does), but whether the current disfunction is as unprecedented as it feels. The answer is doubly troubling. First, to damn the present with faint praise, society has never lived up to its democratic ideals. An aphorism, attributed to Mark Twain, is that history may not repeat, but it does rhyme. Trumpism, QAnon, Western Chauvinists; today's most controversial movements did not spring fully formed from the sociopolitical aether. They are improvisations of nationalist, racist, and anti-immigrant themes that span centuries in this country, and millennia globally. The Know

Nothings, the most infamous historical nationalist party, would feel lamentably comfortable in today's contentious social atmosphere. Likewise, vaccine skeptics, flat-earthers, and climate denialists are not truly novel; these anti-scientific movements are reinterpreted Luddites, reimagined with modern malevolence.

It is an edifying, if sobering, exercise to trace the roots of today's disfunction through the ages. The key lesson from this history is that the public marketplace has *always* been a muddled mess of truth, falsity, sincere assessment, and unfounded confidence. Even more troublingly, just because things have always been dysfunctional does not mean that the health of the public sphere cannot get profoundly worse. The following chapter assesses how the digital revolution undermines Twain's axiom about history repeating. Rather it complicates the flow of information in a way never before experienced in the long arc of human history. But let's put the prospect of everything *getting worse* aside for the moment to further explore how the *the public sphere has always struggled to effectively evaluate truth and confidence.*

Truth-Based Markets Are Exceptional Cases

The traditional truth-driven view of MOI, in the instance when it does function as advertised, is the exception to the norm. Elevating truth to be the ultimate currency—unlike competing attributes like confidence, negativity, etc.—leads to atypical patterns of messaging and evaluation. Thus, before delving too far into alternative perspectives, it is useful to highlight the key limitations of the traditional MOI model.

The fundamental assumption, in the spirit of philosophical positivism, is that capital "T" Truth exists in the world independent of human cognition. While everyday

ignorance, manipulation, and outright lies may temporarily obscure the truth, it has the ultimate advantage of remaining *true*. After sufficient debate and deliberation, the public will eventually embrace good ideas and sideline the suspect. As John Stuart Mill (1991: 40) summarized the process: "Wrong opinions and practices gradually yield to fact and argument."[4] Or as his fellow Englishman John Milton (1644) famously wrote two hundred years before Mill, "…who ever knew Truth put to the worse, in a free and open encounter?"

It is this universalist conceptual yardstick which allows the traditional marketplace model to objectively assess the value of competing ideas. The giant of modern philosophy, Karl Popper (1960, cited in Miller 1985, 193), writes:

> Can we really speak about *better* correspondences? Are there such things as *degrees* of truth? ... I believe that we simply cannot do without something like this idea of a better or worse approximation to the truth. For there is no doubt whatever we can say, and often want to say, of a theory t_2, that it corresponds better to the facts, or that as we know it seems to correspond better to the facts, than another theory t_1.

This perspective, appropriately, is referred to as the "correspondence theory of truth" (Prior 1969; Hanna & Harrison 2004). Even if we never achieve complete certainty in complex issues, the market still elevates ideas which it holds "truer" to an independent reality and sidelines those which do not conform.

For the philosophers among us, the correspondence between "little t" social truth and "big T" universal Truth may be gratifying in its own right. All things being equal,

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[4] John Gray and G. W. Smith, Eds. *John Stuart Mill On Liberty: In Focus* (London: Routledge 1991), p. 40. In arguing against British censorship laws some years earlier John Milton provided one of the most famous quotations for this view in his pamphlet, *Areopagitica* (1644): "And though all the winds of doctrine were let loose to play upon the earth, so 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?"

who wouldn't have a modest preference for being right over being wrong? That said, the purely epistemological satisfaction of being right loses its luster if it takes effort, or if it conflicts with other considerations. How, then, do ideas succeed in a marketplace of ideas?

In a commercial context a superior product is expected to dominate over time. There are a host of industry benchmarks for consumers: reliability, performance, cost, safety, et cetera. Presumably, products which consistently outperform the competition dominate commercial markets. Honda decided to produce the ever-reliable Civic. Yugo, meanwhile, made the fateful decision to build... Yugos. The quality manufacturer became a global player, the other an automotive dodo. Simple. Of course, competition among tangible products is all well and good, but what is the hallmark of a winning *idea*?

The answer is simple: utility. Truthful ideas succeed not because they are "merely copying…reality" but because they effectively offer "cash value; to some human purpose or conception that brings ourselves within the neighborhood of reality for us" (Wonell 1986, 677). In other words, being objectively correct is *useful*. Concepts which are true, or are closer to true than alternatives, provide tangible benefits to the possessor.

There are, to underscore the obvious, a multitude of issues for which coming down on the right or wrong side of an objective question has clear and tangible implications. Is human activity contributing to climate change? Is a belligerent state working on building a nuclear bomb? Will providing free preschool ultimately "pay for itself" by laying the groundwork for more productive adults? Will this-or-that medicine help me live long enough to die from something else? These questions, and those like

them, may be complicated. They may even be unsolvable given present resources, or remain contentious for a lifetime. But few would argue that ultimately getting the answer right does not matter. Even when things are hard, and the market seems mired in endless debate, the benefit of being correct gives fire and urgency to the competition within the MOI.

The incentive to be right is strongest within specialized communities focusing on distinct issues. In professional circles—scientists, economic analysts, or one of the many flavors of punditry where correctness is linked to other metrics of success—idea sharing works much as a marketplace framework would predict. Andrew Farkas (1996), for example, argues that foreign policy institutions follow an "evolutionary model" of promotion and incentives: accurate analysts are promoted, and the error-prone are at risk of being sidelined or fired. Similar cases can be made for the sciences. Academics who make great leaps towards the truth win Nobel prizes; those who falsify data are flung flailing from the Ivory Tower. In medicine, doctors who correctly diagnose diseases grow their practice, the incompetent invite lawsuits. The list goes on and on; the key point is that an evolutionary structure neatly fits with the emphasis on competition propounded by the MOI.

When you move beyond these discrete cases to a broader audience, however, that perspective begins to break down. Once you reach the public sphere writ-large, even if objectivity is never totally dead, it is increasingly unclear whether truth plays a central or peripheral role in determining which ideas dominate. There are a host of reasons why models of communication do not translate perfectly from micro- to macro-level analysis,

but for present purposes three merit mention:

- The subjective nature of political rather than professional issues
- The lack of a clear link between truth and utility
- Additional factors competing with truth

The first two—subjective issues and the lack of obvious utility—are limited critiques, and do not fundamentally challenge the heart of MOI theory. The final point—the crux of the current project—undermines the traditional foundation of communication theory. The more these additional factors are present in an idealized market, the less likely that marketplace is able to function as prescribed by the MOI.

Weak Critique: Subjective vs. Objective Debates

The first limitation of the MOI model is simply that it does not extend beyond the realm of objective reality. Even its advocates acknowledge the model does not, and should not, be expected to have explanatory power when dealing with inherently subjective issues. Topics grounded in subjective concepts like norms and morals do not have the advantage of universal truth as an arbitrator between competing views.

Think of the issue of capital punishment. Some might approach the death penalty from an objective perspective: do such laws deter the incidence of violent crime? In theory, with enough data and deliberation, a "correct" answer is there for the finding. But for many, any kind of objective inquiry is not only unhelpful, it is also fundamentally unwanted. In contrast to Popper's positivism, moral relativists do not believe there is a single absolute truth for social issues. In the case of those who believe state-sanctioned execution is a moral issue, inherently wrong whatever its context or consequence,

marshalling evidence is beside the point. Even if all sides debated for millennia, no amount of analysis could shift their belief. In this instance, social understanding can never inch closer to an “objective reality” that simply does not exist.

The fact that so many hot-button issues remain perennially contentious is *precisely* because there is no universal baseline to adjudicate between positions, no analytical common denominator to measure absolute merit. If and when a viewpoint does achieve broad social acceptance it is not out of any inherent objective superiority. Instead, consensus often boils down to an idea achieving supremacy in a nation-wide popularity contest. Ho and Schauer (2015, 1166-7), reflect on the implications of relativism for market theory:

> Just as, more or less, pure free market theory *defines* value in terms of what succeeds in the competition of the market… [so too might] the value of a political idea or ideological program [if it] was simply a function of which ideas were accepted and which were rejected… such that democratic political truth is determined by, and, indeed, defined by, the market.

This excerpt underscores the essential difference between a market functioning to *define* what it believes, rather than to *discover* an underlying objective truth. Simply saying a "good idea is one that wins" is no different than saying "a winning idea is good.” In this vein, the market does not simply determine what idea is universally true, but rather represents a social "forum where cultural groups with differing needs, interests, and experiences battle to defend or establish their disparate senses of what is 'true' or 'best'" (Ingber 1984, 27).

There is absolutely nothing wrong with this perspective. Indeed, we often view the product of this consensus-becomes-truth market as progress. Just think: in the Declaration of Independence Jefferson writes "We hold these *truths* to be self-evident,

that all men are created equal, that they are endowed by their Creator with certain unalienable rights." The emphasis is my own: the problem, of course, is that just calling a truth “self-evident” does not necessarily make it so. Nor, for that matter, does it make it true. While Jefferson is widely celebrated as a model of enlightened democratic thinking, at the time of the famous declaration "all men" did not include women. Or whites without land. Or people of color, the greater percentage of whom were not even viewed by Jefferson as legally *human*. While an understanding of universal equality may seem self-evident today, and any sentiment otherwise socially repugnant, two hundred years ago modern sensibilities would have been largely out of place.

Indeed, many of society’s proudest achievements—the abolition of slavery, religious tolerance, women's suffrage, gay marriage—emerged and evolved independent of any universal truth to adjudicate between the camps disputing them. Modern day celebrations of the march of progress should not be conflated with the discovery of some heretofore hidden universal truth.

Weak Critique: Linking Truth and Utility

The lure of truth is not always sufficient given the tremendous variation in social challenges. As a model, the MOI is not optimally efficient when the incentive for being right is hard to discover, minimally impactful, far removed in time, or one of an infinite number of factors that could reduce truth’s tangible benefits. Few would argue that getting something pressingly important correct, like determining the best medical treatment, carries immediate and tangible benefits for being correct. Besides, complete apathy towards truth in a life-and-death situation is a self-correcting problem.

But for every issue where truth carries clear import, there are scores of questions of no more value than that of the curiosity elicited by a Snapple-cap. What does an average citizen care if quarks in the Standard Model of Elementary Particles come in varieties of four, six, or sixty? Did Imhotep serve in the 8^{TH} or 18^{TH} Egyptian Dynasty? Did the dodo have a keel on its breastbone? In most fields of inquiry average citizens will never have firsthand knowledge of the truth, are unlikely to care if they do, and certainly will not benefit from establishing a factually correct belief. Even if specialists get these answers right, the probability that this knowledge will manifest in the general market is only modestly above zero.

MOI advocates will not lose sleep over fringe cases, or worry about the widespread acceptance of esoteric facts outside of specialized communities. The national market of ideas is loud and boisterous, and if these curiosities fall by the wayside neither individuals nor society will be markedly worse off. It is only when the stakes are sufficiently high, and truth truly matters, that the free market will work its magic to determine the truth. What is more, even when these markets fail to achieve a truth-consensus around a complex case, such shortcoming can be chalked up to the limits of human cognition: time constraints, imperfect competition, et cetera. Like in economic theory, these factors may make the market inefficient, but these pragmatic hurdles do not fundamentally undermine the theory's foundations.

To be sure, the market can, and often does, function as advertised and succeed in distilling a truthful consensus. But it does not achieve this result with anything like a comforting regularity. In fact, success may even be the exception to the norm. There are

many issues where the market model strikes out on what should be softball questions; cases that are ostensibly objective carry clear utility for being correct and, most frustratingly for MOI theory, ones in which experts have already reached a clear truth-consensus. One does not even have to look very hard to curate examples of this kind of abject market failure.

For example, two issues that have remained at the forefront of the news for decades—climate change and the safety of vaccines—are infamous case-studies of not just of denial of facts, but conscious defiance in the face of overwhelming evidence. Getting these issues right has real value. In fact, choosing the correct answer literally determines either the extinction or perpetuation of life as we know it. These issues are clear-cut, scientific, and objective: the very type of issue suited to the MOI's calculated approach. Yet, despite the deck seemingly stacked in favor of the market theory, a sizable percentage of the public continue to reject these clearly communicated scientific truths (Oreskes & Consway 2010; Lewandowsky et al 2017).

Despite decades of overwhelming truth-consensus in expert communities, a soberingly large portion of the public continues to reject facts. The question of human-instigated climate change is no longer a debate; it is as close to settled as any scientific question (Oreskes 2004; Doran & Zimmerman 2009). Yet even today, decades after the UN officially recognized the existential threat of climate change, there is a thriving population of deniers happily reading and publishing pseudo-texts and online misinformation questioning climate change (Treen & Williams 2020). Similarly, in the midst of a global pandemic—the greatest public health crisis in a century—the anti-

vaccine movement has remained firmly entrenched in a dangerously large portion of society. Referring to these individuals as skeptics is too generous, because that implies cause for uncertainty and at this point it takes *effort* to reject such obvious and pressing truths. Vaccine skeptics either accept the danger of the virus or, more quixotically, acknowledge the problem but reject the overwhelming scientific consensus of the solution (Burki 2020; Hoetz 2021). Rather than a slow but inexorably crawl towards the truth, we have witnessed protracted periods where public opinion has drifted *away* from that of experts on both of these issues (PEW 2016; Gallup 2020). So much for the inexorable march of progress.

Sadly, while the cases of climate change and vaccinations are striking, they are hardly unique. Numerous issues, both the salient ones and those overlooked by the news cycle, follow this general pattern. At some point the standard response in support of the MOI—that the market just needs more time or input to *finally* reach the truth—begins to sound more like an excuse than a theoretical explanation. More will be said about the limitations of MOI theory, and the challenge of truth in society more generally, in the following chapters.

II. The Market of Certainty

The strongest critique of the MOI is that truth does not deserve a uniquely privileged position in the public consciousness. Truthfulness is *not* the central force determining which ideas succeed or fail. Rather than attempt to rescue a sinking metaphor, it is more helpful to broaden the definition of the public market to include competing factors like certitude.

Until the traditional MOI framework, the market for certainty does not provide an objective yardstick like truth that allows it to measure competing ideas. Insight into the flow of information through the public sphere cannot come from looking *externally* in deference to cosmic truth, but rather must come *internally* from within the human psyche. Thus, the relative desirability of certitude versus circumspection, or confidence versus carefulness, is inseparable from the social context in which they originated. Once the market is firmly grounded in psychology, the door is flung wide open for a host of biases to begin to influence the market's efficiency.

The Potential Danger of Systematic Bias

There is a substantial body of literature highlighting the power of the law of large numbers. Amongst social theorists, this phenomenon is popularly referred to as the wisdom of crowds (Surowiecki 2005; Mannes 2012). The most striking feature of this collective evaluation is the disconnect between the irrationality of the individual and the emergent sagacity of the group.

If preference for high versus low-certitude messaging were randomly distributed across the citizenry, this individual-level variance should cancel out at the macro level (Erikson et al. 2002). The result would be a national market whose midpoint of preference approached a measured and thoughtful debate.

Taken individually, citizens may not appear particularly intelligent. The lack of ideological constraint and the dearth of political knowledge among the American mass public have been well documented in contemporary political science research (Bartels 1996; Campbell et al. 1960; Converse 1964; Delli Carpini and Keeter 1991, 1996; Zaller

1992; Zaller and Feldman 1992). Political scientist Phil Converse (1964) is credited with giving voice to the "low mean, high variance" characterization of American public opinion which has opened up questions about the health of a democracy whose people are not generally well informed (see also Dahl 1967; Claassen & Highton 2009).

The perspective changes, however, in the shift from the individual to the wider market. *The Macro Polity* (2002) by political scientist Robert Erikson and his colleagues presents a compelling case for the power of national-level cognition. Even if you accept that a large public is so uninformed that their beliefs are effectively random, or so entrenched that their views do not change, group-level assessment may still appear rational. Individual-level errors effectively "cancel out" in aggregate, yielding no net change in public opinion. Meaningful shifts in opinion, therefore, are driven by individuals who *do* thoughtfully follow politics. Thus, the central argument driving *The Macro Polity* is that at a national level belief formation "*is* orderly, *is* responsive to real political events, and *does* send a message that politicians ignore at their peril" (6). This perspective generally fits within traditional market theory. Good ideas *do* win in the end, or at least win in *enough* of the public to meaningfully shift opinion.

However, Erikson et al. acknowledge several limitations to this perspective, one of which is directly related to society's struggle with misinformation and false confidence. The advantage gained by aggregation breaks down if the "errors" of uniformed citizens "do not cancel out, but instead represent the systematic response to some erroneous signal" (7).[5] Such biases, as psychologist Ulrick Nash (2014) points out,

[5] Consistent with the excerpt from Nash, Erikson et al. offer their own illustration of systematic bias:

make it very difficult for the law of large numbers to overcome the limits of individual cognition:

> The mean of many intuitive judgments, made by numerous different people, is accurate when judgments scatter around the truth. In fact, the mean is perfect when judgments scatter in symmetry around the truth, because then all mistakes of underestimation are matched by counterpart errors of overestimation. However, when the weight of judgments distribute in greater proportion on either side of the truth, the mean has error.

The critical theme in Nash's argument is *symmetry*. Only if errors are evenly distributed around the truth can a society achieve consensus that accurately reflects said underlying truth.

Unfortunately, certitude in sociopolitical communication lends itself to this type of systematic bias. From top to bottom—from presidents, politicians, pundits, patricians and plebians alike—human psychology and social incentives skew the information environment subtly but systematically in favor of high-certainty messaging. This systematic bias is the reason certitude so often plays the role of spoiler in the search for truth in the public ideational market. To echo the sentiment of Walt Kelly (1972), "we have met the enemy, and he is us." If social debate is dysfunctional, it is because we have all had a hand in undermining the market.

III. The Psychological Origin of Certitude Bias

> Suppose they [citizens] evaluate the president not on objective indicators of which they remain ignorant, but rather on superficial indicators like the president's general demeanor when appearing on television news bytes. Similarly, whereas the informed voters respond to candidate issue positions, suppose their votes are swamps by less informed voters who are just attentive enough to follow the siren call of the demagogue. (7)

It is sobering to reflect on the apparent prescience of this excerpt. The siren song is no longer hypothetical; America is still coming to grips with how the greatest demagogue of a generation has warped politics and public debate. We will return to Trump, and broader changes to the American body politic, in chapter six.

Despite protests from the occasional obstinate economist, there is now widespread consensus that cognition is *not* a fundamentally rational process (Kahneman & Tversky 1973; see also Green & Shapiro 1994). We all rely on heuristics, cognitive shortcuts, and other psychological preference factors which, however helpful they may be in navigating day-to-day life, are anything but rational.

Predisposition to certainty ranks among the most primordial of inclinations. Dr. Robert Burton, a neurologist by training and social commentator by preference, speaks to the heart of certitude bias:

> Despite how certainty feels it is neither a conscious choice nor even a thought process. Certainty and similar states of "knowing what we know" arise out of involuntary brain mechanisms that, like love or anger, function independently of reason. (Burton 2008, xiii).

Confidence is both normatively comforting and cognitively appealing. It is comforting to believe so strongly in something that it precludes any nagging anxiety that you might be wrong. And it is cognitively appealing because believing that something is certain—as in, that a troubling problem has been solved—precludes the need for further analysis.

Certitude is Comforting

Humans tolerate trivial uncertainties constantly: not knowing the end of a novel, the solution to a riddle, or what wine will be served with dinner. When things are serious, however, uncertainty is deeply unsettling. The world is infinitely complex, frequently hazardous, and never fully in our control. In light of these potential dangers lurking in every corner, literature in terror management theory—a stark name for an area of study dealing with a very natural impulse—suggests that people gravitate toward the *appearance* of certitude to allay this anxiety (Greenberg et al. 1986; Greenberg & Arndt

2011). Mark Schaefer, an ordained minister and professor of religion, speaks to the inherent appeal of certitude:

> It seems that one of our preferred methods of defending our worldviews and fending off this core terror is the attempt to establish as many certainties as possible, to know that there is something we can be certain of. In an effort to deny our mortality and the recognition that we are not ultimately in control of our own destinies, we try to control our world and one another and we seek to cling to as many certain truths as we can along the way. (Schaefer 2018, 4).

He continues further:

> Even when we're not consciously looking for certainty to resolve our anxieties, we seek it out. It's not that we're even always consciously aware of our need for certainty; much of the drive to be certain is deep in our psychology" (Schafter 2018, 5).

Schaefer's instinct about the appeal of certainty is right on the mark, but his language merits close reading. He speaks of the appeal of "certain truths" that offer us the sensation of comfort along our journey. This may seem one-and-the-same with the theorized structure of a classic MOI; both are ostensibly interested in uncovering truth. However, "objective truth" is not the same thing as a firmly held conviction. For religion, as with partisanship, nationalism, or any other form of dogmatism, it often suffices to *believe* that something is true, even if the issue in question is not intrinsically subjective.

Consider a hypothetical individual, struggling whether or not to accept the scientific consensus on climate change. The implications of this struggle are certainly unsettling. One viewing of Al Gore's *An Inconvenient Truth*, or any number of equally sobering appraisals of the stakes of continuing to burn fossil fuels is enough to cause genuine anxiety. The conflicted may find themselves at a crossroads, choosing either to: A) accept the science, and potentially feel overwhelmed and powerless in the face of impending disaster; or B) reject the science, deny the threat, and sleep untroubled by

visions of catastrophe. Clearly, at least in the short-term, there is undeniable appeal in confidently asserting that nothing is wrong.

Certitude, Dissonance, and Motivated Reasoning

Once an idea is firmly rooted—whether it is correct or suspect—our cognitive machinery works hard to ensure it remains entrenched. It is mentally discomforting to simultaneously hold conflicting beliefs and, when this occurs, the complimentary literature on dissonance theory and motivated reasoning suggest we employ a host of strategies to eliminate the tension (Festinger 1957).

The most obvious way to reduce conflict is to embrace one viewpoint and trivialize or delegitimize any alternatives. Where once there were conflicting views, only one remains (Davis & Jones 1960). People can also reduce dissonance by actively avoiding any contradictory, and therefore potentially unsettling, information. The theory of "selective exposure" suggests that we, actively or unconsciously, take pains not to encounter information at-odds with our existing beliefs (Festinger 1957; Freedman 1965; Sellers & Freedman 1967). Picking up this thread, Epley and Gilovich (2016, 135) reflect:

> The crucial point is that the process of gathering and processing information can systematically depart from accepted rational standards because one goal—desire to persuade, agreement with a peer group, self-image, self-preservation—can commandeer attention and guide reasoning at the expense of accuracy. Economists are well aware of crowding-out effects in markets. For psychologists, motivated reasoning represents an example of crowding-out in attention.

From an objective standpoint this ostrich-like, head-in-the-sand reaction to danger is detrimental for society. Moreover, this impulse to resist uncomfortable truths also runs counter to the MOI's assumed orientation toward the measured pursuit of knowledge.

However, from a purely individual perspective, this instinct—while not rational in any strict definition—is psychologically justifiable.

Certitude is Efficient

Certainty has another cognitive trump card: it is easy to understand. Psychologists have coined the delightful term "cognitive miser" to describe the desire not to spare unnecessary mental effort (Heider 1958; Dunn 2016). We are all busy, limited in our capacity to process information, and often just plain disinterested. Psychologists argue that people have a natural inclination to "take shortcuts whenever they can" (Fiske & Taylor 1984, 15). The psychological drive for cognitive economy is so pervasive that George Zipf (1949, 3) remarked that it often appears that "the entire behavior of an individual is at times motivated by the urge to minimize effort." Humans *can* think systematically. We would just rather not be bothered to, if at all possible.

From this standpoint of cognitive strain, high-certainty messages are more appealing than those couched in circumspection or nuance. Nobel-winning psychologist Daniel Kahneman has devoted a career highlighting the tension between cognitive rationality and efficiency. He notes that human cognition is divided into two "systems" of varying rigor (Kahneman 2011; see also Petty & Cacioppo 1986). System 1 is the more superficial, preferring snap-judgement to rigorous consideration. System 2, in contrast, reflects what we typically think of as careful, calculated, and rational thought. These two systems, unsurprisingly, have different levels of receptivity to uncertainty.

> System 1 is not prone to doubt. It suppresses ambiguity and spontaneously constructs stories that are as coherent as possible… System 2 is capable of doubt, because it can maintain incompatible possibilities at the same time.

> However, sustaining doubt is harder work that sliding into certainty (Kahneman 2011, 20-21).

Motivation is the primary factor determining which system of processing is activated in response to a particular issue. The literature on accuracy-driven reasoning argues that only when there is a tangible benefit for being accurate is a person likely to spend cognitive effort, systematically collect information, and rigorously process it (Neuberg & Fiske 1987; Agrawal & Maheswaran 2005). Importantly, System 2 is not necessarily maintained until a strictly correct answer is achieved. The goal for most individuals is not capital "T" truth, but just something that appears true enough to be useful.

The desire for cognitive efficiency also conflicts with another core tenant of MOI theory: the power of time to carry society closer to the truth. According to the market framework's Bayesian approach, time is needed to both acquire new information and update existing beliefs. However, there is tension between society's protracted time scale and the pressing needs and desires of individuals in the present.

The economist George Stigler's (1961) work on satisficing notes that intense processing—both in immediate thought and in the time spent searching for information—comes only with a sufficient amount of time and energy to educate oneself on a particular subject. Thus, individuals must weigh the potential benefit of achieving truth against the all-too-immediate effort this would entail (Beach & Mitchell 1987; Payne et al. 1988). The result is that citizens often accept a message that appears true enough to satisfy current needs.

Just as economists speak of "discount rates" to compare present and future utility, the further removed the hypothetical benefit of being right, the less its appeal can balance

present desires. Individuals with a "high psychological discount rate" give significant preference to the present. Like J. Wellington Wimpey's "I'll gladly pay you Tuesday for a hamburger today," high discount individuals prioritize "short-term welfare, ignoring the future price of this choice" (Ouattara & De La Bruslerie 2015, 3; see also Rabin 2002). In terms of the present discussion, discount rates mediate the relative appeal of certainty and truth. The desire to confidently believe something *now*—eliminating the need for further inquiry and forestalling nagging uncertainty—competes with the *potential* cost of being wrong in the future. What is more, this desire for mental consonance is likely to diminish the perceived probability of being wrong, further skewing the discount calculation.

As an example, imagine a politician calculating whether or not to accept the science and support emission reductions. They must balance present utility—constituents who work in the fossil fuel industry, contributions from interest groups, or the personal desire to drive an oversized truck—against the more abstract threat of climate change. As an individual they may not suffer personally from the consequences of an incorrect belief, nor feel any urgency to reevaluate their views. Keep this cognitive calculous in mind, as we will return to the discussion of climate change, and balancing present certainty versus future truth more generally, in chapter five.

Certainty *Despite* Truth

Peter van Inwagen, philosopher and leading scholar of metaphysics, holds the quintessentially positivist view that "it is wrong always, everywhere, and for anyone to ignore evidence that is relevant to his beliefs, or to dismiss relevant evidence in a facile way" (Van Inwagen 1996, 145). This sounds like how we would *hope* people would

behave, rationally updating their beliefs in the wake of new information. The reality, however, is rarely so clinical. As shown earlier in this chapter, the instinct to remain committed to a deeply held belief is so powerful that, once established, any pretense of a Bayesian view of cognition appears downright foolish. Once a view is entrenched, the updating process often ceases, and conviction alone becomes enough to define truth.

Richard Dawkins, the evolutionary biologist and scientific advocate, discusses the frequent tension between dogmatic belief and receptivity to objective "truth." Dawkins recounts the story—some might say inspired, others tragic—of Kurt Wise, once a rising star in the natural sciences. Wise received a PhD in Geology from Harvard, and studied under the famed evolutionist Stephen Jay Gould. On paper at least, it is hard to imagine loftier credentials for a professional academic. But Wise was also a devout fundamentalist who found it impossible to reconcile his faith with his field's commitment to evidence-driven inquiry. Wise recounts the pivotal moment in his identity shift:

> I had to make a decision between evolution and Scripture. Either the Scripture was true and evolution was wrong or evolution was true and I must toss out the Bible… It was there that night that I accepted the World of God and rejected all that would ever counter it, including evolution. With that, in great sorrow, I tossed into the fire all my dreams and hopes in science… [and] If all the evidence in the universe turns against creationism, I would be the first to admit it, but I would still be a creationist because that is what the Word of God seems to indicate. (Wise 2000, 354, quoted in Dawkins 2006, 285).

Clearly, the "truth" that Wise prized above all else—and which, ultimately, guided his life trajectory—was not grounded in any objective definition of the word. What is more, Wise explicitly rejected the idea that *any* new evidence, however compelling, could or would shift the foundation of his belief. While Dawkins' book focuses on the illogicality of religion, the following sections will show how the general inclination to proudly and

erroneously adhere to a deeply held belief, even in the face of overwhelming contrary evidence, is not a bug of the human psyche but one of its defining features.

Religious dogma, of course, is just one example of how entrenched beliefs can dominate a worldview and mediate the perception of alternative, often contradictory, ideas. Political affiliation activates the same cognitive responses and tribal loyalties as religion. Extreme partisans become secular zealots, fervently clinging to certainty no matter the objective odds. Party loyalists are more willing to accept—even embrace—incredible certitude from party leaders. By the same token, their first instinct is to downplay or reject out-group messages (Arceneaux 2008; Goren & Federico 2009; Hartman & Weber 2009). In short, partisans are both primed and inclined to prioritize the comfort of certainty and tribalism above measured deliberation and truth.

Demand Begets Production

As we have previously seen, there is a baseline demand for certainty in the public sphere. In the proud tradition of economics, demand incentivizes production. Thus, when politicians, experts, and journalists craft their messages they may shape them to meet the public's preferences. Savvy elites may do so to further specific objectives. Naïve messengers may simply find confidence easier to communicate than complexity. Most importantly, the very nature of the MOI structure suggests certitude bias as an emergent outcome. Even if there is no conscious attempt to skew belief, the interplay of professional incentives and journalistic norms can, and often does, create an information environment biased towards high-certitude messages.

IV. Politicians & Strategic Messaging

Politicians are “in the business of having to sell their ideas, which means that they model the facts to fit their goals” (Patterson 2013, 45-6). The literature in strategic communication explores how rhetoric is a means to an end in which the message sender crafts their message to shift the beliefs or behavior of another (Della Vigna & Gentzkow 2010; Perloff 2013). Politicians "craft their public language with the goal of creating, controlling, distributing, and using mediated messages as a political resource" (Coe et al. 2007).

In the past, when most politicking was a matter of backroom wheeling-and-dealing, politicians spent most of their time selling their ideas to other politicians. Over time, new communication technologies, combined with a more educated citizenry, expanded the political arena. Now, politicians not only barter ideas amongst themselves, but they must also appeal for public support for their preferred policies (Pfetsch 1998; Kitchelt 2000). In the era of constant news cycles, social networks, and broad civic engagement, direct outreach is an increasingly powerful strategy. Politicians “go public” with messages in order to secure public support (see Hallahan et al. 2007 for a comprehensive review; also Manheim 1994; Baum & Kernell 2007). How they do so, and the language they choose to employ in the process, is itself a strategic decision.

Incredible Certitude, Outright Lies, and Electability

There are two unofficial rules in the study of politics. The first is the admittedly cynical but imminently useful view that politicians are primarily motivated by reelection (Mayhew 1974; Fredriksson et al.2011). The second is that they will do and say anything

to secure said reelection. There is a long and proud tradition lambasting the casual—if not outright criminal—relationship of politicians with the truth. Brian Montopoli (2012), a producer at CBS News, wryly observed: “There are three things that most Americans take as an article of faith: The sky is blue. The pope is Catholic. And politicians are liars” (Montopoli 2012).

Suggesting that politicians lie is hardly breaking news. A considerable literature explores the dichotomy between political lying and truthfulness (Jay 2010; Gordon 2018). In democratic theory, the MOI is effectively a two-tiered market, one that gauges both the accuracy of an idea *and* the veracity of its sender. The explicit assumption is that those offering "good" arguments are perceived as more capable and credible over time. While politicians may be tempted to manipulate information to achieve short-term ends, a “countervailing force for accuracy is the desire to build a reputation: if receivers are rational, senders may benefit from committing to limit the incentive to distort, or report accurately” (Della Vigna & Gentzkow 2010, 26; see also Barro 1973). In theory, the reputational risk of lying in a democracy should preempt, or at least temper, suspect information from entering the public arena.

Given the ostensible cost of lying, one may think that politicians are incentivized to convey their private certitude accurately. However, there is a vast expanse between the binary extremes of truth and lies, with plenty of room to strategically manipulate rhetoric even if it never reaches the extreme of outright falsehood. This gray area between truth and falsehood is painted in a palette of C’s: confidence, caution, certainty, and circumspection. Thus, even if politicians shy away from outright lies, they have plenty of

wiggle room to distort their private certitude when communicating publicly. There is no single rubric to balance the relative appeal of certitude or circumspection; these strategic calculations vary according to the source, context, and the politician's desired ends.

The Appeal of Ambiguity

On one hand, there is strategic value for politicians to be ambiguous (Eisenberg 1984; Goodal et al. 2006). Hedging may be seen as politically safer than risking backlash from taking an unpopular decision. Similarly, there may be times when ambiguity is useful because it does not telegraph intent to potential adversaries (Page 1976). Hedging also makes it harder to appear to have flip-flopped on a position. After all, it is hard to succumb to a "gotcha" moment if politicians refrain from ever taking a firm stand. More recently scholars have argued that an increasingly complex media environment— one in which every public statement can be subject to intense scrutiny—paints equivocation as an increasingly attractive rhetorical option (Kernell 2007).

The Power of Confidence

On the other end of the spectrum, there are times when exuding confidence, no matter how incredible, is a compelling strategy. At an immediate level, high-certitude messages are psychologically appealing. Unlike their more nuanced sibling, a high-certainty message is not encumbered by qualification and is generally easy for audiences to process, which is a clear advantage when the audience is a nation of cognitive misers (Manheim 1991, 1994). Certitude, in short, is a particularly compelling strategy if your intention is to persuade. In many cases, determining whether or not that certitude is justified—and any reputational costs its invocation might incur—can be put off until *after*

a particular end has been achieved.

Under the right conditions, highly certain communication makes both the message and messenger appear more robust and credible, and thus ultimately more likely to sway public opinion (Coe at al 2004; Barabas 2005). The literature on threat-inflation highlights the quintessential example of certitude serving as a means to an end: framing international crises in stark terms can galvanize public support (Kaufmann 2004).

In his memoir Dean Acheson, President Truman's Secretary of State, underscores the rhetorical appeal of certitude:

> The task of a public officer seeking to explain and gain support for a major policy is not that of the writer of a doctoral thesis. Qualification must give way to simplicity of statement, nicety and nuance to bluntness, almost brutality, in carrying home a point. (cited in Krepon 2009, 9)

When an administration has a singular goal in mind—and when the public's passion is pitched—presidents typically eschew an analysis of pros, cons, and unknowns to present a clear and unambiguous case for their agenda. Moreover, once the president sets the initial tone of certitude, other members of the administration or party may feel compelled to offer a "consistent perspective" because "any appearance of disunity among the president's ranks will be seized by the media as an opportunity for a story" (Maltese 1994, 1; see also Entman 2003). Eliminating uncertainty thus makes it hard for journalists or any of said administration's political opponents to exploit obvious chinks in its armor.

V. Expert and Institutional Bias

We often attribute the worst motives to politicians; for them, lying is nothing noteworthy. What is more surprising is that the private beliefs of experts, scientists, analysts, pundits—ostensibly society's best equipped members to accurately articulate complex messages—may not always be accurately conveyed to a general audience.

Despite the ideals of "objective" professional inquiry, there are powerful forces, both within professional circles and society at-large, which can lead to errors, even the unintentional, in communicating certainty.

The problem is multifaceted. First, the incentive structure of many institutions can bias the production of information. Second, even if specialists can limit the emergence and consolidation of incredible certitude within their field, the level of confidence may be distorted when communicating that to a general audience. Importantly, neither case requires an intention to deceive; the very structure of professional organizations and the media lead to emergent certitude bias.

Professional Incentives for Certainty

Titans of a particular field may have built up sufficient personal reputation to indulge in the luxury of uncertainty. Presumably, however, they did not reach their lofty positions by clinging to uncertainty early in their careers. For those starting out, the typical professional milestones—publications, proportion, tenure, et cetera—are all predicated on being certain about *something*.

Established scholars have the luxury of asking profound rhetorical questions without feeling obligated to provide confident answers. However, few reach these lofty heights without exuding confidence earlier in their career. For most professional intellectuals and experts, uncertainty, null results, and shoulder shrugging do not constitute a recipe for professional success.

In practical terms, this corresponds to a longstanding debate within academia regarding the priority given to positive results (Greenwald 1975; Rosenthal 1979). The

individual incentives are far reaching: publication and professional advancement is harder to obtain for those whose findings are less than certain. In the medical literature, for example, studies with null results are three times less likely to be published compared to those with positive findings, despite the fact that both groups appear equally rigorous in design and implementation (Easterbrook et al. 1991; *Dickerson et al. 1987*).

Similar patterns are found across a broad spectrum of specialties, suggesting that positive-result bias is endemic to academia (Mlinaric et al. 2017). This suggests that "'successful and productive' studies are more interesting, readable and therefore more 'valuable' for publishers, editors and readers. This can be derived from the fact that the positive results are more favourably cited in the scientific and medical literature" (Mlinaric et. al 2017; see also Jannot et al. 2013 & Duyx et al 2017). Notably, this professional bias towards positive results has increased over time. In the early 1990s roughly a third of published studies were based on null results; twenty years later this rate had been effectively halved (Fanelli 2012).

Unfortunately, while the trend towards positive results may be more "valuable" for publishers and readers in the short-term, it represents a broader disservice to the actual quality of information in the public sphere. There *is* inherent value in null results and the fact that most of these studies never see the light of day subsequently skews our understanding of the world around us. While there have been some attempts to rectify this, including the delightfully titled *Journal of Articles in Support of the Null Hypothesis*, this perspective is the exception to the institutional norm.

Moreover, the allure of positive results can lead to a professional and intellectual

complacency, a false sense of confidence in the accuracy of our knowledge. The pressure to "publish or perish" creates "perverse incentives" for academics to seek positive results, even if the resulting methods and findings are dubious (Ravetz 1971). Once results are achieved it does not pay to peer too deeply at what is swept under the rug or to ask questions about the robustness of the findings. This has led to a replication crisis in many fields, where researchers failed to reproduce published findings. In 2016, a survey of 1,500 scientists indicated that a strong majority—70%—failed to reproduce another's work. More remarkably, half reported difficulty consistently reproducing their *own* findings (Fanelli 2009). In short, even academia—ostensibly defined by meticulous rigor and precision—struggles with a systematic bias towards incredible certitude.

Communicating to a General Audience

This pressure extends beyond the ivory tower of academia, influencing broader social and professional incentives for research presented in high certainty terms (Ranshoff & Ranshoff 2001; Tetlock 2005). Charles Manksi, economist and policy analyst, has made a career exploring how complex issues are handled in Washington. In the aptly titled *Policy Analysis with Incredible Certitude* (2011, 3-4; see also Manski 2007 7-8) Manski observes:

> The pressure to produce an answer, without qualifications, seems particularly intense in the environs of Washington, D.C. A perhaps apocryphal, but quite believable, story circulates about an economist's attempt to describe his uncertainty about a forecast to President Lyndon B. Johnson. The economist presented his forecast as a likely range of values for the quantity under discussion. Johnson is said to have replied, "Ranges are for cattle. Give me a number." 2007, 7-8

President Johnson is not unique in favoring high certitude analyses. When politicians ask for expert assessment, they often find precise estimates to be more politically expedient,

even though such analysis may be wanting in both rigor and accuracy. Indeed, the drive to appear confident is reinforced by the expectations of others. Analysts are not given raises or paid handsome consulting fees to hedge or waffle. Pundits do not get booked for speaking tours or TV appearances to shrug shoulders or scratch heads. Straightforward messages are easier to explain to a wider audience and experts are perceived as more credible when they speak in highly certain terms (Burrell & Koper 1998; Jensen 2008).

VI. Media and the Transmission of Confidence

If politicians and experts represent the "supply" of information, it is the media which has traditionally determined which viewpoints reach the general public. Though experts and politicians produce a vast universe of potential information, it falls to journalists to determine which items merit broader exposure in the market. Thus, it is the news media—not politicians per se—who play the central role in educating the public about current events (McCombs & Shaw 1972; Huckfeld et al. 1998; Entman 1991). To put it mildly, journalists have their work cut out for them.

To paraphrase Rumsfeld's famous quotation, as individuals we are all surrounded by an infinite sea of unknown unknowns. Citizens *need* the news to inform them about all the problems they did not even know they had to worry about. Lyton (2009, 111) reflects on the necessity of delegation:

> When faced with conflicting claims and data, individuals usually aren't in a position to determine for themselves how large particular risks—leukemia from contaminated groundwater, domestic attacks by terrorists, transmission of AIDS from casual contact with infected gay men—really are. Instead, they must rely on those whom they trust to tell them which risk claims are serious and which specious.

It is not simply enough to compile a list of what *might* threaten the public. Rather, people want to know what *should* merit their worry. It falls to journalists to sift through all the

talking heads, all the Chicken Littles warning of danger, to tell us what really warrants attention.

Mirroring vs. Curating

Of course, selecting credible sources for the news is easier said than done. There are two general beliefs about the role journalists should take curating the news. On one hand, many argue that journalists—as curators, not content creators—should take a passive role and "mirror" the elite debate (Bennett 1990). Practically speaking, the subset of elite messages which make it to mainstream coverage should be a representative sample of the larger universe of rhetoric.

In the specific context of certitude, faithful indexing means that the confidence of the news largely matches that of elite circles. There are times when the media does, in fact, accurately index this messaging. Domke's (2004) theory of the "echoing press" argues that, particularly during crises or conflict, elite debate is accurately portrayed in the news (see also Coe et al. 2007; Domke et al. 2006). For example, if the majority of security analysts are convinced that a rogue nation is developing a nuclear bomb, then news coverage of the potential threat should be equally confident.

Systematic Indexing and Certitude Bias

However, beyond acute periods of crisis, the general consensus in the literature is that journalists are rarely passive actors. There is considerable evidence that journalists, by intent or accident, influence the content of information as it passes from politicians to the general public. In contrast to mirroring, the tenor of selectively indexed news does *not* match that of the broader body of elite rhetoric (Bennett 1990; Bennet 2011; Althaus et

al. 2010). The process of selective indexing generally assumes that not all news is equally newsworthy; thus, given the time constraints of TV news, and the limited time and attention of the viewership, journalists focus on whatever is perceived to be the most novel or significant.

Research clearly indicates that media actively promotes certain stories for wider coverage based on key criteria. For example, Baum and Groeling (2010) employed a two-tiered content analysis to test for media selectivity on partisanship. First, they analyzed partisan signaling by Members of Congress on morning news shows. These morning shows typically follow a talk-show format and, critically, in this less structured setting the media executives have little control over what is said. The result of this initial content analysis, as one would expect, is that only a modest percentage of these morning interviews contain messages that cross party lines. The crux of the study comes from the follow-up content analysis run on the evening news. Rather than passively mirror elite messages, Baum and Groeling find that cross-party signals, which are relatively rare in the morning news, dominate evening broadcasts.

Baum & Groeling suggest that this discrepancy is a product of the fact that producers select only the most "newsworthy" stories from the morning to reprise in the afternoon. The fact that cross-party signals are disproportionately likely to be repeated strongly suggests that journalists are not impartial, but actually play an active role in shaping the narrative that is ultimately disseminated. The implication, of course, is that what is shown to the public is not simply a function of elite messaging but also of active mediation from journalists and editors.

Selecting Voices

To be clear, active indexing is, in itself, a form of media bias. While the word "bias" often carriers a pejorative combination, it is not necessarily a negative force when everything is taken into account. If, for example, journalists ignore the messages of quacks and charlatans—even if they are members of elite networks—the ensuing coverage is probably the better for it.

However, indexing does not always work to remove dubious voices from the debate. In fact, active news curation may have the opposite effect. One must not forget that journalism, despite any lofty intention, is a profit-motivated business at heart. To survive, newspapers must sell copies and networks must maintain reliable viewer-bases by providing streamlined and engaging coverage.

Consider the implications of televised news in the context of source credibility. From a journalist's perspective, it is possible that charlatans may *sound* more expert and persuasive than sages. More to the point, those that dabble in incredible certitude may make for compelling coverage. In contrast, thoughtful experts, aware of their own limitations and the nuance of the issues, may hedge statements or speak in moderated terms. Including their measured views may represent the available knowledge but it rarely makes for the juiciest (and most profitable) sound bites.

As a consequence, given the commercial considerations and norms of contemporary journalism, there is a potential for two detrimental trends, either A) selective bias *against* the most credible experts, or B) untoward tolerance of incredible certitude in the service of entertainment, rather than education.

CHAPTER THREE: TRUTH ON THE DIGITAL FRONTIER

This digital age is empowering citizens. People, becoming more knowledgeable, can make informed decisions on matters ranging from their family's healthcare to travel. By putting public data online the government is becoming increasingly transparent and so more accountable which again works in the people's favour.
— Timothy Kirkhope 2012

The future of the information age will be dominated by unintended consequences.
— James Dewar 1998

Over the vast arc of history—the rise and fall of nations, the birth of democracy, the march of science—the central nature of the public sphere remained largely unchanged for centuries. While new communication technologies successively expanded the information environment, they did not fundamentally change the dynamic of the information environment. Indeed, had this project been undertaken anytime between the printing press and the founding of PBS, remarkably little would have changed surrounding market theory. The discussion would have ended with the previous chapter's conclusion that society has *always* struggled to accurately assess truth and, more pointedly, that today's crises of confidence are at heart no worse than those of previous eras.

However, breaking with this long period of stability, the public sphere is in the midst of a period of rapid change. Beginning in the early 1990s the information revolution upended *everything* in the public sphere, and continues to reshape the informational market in ways that we are struggling to comprehend. Now, as we begin to reflect on the first decades of the digital public sphere's existence, the early results are sobering. From 2016 Russian hacking to the bevvy of 2020 conspiracy theories, digital

platforms offer a fertile ground for outright lies to spread and take root in the public consciousness. While these outright lies are deeply problematic in-and-of-themselves, they are only one of many obvious challenges; the implications of new digital technologies extend far beyond these headline-driving cases.

The more pervasive, though admittedly subtle, issue is the impact of digital mediums on the overall dynamics of the information environment. The implications are not restricted solely to the *content* of the public sphere; in fact, they impact the very *tenor* of debate across every sociopolitical issue. Digital platforms, to a fundamentally greater degree than earlier print and oral mediums, are conducive to the creation and proliferation of high-certainty arguments. This intensifies the longstanding struggle between circumspection and incredible certitude, as all facets of society can heedlessly indulge their immanent certitude bias.

The current chapter investigates how three features of digital technology undermine the quality of the information environment and thus deviate from the predictions of a classical MOI theoretical model:

1. **The exponential quantity of information**. Simply shoveling more information into the ideational market, without any kind of preemptory filter or quality control, is not necessarily helpful. Under the MOI model, the market struggles to systematically process all the information; searching for kernels of truth is difficult if the haystack grows faster than society's ability to thresh good ideas from bad.

2. **The decrease in the average quality of content**. Processing an exponential quantity is challenging in its own right, and the task is compounded by a decrease in the

average quality of information entering the market in the digital era compared to the previous norm. Digital platforms have dramatically decreased the ratio of thoughtful analysis relative to overconfident proclamations, making it harder for the market to efficiently reject suspect arguments.

To be clear, while these first two points impede market function, they are issues of volume and relative efficiency, not fundamental identity. The most critical repercussion—the reason the news is deluged with demagoguery and conspiracy—is that the way that new mediums are changing the dynamics of information creation and sharing *within* the market itself. This leads to the third key feature of the digital age:

3**. New technology has undermined safeguards against the entry of suspect information into the market**. Digital technology has created, in just a few decades, vast networks of people and ideas where none had existed—or could have *imaginably* existed—at any previous point. This new dynamic circumvents and undermines the MOI's traditional firewall against incredible certitude: professional journalism. The media is no longer able to fulfill its longstanding role as the watchdog of democracy, and now nearly anyone—the informed and the imbecile alike—can add their voice to the din of the market. In short, the digital sphere may be faster at promulgating a fantastic *quantity* of information, but it does so without meaningful safeguards governing its *quality*.

Any of these points alone would have placed serious strain on the MOI model. Taken together, they are more than the market theory model's expectations of the public sphere, and traditional models of communication more generally, can effectively handle.

The explosion in information and participation, in contrast to MOI theory, does not necessarily translate in to a more educated or thoughtful public. Digital technology is making it more likely that society will either suffer from its bias for systemic certitude, or fall victim to those who would manipulate the public's confidence for their own ends.

I. Reflecting on Revolutionary

It is worth a moment to reflect on the sheer magnitude of the digital revolution. The term *revolution* is a weighty concept, but it has become so ubiquitous in common parlance that its usage borders on cliché. However much marketers would like to convince us, cheese *inside* pizza crust is not "revolutionary." Nor are any of Apple's last ten phones. But sometimes, every few centuries, an idea comes along that fundamentally challenges our core beliefs. Thomas Kuhn, the philosopher of science, famously reflected on the nature of scientific revolution. The crux of his most well-known theorem is worth quoting at length:

> The historian of science may be tempted to claim that when paradigms change, the world itself changes with them. Led by a new paradigm, scientists adopt new instruments and look in new places. Even more important, during revolutions, scientists see new and different things when looking with familiar instruments in places they have looked before. It is rather as if the professional community had been suddenly transported to another planet where familiar objects are seen in a different light and are joined by unfamiliar ones as well. (Kuhn 1970, cited in Packer 2017, 36)

In Kuhn's view, science is divided between "normal" and "revolutionary" periods. In normal periods, knowledge grows in increments, gradually expanding within the bounds of an established order. The status quo is occasionally interrupted by moments of revolution, replacing old beliefs with radically new ways of thinking about the world.

If you replace the concept of "science" with "communication," the digital revolution is quintessentially Kuhnian. The transition to an online public sphere is a

magnitude greater than anything that came before, a quantum shift in society's relationship to information. The effects of these new mediums are so far-reaching that it would be hard to exaggerate their impact, both on the volume of information and the underlying dynamics of the MOI.

On one hand, digital media appears to embody the loftiest ideals of democratic theory, the ultimate expression of a free informational marketplace. John Wihbey (2014, 3), a scholar at Harvard's Center on Media and Policy, optimistically asserts:

> More than any prior technology, social media have the possibility of driving this democratization of information even further, undercutting the agenda-setting of large media outlets and their relative control of news and information flows.

Without question recent trends carry tremendous potential for democracy and collective knowledge; its potential for knowledge, truth, and a more enlightened polity is beyond question. Joe Trippi, Howard Dean's presidential campaign manager, exclaimed that "the Internet is the most democratizing innovation we've ever seen, more so even than the printing press" (2005, 235). For Trippi and others, the digital frontier promises an egalitarian future, where citizens can educate themselves without having to rely on elites.

However, not everything is rosy on the digital frontier. The very trends championed by democratic idealists—vast information and egalitarian participation—have proven to be deeply problematic in practice. There is a world of difference between the democratizing potential of the Internet, and the reality of a public sphere adrift without effective safeguards monitoring the spread of suspect information.

II. More is a Double-Edged Sword

The most obvious challenge to an MOI model stems from the sheer *volume* of

information bombarding the market each year. This deluge alone is not a deal-breaker for MOI theory. The market has overcome a succession of disruptive technologies throughout history: the progression from print to radio to TV did not break the public sphere. Each new medium may have been disruptive in the short-term, but each ultimately proved a net benefit for the quality of the public sphere.

Notably, these historical technological advances were primarily a shift in the scale of distribution, increasing the number of citizens able to consume market information. This progression, however, was not accompanied by a corresponding increase in the proportion of active participants involved in the production of information. Barriers to entry across print, radio, and TV remained relatively too high for average citizens to directly influence the information environment.

The digital revolution, however, is fundamentally different. It not only represents a massive expansion of the breadth of the information environment, but it has also eliminated major hurdles to market entry. Now anyone with a computer, the will, and a few spare moments can add their two cents to the market directly. Individually, the effect is miniscule. But collectively, billions of individuals entering the market in an active capacity represents an unprecedented social, political, and epistemological force. Take a moment to reflect on the sheer magnitude of change over the past decades. Available news sources have exploded in the last few decades, moving largely from a handful of national print and television sources to a seemingly endless number of blogs, vlogs, or digital media platform du jour.

Exponential *Everything*

The two factors determining the size of the public sphere—population and the capacity of technology to transmit information—are both in the midst of a period of exponential growth. Either factor alone would have resulted in a massive expansion of the information environment. Together, their compounding effect is unprecedented in the history of civilization.

For millennia, the global population grew at a roughly linear rate. Between the rise of *Homo sapiens* approximately 200,000 years ago to the turn of the 20th century the global population grew to 1.6 billion.[6] Not too shabby! However, the population milestone that civilization had taken millennia to reach was doubled in a single lifetime, hitting 3.5 billion by the mid-60s, and then doubling again within fifty years. Today the world population stands just shy of eight billion, roughly four times what it was a mere century ago. Exponential growth indeed.

Moreover, advances in agriculture, industrialization, and literacy means that these billions have more time on their hands than their forebearers, affording them the freedom to enter the intellectual marketplace as both producers and consumers. Provocative freethinkers have suggested that the majority of scientists who have ever existed are alive today. While this claim may not be strictly true, it does speak to the accelerating rate of knowledge production (Curtin 2007). There are simply more people, with more time, who are more than willing to contribute to an already boisterous public sphere.

[6] United Nations, Department of Economic and Social Affairs, Population Division (2019). World Population Prospects 2019: Highlights. ST/ESA/SER.A/423.

To illustrate one market niche, consider modern academia. While formal fields of study are hardly the sum total of human knowledge, they presumably represent a more-rigorous-than-average pursuit of truth and learning and thus are a reasonable proxy for good information. In a meta-analysis of professional journals from 1950 to the present, the number of scholarly papers published annually doubled every nine years (Bornmann & Mutz 2014). While scholarly articles clearly do not represent the totality of new knowledge, this trend nonetheless illustrates the dramatic increase of input into the MOI. In fact, given the wide scope of the Internet the overall growth trend may well be higher.

The trend identified by Bornmann and Mutz started *before* the digital revolution. The Internet has further accelerated the rate of production of knowledge, both in academia and society more broadly. The Internet is so complex that attempts to quantify it are imperfect, and even if we agree on a reasonable metric the values are so large that they are hard to comprehend. If you are looking for something to impress your friends over dinner, you can mention that in 2016 the Internet eclipsed the annual threshold of a zettabyte of information (Barnett 2016). What is a zettabyte, they might ask? The snide answer is $1x10^{16}$ bytes of information, though for most us that is hardly more helpful than esoteric nomenclature. For a (slightly) more approachable perspective, technology journalist Eric Brantner (2016) noted that that the zettabyte milestone is the "equivalent of downloading enough data to fill 20 billion Blu-ray discs."[7] Now clearly, that mind-boggling measure of data—which includes slick formatting and video—is not an ideal

[7] If those 20 billion hypothetical Blu-rays were indeed actual movies, what percentage would be worth a second watch?

reflection of the *usefulness* of the information conveyed. Another approach is to attempt to count the number of websites as a very rough proxy for information volume. While estimators contest what type of data should be counted, a rough approximation suggests that by 2020 the web had grown to over 1.7 billion active websites.[8]

Let us pause here for a moment. While it is entertaining to conjure clever analogies illustrating the unimaginable vastness of the cybersphere, focusing on whether the Internet spans one, two, or seven billion websites overlooks the forest by counting the trees. For all practical purposes, if we are interested in the value added to the quality of public debate achieved by additional voices, we are comfortably past the point of diminishing returns. The more important issue is how well the public sphere adapts to this influx of information, how efficiently the market calibrates to this new normal as it stives to separate fact from fiction.

An Optimistic View: The Torrent Brings More Truth

MOI advocates would acknowledge that, while the sheer volume of information can be problematic, this alone does not undermine the core tenants of the theory. If you are feeling optimistic, you could argue that the influx of information will eventually be a net positive for society. In Kuhnian terms, once society overcomes the unique challenges of the information revolution, it will enter a new period of "normal" communication.

Adherents to the market model would argue that there have been other points in history where the introduction of new mediums—telegraph, radio, TV—neither broke the MOI nor capsized the established sociopolitical order. Digital media, in this light, is just

[8] Data compiled from the aggregating website internetlivestats.com/ in early 2020.

another chapter in a longer story of technological advancement. It may seem disruptive as we experience the first growing pains of a new era, but eventually, through trial, error, and incremental regulation, society will master this new medium. In the MOI dream scenario, the health of the market, armed with millions of new participants and a bonanza of new information, would eventually surpass that of the pre-digital era. There is potential for an enlightened information age where the MOI will emerge more powerful and efficient than ever. How can error, false prophets, and incredible certitude stand against the collective wisdom of billions? The reality, however, is not that simple.

A Pessimistic View: Truth is Buried in the Torrent

While MOI theory rests on the wisdom of crowds, group rationality is not a democratic panacea. Humans are not perfectly rational Bayesian computers, and there is a limit to how much information we can usefully process. The root of the problem is a function of sorting. Logically, the market takes time to process additional information. The ability to learn about nearly anything with a click of a mouse, while admirable in theory, can often be counterproductive when it devolves into information overload. In this light, adding new content, and new voices, is only helpful up to a point. While it is impossible to define a specific threshold, there comes a point when adding new voices does not make crowds wiser… it just makes them more crowded. The more input entered into the public sphere, the more time it takes to identify good views and reject suspect ones. However, the time it takes to reach consensus represents a potential cost to society. We will return to the Catch-22 of time in the later discussion of climate change.

III. Information Entering the Market is Increasingly Skewed

A dramatic increase in information, in-and-of itself, would not necessarily break the public market. There may be a momentary dip in the quality of debate—an unavoidable lag as the market recalibrates to a new reality—but presumably it would regain efficiency over time. The problem for the MOI model is that it does not simply have to adapt to a burgeoning volume of information, but also a simultaneous diminution in the average quality of information entering the market.

There are reasons to suspect that digital platforms are more likely to promote the creation and promulgation of incredible certitude over thoughtful deliberation. Consider how two factors—the democratization of participation and content constraints imposed by different communication mediums—create a market increasingly skewed towards high-certitude content.

Not All Producers are Equal

The logic behind democratizing the market is less compelling when you consider the production of information. It is not simply that new platforms give voice to more charlatans in the absolute sense—which they certainly do—but that the average digital contributor does not have the same training or incentives to temper incredible certitude.

Whether you call the content on social media "citizen journalism" or babbling rabble depends on how generous you are feeling, but even the boosters of social media concede it produces a different dynamic than professionally curated news (Goode 2009; Ali & Fahmy 2013). It is absurd to think that the average individual creating, liking, or forwarding information has the same training as a journalist, or similar professional

incentives to temper their language. Even a cursory review of Facebook feeds or the comments section on news sites does not suggest a master class in introspection; they frequently teem with bold declamations, self-aggrandizement, and unapologetic confidence. While the insinuation may be abhorrent to democratic idealists, one must wonder if allowing average citizens to become content creators has increased the average quality of information in the public sphere.

The Medium is the Message

Beyond *who* contributes, the changing nature of the mediums themselves influences the prevailing tenor of certainty. The general premise that medium influences content has been widely discussed. McLuhan (1964), one of the early gurus of communication as an organized discipline, asserted that "the medium is the message." The core of his argument is that the information contained in a message is inseparable from the manner of presentation.

One inescapable difference between mediums is informational real estate. The presentation of an issue must clearly differ when it written into a *New York Times* article instead of a Tweet. When there are tight space constraints, there is less room for context or nuance; the story must get right to the point and capture the essentials of the issue before space runs out. Practical considerations between mediums manifest in different average tenor of certainty. As stated earlier, not all producers are equal and at an immediate level there is a clear difference between a trained journalist and an average Twitter user.

Beyond *who* is writing, each platform also presents clear constraints on content.

Word count is a reasonable common denominator when attempting to quantify the volume of information across mediums. Broadsheet newspapers occupy the lengthiest end of the spectrum at an average of 600 words, 350 for local news, and 20-odd for the most shared Tweets. [9] It is hardly a contentious claim to suggest that a *Times* exposé conveys more information in an absolute sense than the average Tweet. But if the quantity of information is all that matters, does it follow that thirty Tweets conveys comparable information, or a similar balance of certitude, as an average article from the Grey Lady? The suggestion is preposterous.

Indeed, broad analysis from the Linguistic Inquiry and Word Count (LIWC) platform, an automated program for language analysis, includes the average certainty by several common mediums (Pennebaker et al. 2015). LIWC calculates scores based on the frequency of a particular family of words in a segment of text. As a baseline, average written speech has a "certitude" score of 1.35; that is to say, 1.35 words that denote confidence per every 100 words Twitter, a written medium with extreme length constraints, has a modestly higher average score of 1.43. At the other extreme, the *New York Times*, which enjoys both trained journalists and plenty of room for context, has a

[9] Broadsheet newspapers occupy the content-rich end of the spectrum. The average length of a NYT article is six hundred words, but it is not uncommon for pieces to reach well over a thousand (Menendez-Alarcon 2012; NYT 2020). Typical TV spots occupy the informational middle-ground. An analysis of over 30,000 local television news segments found that the average length of a typical produced segment ran 2:23. If you consider that normal speech patterns, it follows that these segments averaged 350 words (Williams 1998). At the other extreme is the newest medium on the block, Twitter. The service was originally limited to 140 characters, though this has since been raised to a positively garrulous 280. For the sake of discussion, consider that the sweet spot for Tweet "engagement" is approximately 100 characters or the general ballpark of 20 words. This is, admittedly, something of an apples-and-oranges comparison. Twitter users often abbreviate words or phrases, so it is hard to make a perfect world-count comparison between Twitter and other mediums.

certitude roughly score *half* that of Twitter at .76. Clearly, medium matters when comparing across platforms.

The Ever-Shrinking Sound Bite

New technology, combined with evolving journalistic norms, is also changing the informational constraints *within* mediums. Consider TV news, a medium that has evolved substantially over the past decades. In an increasingly competitive media landscape news programs have had to navigate being informative enough to be useful, and entertaining enough to compete for attention. One consequence of this market pressure is that news segments are now carefully produced, distilling complex issues into tidy three-minute packages.

Even Walter Cronkite, perhaps the most celebrated journalist in recent history, admitted that his medium of television was great to introduce stories, but had limited ability to truly educate. In an interview at the midpoint of his career, he lamented the need to balance information with engagement.

> The consultants [have] convinced all these stations that they had to have action in the first 45 seconds--any old barn-burning or truck crash on the interstate would do. There is no attempt to cover any of the major stories of the town in depth--the school board and city hall and that sort of thing. (Cronkite 1952, cited in Rottenberg 1994)

Mind you, this was coming from one of the most revered figures in professional journalism seventy years ago.

Today, the pressure to which Cronkite alluded, to fill the news with "action," has been given, fittingly, the flashy name "infotainment" (Carpini & Williams 2001). Infotainment carries a negative connotation, suggesting that educational "hard news" is being sidelined in favor of entertainment in order to maximize viewership. Satirist John

Stewart, who made a career skewing mainstream media, noted that "the press can hold its magnifying glass up to our problems… illuminating issues heretofore unseen, or they can use that magnifying glass to light ants on fire and then perhaps host a week of shows on the sudden, unexpected, dangerous flaming ant epidemic." While immolating insects is comedic hyperbole, it does speak to the broader tension between the news as a means to educate rather than simply entertain the masses.

However, while Stewart, Cronkite, and others lament the informational sacrifices implied by infotainment, it does nothing to change the corporate reality of professional journalism. While we celebrate the press remaining free and independent, organizations that purely pursue education over engagement will not survive long enough to write their own obituaries. Technology has intensified the pressure toward entertaining over informing. One consequence is a newsroom increasingly motivated by metrics and viewer engagement, a weighty issue that we will return to at length shortly.

For now, consider how technology has also changed the way content is presented, and the implications that brings for certitude in the news. The days of an anchor narrating solemnly behind a news desk are long gone. Straightforward narratives are replaced by slick graphics, quick transitions, and generally streamlined presentation. One of the hallmarks of modern TV news is an increasing reliance on short-and-punchy sound bites to punctuate the narrative.

The fact is that sound bites themselves are changing. Daniel Hallin (1992) analyzed TV coverage of elections from 1968-88. He found that the average length of candidate sound bites decreased dramatically, from 43 seconds in 1968 to 9 seconds in

1988. There are two important consequences of the shift toward an ever-shrinking sound bite: the agent driving the narrative, and the linguistic content of the sound bite itself.

First, the selective use of short sound bites means that journalists, rather than elites, play the central role in driving the narrative. Hallin (1992, 9-10) suggests that when elite messages are included, they serve as thematic punctuation marks rather than the core drivers of a story:

> Today's television journalist displays a sharply different attitude toward the words of candidates and other newsmakers. Today those words, rather than simply being reproduced and transmitted to the audience, are treated as raw material to be taken apart, combined with other sounds and images, and grated into a new narrative.

In short, political statements are rarely narratives in-and-of-themselves, but simply stylistic embellishments to serve a larger narrative.

This leads to the second implication of Hallin's work: soundbite length is intrinsically linked to certitude. Shortening sound bites increases the pressure to make sure that every second, every word, helps advance the narrative. Short soundbites simply do not have the informational real estate to accommodate circumspection, context, or any amount of waffling. Short, straightforward sound bites, in contrast to their lengthier and wordier predecessors, can quickly communicate a particular argument or perspective.

The constraints imposed by sound bites resonate with the discussion of incentives for certitude in the previous chapter. Knowing the media's proclivity for pithy sound bites, public figures must master the art of saying more with less if they are to make the most of limited media exposure. Gleick (2000, 97) observes that "sound bites are what politicians learn to speak in if they wish their voices to be heard in a format that tells the whole story in less than a minute." Indeed, an entire cottage industry of consultants is

devoted to helping public figures craft concise and punchy messages. If politicians want to make it to the news, let alone advance a persuasive argument, they must adapt to the modern media landscape or risk being sidelined entirely. We will return to this feedback mechanism between journalists and politicians at the end of the chapter.

IV. The Evolution of the Digital MOI

If the first two developments—increased volume and the constraining effect of medium—are matters of degree, the greatest consequence of digital mediums is the way it has reinvented the core channels of social communication. New technologies created new pathways of communication, allowing novel pathways into the public sphere, as well as new mechanisms to amplify content. In short, the digital public sphere is not simply more of the same at a higher volume, it is something new entirely.

In the traditional portrayal of the MOI the flow of information through society is largely linear. Elites create messaging, the media filters, distills, and disseminates it, and then the public consumes it. Fin. This exchange, in its simplest form, is represented in the figure below:

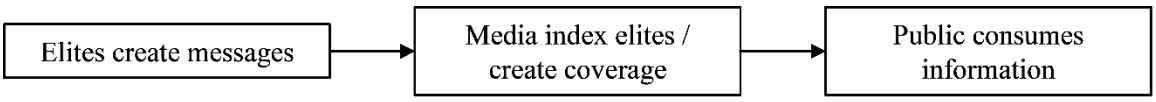

Figure 1 The "Traditional" MOI

While this is an admittedly simplified depiction of communication in the real world, it illustrates two important features of how the MOI is traditionally articulated.

First, the media's role in the chain of communication, as the sole link between elites and the public, affords journalists the greatest capacity to realize their role as democratic watchdogs. If all information really must pass through the media, they deserve their well-worn moniker of gatekeeper. Presumably, this setup benefits society by keeping questionable information—and incredible certitude—from ever entering the market. This control over the content of the public sphere afforded the media with a near monopoly on the trade of information. Beyond a few special cases—the president's bully pulpit being the most salient example—politicians have had no reliable means at their disposal to communicate directly to the masses. But the president is the exception to the norm. If Joe Congressman or Josephine Expert wants to reach a national audience, they are largely at the mercy of journalists and media executives.

Citizens in this traditional model are little more than passive information consumers. While individuals can choose what news source to turn to—or choose not to watch at all—that is about the extent of an average citizen's control over the information environment. Yes, citizens *can* influence the political process through opinion polls and the ballot box, which, presumably, will influence the flow of information into the public sphere, but this is an indirect and often delayed feedback mechanism. Without the president's bully pulpit or a pundit's platform, the typical individual has effectively no ability to directly participate in the market.

All this changed with the rise of the Internet. New channels of information circumvented the media's central position in the information exchange, providing both elites and the general public previously unimaginable agency to actively shape the

content of the information environment. To expand on the earlier graphic, the evolution into a digital marketplace can be diagrammed as follows:

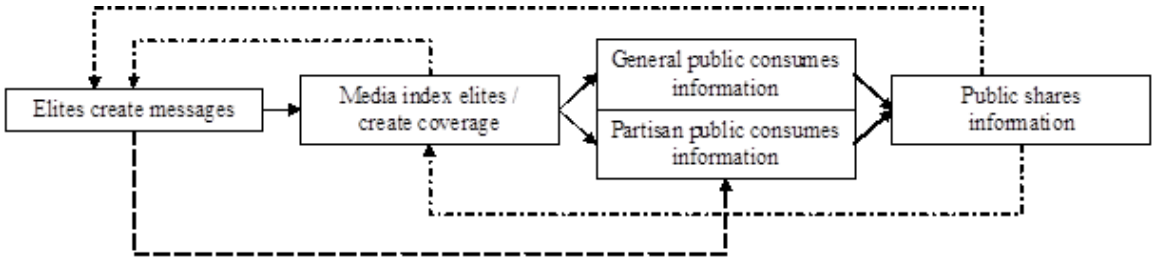

Figure 2 The Digital Marketplace

A few lines and boxes do not do justice to the sheer magnitude of the changes to the MOI. The public sphere, once a unified body, is now split between general and special-interest audiences. For present purposes, the divide runs between the general public and partisans. The potential for subdivision, however, is generalizable. Technology just as easily allows parallel MOIs to develop between dog enthusiasts and cat fanciers, Wolverines and Buckeyes, flat-Earthers and normal folk, or any other social group whose focused beliefs motivate information consumption.

Additionally, the rightmost stage representing a citizens' ability to create and amply content turns the traditional MOI dynamic on its head. Now *everyone*, however humble, can directly enter their views into the national market. Moreover, by clicking on links and sharing content, citizens effectively "vote" for the information they find most compelling. Individually, the effect is negligible. But collectively, the expressed preferences of millions can dramatically shift the balance of content produced, uplifted,

and circulated in the public sphere. What is more, digital metrics allow these signals to be monitored by journalists and elites, providing real-time feedback on which stories are most compelling. As we have seen in the previous chapter, when the masses share a systematic bias for certainty, this preference can influence the very production of information.

Elites, too, have become empowered on the digital frontier. In the past, most politicians were limited to town halls and mailers to communicate directly with constituents; their strategies were limited by time, expense, and scope of influence. If elites wanted to reach a general audience, they had to rely on the decisions of journalists over whom they had no direct control. It was journalists, not politicians, who ultimately decided which statements merited national exposure. Now, through their personal social media accounts, politicians can communicate directly to supporters without the constraints imposed by journalistic gatekeeping.

The remainder of the chapter expands on four important consequences of digital technology:

1. New technology has changed journalism as an industry.
2. The unitary MOI has been fractured into parallel, and potentially independent, markets for niche audiences.
3. Social media has provided elites with more agency, and changed the incentives, when communicating to the general public.
4. Most importantly, citizens have evolved from passive consumers into active information amplifiers.

Each of these points is independently significant. Together, as we will discuss at the close of the chapter, they create the perfect storm to allow incredible certitude to permeate the public sphere.

V. Technology Has Changed Journalism

While not explicitly demarcated in Figure 2, digital technology has dramatically influenced news media as a profession. Two trends in particular, the proliferation of viewership metrics and changing demography, have begun influencing the way journalists convey certitude.

Data-driven News

Journalists must balance what they deem important for their audience to learn against what they believe that audience is interested in hearing (Johansson 2004). Sometimes these are one and the same, but often the tension between the two reflects the broader infotainment dilemma. This balance is increasingly skewed towards corporate, rather than purely journalistic, considerations (Witschge & Nygren 2009)

Media duality—with journalists curating and crafting the news and the executives sitting at the corporate helm—has always existed in the news industry. Ideally, there is as degree of separation between the two groups. For democracy to flourish, journalist *should* have the freedom to cover genuinely important news in the manner they deem appropriate. Digital technology, however, threatens to undermine the traditional division between the newsroom and the boardroom.

Rather than simply tout the quality of coverage, editors are increasingly consumed by audience size; media executives speak of counting "eyeballs", "target groups", and the "portfolio" of viewers that they can use to lure advertisers (Picard 2004). As Witschge & Nygren (2009, 49) note:

> Journalism is more connected than ever to finance and the old wall between the

> newsroom and the advertising and finance departments is no longer the great wall of China, but more the Berlin wall, crumbling and seen as a museum piece. (Witschge & Nygren 2009, 48)

The problem is that the corporate desire for site traffic and viewer engagement is increasingly easy for everyone—corporate executives and journalists alike—to track in real time. Every click, every shared story, every news retweet creates a "constant flow of metrics [that] tells the online journalist what the audience reads and does not read and this is beginning to influence news selection. Articles with bad metrics can be dropped and other articles with lots of readers are put on top" (Witschge & Nygren 2009, 47). While we may hold journalists up as some paragon of democracy, in reality they are, like the rest of us, trying to make a name for themselves in a highly competitive field. Metrics, in this sense, are both a blessing and a curse: a measure of audience engagement, and an ever-present temptation to craft stories with an eye towards engagement rather than education.

The journalist Kevin Rawlinson (2016) interviewed his colleagues in the newsroom and found that these metrics were never far from their mind. One journalist noted the implicit "pressure to churn out stories, including dubious ones, in order to get clicks, because they equal money. At my former employer in particular, the pressure was on due to the limited resources." In an increasingly competitive field, newspapers and media companies are asking more of their staff to maintain relevance and margins in the market. Keep this point in mind, as we return to the central role of data in creating a "circle of certitude" at the close of the chapter.

Journalists *Themselves* Are Changing

Technology is also having a profound change on the demography of journalism. Conservatives have long charged that the mainstream media has a strong liberal bias. To a degree, they are correct. In 2013, only 7% of journalists self-identified as Republicans, a professional homogeneity that bears little resemblance to the ideological spread of the nation at-large (Silver 2017). Steve Bannon, President Trump's part-time strategist and a full-time conspiracy theorist, took things further. In a 2016 interview he argued that "The media bubble is the ultimate symbol of what's wrong with this country… It's just a circle of people talking to themselves who have no fucking idea what's going on" (cited in Shafer & Doherty 2017). Presumably, the reason journalists have "no fucking idea" is because they suffer from institutional groupthink, without any meaningful way to gain outside perspective.

Jack Shafer and Tucker Doherty, media reporters at Politico, approach the issues from a slightly different angle. They argues that:

> [J]ournalistic groupthink is a symptom, not a cause. And when it comes to the cause, there's another, blunter way to think about the question than screaming "bias" and "conspiracy," or counting D's and R's. That's to ask a simple question about the map. Where do journalists work, and how much has that changed in recent years? (Shafer 2017)

Shafer emphasizes the importance of the self-evident: news stories do not spring fully formed into the front page, they are the product of the journalists, editors, and organizations. When technology shifts the demographics of journalists, it is reasonable to think that this has an effect, even if unconscious, on the news making process.

In 2004 *New York Times* Editor Daniel Okrent spoke of the connection between the physical geography of a news organization and its on-paper perspective. In a story

titled "Is *The New York Times* a Liberal Newspaper," he did not hesitate to answer in the affirmative. He reflected that:

> Today, only 50 percent of The *Times's* readership resides in metropolitan New York, but the paper's heart, mind and habits remain embedded here. You can take the paper out of the city, but without an effort to take the city and all its attendant provocations, experiments and attitudes out of the paper, readers with a different worldview will find *The Times* an alien beast.

In the past, this geographical branding was notable, but not overly detrimental to the national MOI. *The New York Times*, after all, was not the only game in town. There were numerous smaller news organizations across the country, each happily catering to anyone who found the *Times* too alien. Being small and local was not a limitation but a strategic advantage. Small outlets were able to cater to the interests and tastes of their specific audiences.

Digital technology is changing this balance. While major news organizations have struggled to adapt to changing consumer habits, the impact of technology has devastated local news (Nielson 2015; Hayed & Lawless 2018). As advertising revenue has shifted from print to electronic mediums, paper subscriptions have plummeted and local newsrooms have struggled to stay solvent. From 1995 to 2015, when the internet became mainstream, newsroom staff fell by nearly forty percent and many papers were forced out of business (Hendrickson 2019; Hagey et al. 2019; Grieco 2019).

Today, most media markets are limited to the few national news brands, with limited ability for local news to complement the national coverage (Hindman 2011). There are important consequences of this shift. At a direct level, much of the country suffers in a "news desert," lacking any coverage that is specifically catered to the local geography and demographics (Doctor 2016). When citizens do not feel like the news

represents them, it is because it objectively does not. Many in the media are more liberal, and more isolated, than the country at-large. Keep this point in mind, as we return to the issue of media distrust in chapter six.

VI. From a Unitary to Fragmentary Market

For much of US history, the US public sphere was something like the unitary behemoth implied by the scholarship. While there was certainly variation in local newspapers and issues of regional importance, it was reasonable to speak of "national" debate in the fullest sense of the word. It was not simply that national discourse concerned subjects that impacted the whole country, but more fundamentally that the mechanism of media coverage was inherently national. During this period, debate in the national public sphere was dominated by a handful organizations (Hindman & Weigand 2008; Iyengar & Hahn 2009).

Only a few major newspapers enjoyed the funding, infrastructure, and gravitas for national distribution. And, until remarkably recently, there was little choice or variation in TV coverage. From 1961 through the early 90s almost all televised news was covered by one of the Big Three: ABC, CBS, and NBC (McNeil 1996). While citizens could choose which network to tune into, there was generally little difference in the headlines covered across the networks (Iyengar & Hahn 2009). The topical similarity between the channels extended into the tone of coverage itself. Remember that the Big Three presented their same national news broadcast to everyone in the country. Texas farmers and New York bankers, however diverse in their perspective and interests, formed a common audience. The need to cater to a very diverse viewership dictated how the news

was crated and presented.

The result was a journalistic spin on of Downs' (1957) median voter hypothesis for politics. In an electoral context Downs, along with a host of other social scientists, argued that the candidates have strategic incentives to take positions hovering around the middle of the ideological spectrum. Coverage that drifted towards an ideological extreme, while potentially appealing to a smattering of ideologues, would risk alienating more viewers than it pleased.

The trend towards moderate coverage also helped temper incredible certitude. Centrist news organizations had to be careful about how they presented ideologues; giving a platform to incredible certitude could undermine the legitimacy and credibility of the news organization. While this moderate approach might not suit citizens on the far right or left, who would prefer similarly extreme candidates, it was generally palatable to a wide swath of the electorate.

The Rise of Specialized Markets

Technology, however, has destroyed any pretense of a unitary market. The three major TV news desks were joined by a host of competitors on cable in the 80s and 90s. Then, with the advent of the Internet and social media, what had started as a gradual growth in the news market became a tsunami of competition. Ken Melham, G.W. Bush's campaign manager, remarked that "technology has broken the monopoly of the three [television] networks… instead of having one place where everyone gets information, there are thousands of places" (quoted in Hindman 2008, 2).

News consumers are no longer restricted to three big networks or local papers; in

this vastly expanded media universe there is now a news venue catering to any audience. This has led to ideological "self-segregation" in TV news (Prior 2007; Jamieson & Cappella 2008) and online (Garrett 2009; Hindman 2008) as individuals naturally gravitate to news venues that reflect their political preference and perspective. The implications of partisan news are so far-reaching that the following chapter is dedicated entirely to discussing the impact of the fractured MOI on the quality of political debate.

VII. Elites Have Direct Market Access

Digital mediums have also fundamentally altered the relationship of elites to the general public. During the era of print, radio, and TV news, direct political outreach was inherently constrained. Presidents could rely on the bully pulpit to communicate to the nation, but theirs was a singularly empowered platform. A typical politician wanting to "go public" would have little means to communicate with citizens beyond town halls and direct mailers; sufficient enough for a limited constituency, but a far cry from a national platform. To engage with national debate, politicians would have to angle for mainstream news coverage. McCombs & Shaw (McCombs & Shaw 1972, 176), writing about outreach in the 1970s, noted:

> In our day, more than ever before, candidates go before the people through the mass media rather than in person.' The information in the mass media becomes the only contact many have with politics. The pledges, promises, and rhetoric encapsulated in news stories, columns, and editorials constitute much of the information upon which a voting decision has to be made. Most of what people know comes to them "second" or "third" hand from the mass media or from other people.

The challenge for politicians, of course, is that their desire to be heard did not necessarily correspond with what journalists deemed newsworthy. This left political elites in a precarious position, with any ambition for a broader audience contingent on the whims of

others.

Digital technology has fundamentally changed this dynamic. The Internet allows politicians to bypass journalists, newsrooms, editors, and anyone else who might object to what they have to say. Social media, in particular, provides a direct and unfiltered link between candidates and their supporters. Exposure in the mainstream media is still a boon, sure, but it is no longer an essential barrier for entry onto the national stage. The textbook example of the power of social media, of course, is candidate, then President, Trump. We will return to both Trump's master-class in social media, as well as the implications of his ultimate deplatforming, in later chapters.

Suffice it to say that the internet has been a mixed blessing for the quality of the MOI. On one hand, the Internet embodies an egalitarian model of communication. Anyone with a message and the desire to be heard has a chance to reach a truly national audience. On the other hand, lowering the bar for entry risks a messy free-for-all. To make matters worse, the quality control mechanism in the traditional MOI—the media—is no longer able to be an effective information gatekeeper (Carr 2012). Sidelining professional media leaves the door wide open for incredible certitude to enter the MOI and proliferate unchecked.

VIII. Citizens: Playing an Active Role

Consider the traditional role of citizens, as the final consumers of information, in shaping the information environment. Presumably, watching the news and becoming informed is an essential step to a healthy democracy. Granted, the degree to which watching the news actually informed or changed opinions among viewers is a subject of

considerable debate in its own right (Benett 1990; Iyengar 1990; McCombs et al. 2011). But let us put the issue of citizen's relative sagacity versus stupidity aside for present. Let's simply assume that, *ceteris paribus*, the desire for citizens to become informed is better than wallowing in contented ignorance. What is a dutiful, or at least passingly curious, person able to do in the traditional model to fulfill their civic duty?

The answer: not much.

Citizens could choose to follow the news. Or they could not. That is about the extent of their ability to engage with political debate under the prior market model. Of course, citizens in a democracy can always attempt to influence policy at the ballot box. But this electoral connection to national debate is, at best, an indirect and delayed feedback mechanism. Given enough time, citizens could influence the public sphere by rewarding or punishing elites and following or ignoring media outlets. But all this is, at the very least, a degree removed from the actual news making process. In terms of the short-term content of the information environment, citizens have largely served as an informational dead-end within the dynamics of the MOI. There was simply no means for a normal citizen to project their views outside of their immediate social circle, let alone influence the content of the national marketplace in any meaningful way. In essence, citizens as a collective may have been the final jury under the MOI, but they had very little input into the specifics of the debate itself.

Digital technology has turned centuries, even millennia, of conventional wisdom on its head. With the Internet any individual has the ability to offer their perspective directly to a national, and potentially global, audience. In 1997 a US Supreme Court

decision striking down the *Communications Decency Act* highlighted the ability of the Internet to empower citizens:

> Any person or organization with a computer connected to the Internet can ‘‘publish’’ information…. Through the use of chat rooms, any person with a phone line can become a town crier with a voice that resonates farther than it could from any soapbox. Through the use of Web pages, mail exploders, and newsgroups, the same individual can become a pamphleteer. As the District Court found, ‘‘the content on the Internet is as diverse as human thought.[10]

The Internet has given “new voice to people who have felt voiceless” (Gillmor 2004, xviii). Similarly, the chair of the Federal Communication Commission, Michel Powell (2002, quoted in Hindman 2008), emphasized the “democratizing effect” of technology, now “with a low-cost computer and an internet connection everyone has a chance to ‘get the skinny,’ the ‘real deal,’ to see the wizard behind the curtain.”

Even beyond adding their own messages, the Internet allows citizens to amplify the messages of others (Peck 2020; Zhuravskaya et al. 2020). Every time a story is shared or a message retweeted the balance of information in the public sphere shifts slightly. To be clear, at a strictly individual level citizen agency remains negligible. But in aggregate, the public mass, hundreds of millions of participants acting simultaneously as news consumers *and* amplifiers, has a profound impact on the information environment. It is hard to overstate the significance of this shift of citizens from passive consumer to active producers of information. Within the many tectonic shifts brought on by the digital revolution, this may be the most revolutionary change of all.

VIII. The Circle of Certitude

[10] 521 U.S. 844 (more)117 S. Ct. 2329; 138 L. Ed. 2d 874; 1997 U.S. LEXIS 4037

The omnipresence of certitude bias is a major challenge for the MOI in-and-of itself. The problem is compounded by the fact that various manifestations of certitude bias do not exist in isolation, but rather are all linked in the complex web of the public sphere. Every group, from elites to common citizens, has a hand in the transmission of information. As Edleman (1988, 85) emphasizes:

> Interpretation pervades every phase of news creation and dissemination. Officials, interest groups, and critics anticipate the interpretations of particular audiences, shaping their acts and language so as to elicit a desired response. The audiences for news are ultimate interpreters, paying attention to some stories, ignoring most, and fitting news accounts into a story plot that reflects their respective values.

While this broad social awareness is as old as politics itself, digital technology has intensified the practical implications. The ability to anticipate the desires of potential audiences, and then to track public preference in real-time, has a profound impact on the news making process. Consider how several linked steps may create a self-reinforcing cycle of certainty in public debate:

Initially news organization publish a series of articles online. Citizens then "vote" on content by viewing, sharing, commenting on their preferred stories. Importantly, this public interaction is not random: news consumers, manifesting the common psychological preference for confidence, are likely to disproportionately favor stories told in highly confident tones over those which are more cautious. Any sharing behavior subtly but systematically shifts the tenor of certitude in the information environment. Compounded over tens or hundreds of millions of engaged news consumers, selective sharing alone can have a major impact on the information environment. But this is just the first stage in a far-reaching cycle.

In the second stage, news organizations use internal metrics to track which stories are the most popular. We've all encountered the "top stories" or "trending" section of news websites. For regular viewers they may represent little more than intriguing prompts or passing curiosities, but for news organizations, they provide deep insights about viewer engagement. Editors, armed with metrics and data, are able to track in real time which stories drive the most traffic and viewer engagement. If the public expresses certitude bias—or any other systematic preference for content or presentation—it is meticulously logged by news publishers.

Once Pandora's box of metrics has been opened, this knowledge has a twofold impact on the news making process. First, journalists—competing for the coveted "top spot" on trending stories—may add just a little spice of sensationalism or an extra dash of incredible certitude to cater to public preferences. The resulting stories may not be explicitly false, but they may stretch the truth while turning an uncritical eye to incredible certitude. Secondly, editors must decide which stories to actively promote through strategic placement on websites, or through social media. Given the ease with which news organizations can track site visits, link sharing, and retweets, public patterns of media consumption influence which stories news organizations decide to tweet about in order to maximize their virality. The *New York Times*, in fact, built a program to suggest which published stories to tweet based on its prediction of how much sharing each piece would encourage (*New York Times* 2014). Once executives become aware of the public's predilection for highly-certain content, it is easy to imagine that news organizations will be more likely to tweet these more straightforward stories and eschew more nuanced

ones. Between journalists tweaking stories and executives selectively promoting content, news coverage begins to skew slightly towards certitude.

The final component of the circle of certitude is the preemptive impact on elite messaging. Savvy elites may feel doubly pressured to inflate confidence when speaking publicly. At a basic level, highly certain messages are easier to communicate. As discussed earlier, in a world of soundbites pithy and punchy is king. Elites also follow general interest news, and are aware of which types of stories—and, more importantly, which types of rhetoric—garner the most public exposure. Elites who want to make the news and secure a coveted ten seconds of sound bite glory learn to speak in the focused, highly-certain terms favored by journalists. Elites who don't adapt to this reality, however wise and careful they may be, risk becoming invisible to the general public. In short, knowledge of certitude bias preemptively influences elite communication, thereby completing the circle of certitude.

CHAPTER FOUR: STRATEGIC UNCERTAINTY

On the science of global climate change, I'm an agnostic. I've seen Al Gore's movie… I've also listened to the "skeptics." I don't know who's right. — Robert Bryce 2007

I'm often asked whether I believe in Global Warming. I now just reply with the question: "Do you believe in Gravity?" — Neil deGrasse Tyson 2020

The counterpoint to incredible certitude is unjustified uncertainty. There are instances when the public has everything theoretically necessary to achieve an accurate truth consensus, yet fails to achieve an accurate assessment. The fact that demonstrably false beliefs are so widespread, and so resistant to contrary evidence, suggests unjustified uncertainty is a defining feature, not a bug, in public debate. Such skepticism represents a particularly pernicious challenge to MOI theory, and can be just as harmful as incredible certitude.

If the public sphere works as advertised, falsehood should gradually fade in the face of contrary evidence. In reality, the two pillars of market theory, time and participation, often appear to move opinion *away* from truth. When this happens, it is rarely a product of random chance. The most egregious cases of unjustified uncertainty are the direct consequence of countervailing forces that seek personal utility over social truth. When interest groups contend with facts that, with a nod to Al Gore, they find terribly *inconvenient*, their reaction can be corrosive. The result is often conflict between the self-serving economic market and the idealistic market of truth. Sufficient inconvenience begets selfish self-preservation, which in turn can metastasize into lies and misdirection. Unfortunately, a free public sphere, by definition loosely regulated, is not

well equipped to counter concerted effort to subvert the truth. By the time truth finally reaches broad public acceptance, which is hardly a forgone conclusion, decades often pass when the public *should* know better, yet fails to achieve accurate consensus.

This chapter addresses why campaigns to sow doubt in the public sphere are so effective. The focus is not what scientists know, but *how* their confidence is ultimately communicated to the general public (Stocking 1999; Dunwoody 1999; Tetlock 2005). This gap between expert belief and general opinion is the weak link in the chain of sociopolitical communication, vulnerable to exploitation by those with an agenda. In the ensuing battle for public opinion, strategic uncertainty is one of the most potent weapons.

I. The Challenge is Widespread

Even before the epistemologically mind-bending rise of "fake news," "alternative facts," and the partisan choose-your-own reality show, society struggled to parse fact from fiction (Gaughan 2016; Tripodi 2018). Scholars and social commentators have long noted the public sphere's struggle to coalesce around an ostensibly unambiguous truth (Pollack 2003; Boykoff 2008; Feldman et al. 2012). History teems with examples where the public, despite overwhelming evidence, time, and open debate, failed to embrace scientific consensus. In the present era of dysfunction, long-simmering skepticism about scientific inquiry has become mainstream, and is now a defining feature of the U.S. sociopolitical landscape.

The MOI's failure is not because of professional ineptitude. Scientific analysis is *hard*, sure, but this is an issue that extends far beyond the foibles of expert judgment (Tetlock 2005). For now, put aside all ambiguous cases—the verdict-is-still-out questions

like life on Mars, the root cause of cancer, the practicality of fusion, et cetera—and focus only on topics that have achieved broad scientific consensus. These settled questions *should* be the easiest to transmit to the general public, and yet the reality is anything but straightforward. Even after experts agree on a particular "truth" it can take years, decades, centuries for this conviction to translate to general understanding. MOI advocates might counter that the market just needs more time to calibrate, more time to reach consensus on complex issues. But this "wait for the market to work its magic" perspective is trying when every moment of public indecision carries long-lasting consequences.

Nor, in many cases, does the disconnect persist for want of public attention. Again, dispense with the easy examples, the fringe questions that never reach the threshold of general debate. The public can be excused for not knowing the taxonomical differences between a crow and a raven; corvidae rarely make news outside of the pinion pages. Focus instead on the settled scientific issues that, despite considerable mainstream attention, still leave the public unsure about the scientific consensus.

Perception of the theory of evolution by natural selection, the cornerstone of modern biology, is one of the most dramatic examples of the MOI spinning in circles. Evolution engendered heated debate for over 150 years, enough time for a truth-based market to test, prove, and re-prove its validity many times over. There is no longer meaningful debate about the validity of evolution in professional circles; the question is settled. Indeed, in a recent sampling of surveyed members in American Association for

the Advancement of Science—the individuals best equipped to judge scientific inquiry—over 98% accept that humans have evolved over time (Pew 2015; Funk 2019).

However, one would not come away with this impression of broad acceptance of evolution by looking at public opinion polls. Compared to scientists' nearly unanimous consensus, belief in evolution is held by a markedly smaller share, 80% of the general public (Pew 2015; Funk 2019). This gap in personal belief is partly a function of religion, which, as discussed in chapter two, is independent of objective fact. But personal and spiritual convictions are only part of the equation. Just as notably—and far harder for the MOI to excuse—is the disconnect between what scientists believe and what the public *thinks* they believe. In a spin on metacognition, I will call this perception about another's understanding *meta belief*.

Consider *meta belief* in the context of evolution. While the exact value varies slightly between surveys, generally speaking three-quarters of the public report that "most biological scientists think humans have evolved" (Pew 2015; Funk 2019). This may seem close enough, but a twenty percent gap between the actual consensus in the scientific community and the *perceived* level of agreement should give us pause. It suggests that, even on an issue that has been debated ad nauseum for over a century, truth still struggles to be accepted by the broader public. Even more troublingly, even after considerable debate it appears that the aggregate public can still drift *away* from truth (Popovich 2020).

Indeed, underestimating scientific agreement is widespread. Similar to the topic of evolution, Pew Research Center surveys find that two thirds of the public believe

scientists do "not have a clear understanding" of broad scientific agreement on the risk of genetically modified crops, contrary to the fact that scientists *do* have a clear and unified understanding about their safety. Smaller, but still nontrivial, percentages of the citizenry remain uncertain about climate change (37%), the safety of vaccines (33%), and other issues that enjoy broad scientific consensus (Pew 2015; Marietta & Barker 2019).[11]

Mind the Gap

To an extent, a gap in meta belief may be justifiable. There is inevitably a lag between when experts reach consensus and when that message works its way through the public marketplace. If the MOI is working as advertised, presumably public belief should slowly but inexorably begin to reflect expert opinion. However, there are many instances when time actually appears to *widen* the gap in meta belief, effectively moving public opinion *away* from truth. When this happens, as we will see in the following examination of the climate change debate, something is profoundly amiss in the MOI.

The Catch-22 of More, Redux

Chapter Three's discussion of technology introduced the paradox of more, which suggests that free speech does not always improve the quality of public deliberation. Indeed, when confronted with error or falsehood, the first inclination of MOI proponents is to generally wave a hand at *more*. More time. More participants. More debate. As if simply piling ingredients into the melting pot of public opinion will inexorably coax society towards truth. This is a comforting, rational approach and would warm the heart

[11] The COVID pandemic is another unfortunate example of a disconnect in meta belief. While the medical community remains overwhelmingly supportive of vaccines, a nontrivial percentage of the general public remains highly skeptical, and polling suggests roughly a third of adults may forgo vaccination because of unfounded safety concerns.

of any Bayesian, but it is not a realistic representation of how individuals function in the real world. If humankind operated on rational principles, the debate over climate change, along with evolution, vaccines, and GMOs, would have been comfortably settled years ago.

The Catch-22 of "more" challenges two pillars of MOI theory: open participation and time. The problem is rooted in the MOI's core logic: while the MOI avoids the "danger of officially sanctioned truth, it permits, however, the converse danger of the spread of false doctrine by allowing the expression of potential falsities" (Ingber 1984, 7). Time, rather than acting as an ideational panacea, often becomes an epistemological Catch-22. Lengthy analysis may be necessary to differentiate truth from falsehood, but it also extends the window for negative social and political forces to interfere with the deliberative process.

In this complex mix of fact and misinformation, more is *not* necessarily better. While the MOI may be able to assess the relative truthfulness of a specific viewpoint given enough time, doing so leaves the door open for new voices and information to continually enter the public arena. This is particularly troublesome when the new information is not simply random but a product of a concerted effort to disrupt the normal function of the MOI in order to spread half-truths, misinformation, and outright lies.

II. The Climate Change Conundrum

The climate change debate illustrates the longstanding failure of meta belief in the public sphere. While scientists have achieved near unanimous consensus about the issue, news coverage and public opinion remains unnecessarily uncertain about the reality of

global warming. Clearly, there is a disconnect between what the news *should* cover based on the best available science and what is *actually* broadcast.

If open debate inexorably leads toward truth, as the MOI posits, we would expect a slow but steady convergence of public opinion towards scientific consensus. There may be the inevitable hiccup along the way, but truth will overcome in the end. In this light, the issue of anthropogenic climate change should be an easy win for the MOI theory, a shining illustration of how scientific expertise can inform public opinion. In the world of politics few issues are as black-and-white, true or false. Will a progressive tax policy lead to long-term growth? Does the death penalty deter violent crime? While there might be a "right" answer to these questions given enough time and analysis, esoteric topics may be too hard for experts to tackle efficiently, let alone communicate the nuance and complexity of their findings to the general public (Tetlock 2005).

In contrast, the reality of anthropogenic climate-change is a rare instance where a complex issue can be distilled into a straightforward and unequivocal answer: yes. Matching the previously cited 98% of scientists who personally believe in climate change, a meta-analysis of peer-reviewed articles on the subject suggested 97% of the articles were supportive of the consensus view, and many of the small remainder were agnostic rather than strongly contrarian (Cook et al. 2016). Even though the precise percentage has been a point of scholarly debate, similar analyses have echoed the conclusion that the majority of scientists subscribe to anthropogenic models (Oreskes 2018). Ultimately, debating whether the percentage of concurring articles is 90% or 97%

is splitting hairs; for all intents and purposes the scientific community is as unified around anthropogenic climate change as any complex issue.

More troubling, the trend in public opinion has not, as the MOI would predict, gradually but consistently moved closer to truth. A 2010 Gallup poll suggested Americans were "less worried about the threat of global warming, less convinced that its effects are already happening, and more likely to believe that scientists themselves are uncertain about its occurrence" than they had been a decade prior (Newport 2010). Once skepticism, however unfounded, takes hold and establishes itself as a core belief, dissonance theory and motivated reasoning ensure its perpetuation. A false belief, once established, can be very difficult to shift.

The Stakes are Genuine

Certainty in the context of climate is not an esoteric question. Accurate public opinion *matters*, and persistent uncertainty surrounding climate change carries tangible consequences. Whether climate change is presented as either 'very likely,' 'somewhat likely,' or 'unlikely' in the news is an integral force shaping public opinion. Vn der Linden et al. (2013) argue that uncertainty about climate science is a kind of "gateway cognition," where skepticism of the scientific community has far-reaching consequences for the perception of threat and the need for action. Citizens who do not understand or accept the expert consensus about global warming are, in turn, unlikely to believe that the issue is genuine or driven by humans, and may not believe the problem can, or should, be addressed by concerted sociopolitical effort.

In a 2018 address, UN Secretary General António Guterres warned that "climate change is, quite simply, an existential threat for most life on the planet including, and especially, the life of humankind." *Guterres* is hardly alone: scholars from numerous fields, celebrities, politicians, and citizen-activist all echo his concern. In the traditional MOI, ideas are embraced or sidelined because knowing truth is tangibly *useful* (Wonell 1986). Presumably, since the stakes are so high—the continued existence of humankind, no less!—there should be universal interest in getting the answer right, along with an eager embrace of the evident scientific consensus. In the real world, however, the utility of truthfulness in this case conflicts with powerful economic and political forces.

Part of the problem is that the rational calculus for humankind does not always—and perhaps rarely—reflects the consideration of individuals in the present. At one extreme are the low-elevation nations like the Maldives or Marshall Islands. For these high-risk communities, the effect of climate change on rising sea levels is unequivocal, immediate, and pressing. UN reports suggest that these communities might be reclaimed by the ocean within a lifetime (Wignaraja & Fujii 2020). These communities do not need to rely on scientific consensus on climate change: they have more than enough firsthand knowledge to know that the problem is real and pressing.

At the other end of the spectrum are communities whose day-to-day existence is not currently impacted by climate change. The incentives for these communities are not always as clear-cut, particularly when balancing current needs against an indistinct future. This is complicated by the fact that, as critical as climate change may be, it is not the only urgent consideration in the tumult of day-to-day life. Humans are simply not

cognitively predisposed to make the kind of complex, discount-rate-driven decisions balancing both present and future utility. Evolutionary, this makes perfect sense: future perils appear less pressing than survival in the hear-and-now. Citizens trying to balance "uncertainties in this global, complex, invisible problem have to compete with the certainty of the near-and-dear challenges involved in feeding one's family, getting an education, maintaining a job, or retaining one's health (and health care)" may be willing to overlook or downplay climate change consensus in service of more pressing considerations (Moser 2010, 35). The consequence is a self-reinforcing cycle of denial; individuals who do not perceive the firsthand threat of climate change might not feel strong incentives to uncover the truth, and in doubting science in the present they are less likely to correct their views in the future.

For other facets of society, openly acknowledging the reality of global warming carries a tangible *negative* cost in the present. Special interests, particularly in the most polluting sectors, have a strong financial interest at stake. To protect their "morality" industries often engage in "understandable, if misguided, and sometimes deliberately misleading, efforts" to secure their financial future by downplaying climate science (Moser 2010, 36). Fossil fuel companies have come under intense scrutiny in the past decades. Investigative reporting suggests that by the 1960s major oil companies were internally aware of the connection between automotive emissions and global warming but nonetheless "funded a disinformation campaign aimed at discrediting scientists and blocking government efforts to fight climate change for more than 50 years" (Goldenberg 2016). Similar discrepancies between internal knowledge and public posturing can be

found in the lead, tobacco, and opioids industries, among many others with a vested interest in downplaying science that might undercut their bottom line.

Not for Want of Attention

Pundits cannot blame the uncertainty about climate change on lack of debate. The first inklings of the connection between greenhouse gases and global temperatures began in the late 19th century, and by the 1950s articles connecting pollution to climate were appearing in mainstream outlets like the New York Times (Dessler & Parson 2019). By the 1980s the climate change debate regularly appeared in print and television, with predictable spikes in coverage corresponding to UN announcements and international summits (Boykoff et al. 2020). In 1990 the UN's Intergovernmental Panel on Climate Change (IPCC) published a landmark report underscoring the connection between human behavior and climate, a theme echoed in numerous summits over the following decades.

The climate discussion has also taken center stage in the public arena. Miller (2000) argues that few other issues have been raised as frequently in recent years as global warming, an issue which both commands the attention and frequents the derision of politicians and the public at-large. The persistent debate over climate change's existence has produced an ongoing wave of sociopolitical attention. Climate science has given rise to Oscar-award winning documentaries like *An Inconvenient Truth* (and its sequel), blockbusters like *The Day after Tomorrow*, and an entire genre of apocalyptic video games. Celebrities promote environmental foundations, politicians have advanced a Green New Deal to address the economic challenges posed by climate change, and, throughout it all, international bodies like the United Nations consistently warn about the

dangers of indecision and inaction. Given this combination of stakes and spectacle, Edwards (2001, 31) suggests that "If the idea of a truly global environmental problem required a poster child, climate change would certainly top the list of candidates." And yet, as a poster child, climate change is not a success story. It is an advertisement for the systematic shortcomings of democratic debate as theorized under a market model.

A Dubious Distinction

While most of the world accepts the science and recognizes the threat, the U.S. is increasingly isolated in its dismissal of climate science. In 2014 Ipsos surveyed the climate change views of 20,000 individuals across 20 countries. Respondents were asked to what extent they believed changes in climate could be tied to human activity. In many countries, including China, India, and France, 80% or more of surveyed respondents expressed belief in anthropogenic climate change. Among the 20 surveyed countries, the U.S. had the highest percentage of skeptics at approximately one in three respondents.

The researchers at Ipsos suggested that "variations in perspectives in places like the United States, Britain and Australia might be caused in part by the way climate science has been polarized and politicized, especially in the news media, within those countries" (cited in NYT 2015). The operative word here is polarized. Partisanship, and the corresponding blindness to factual accuracy and credible certitude, is perhaps the single most corrosive force inhibiting the efficient operation of the MOI. When economic forces form an unholy alliance with party politics, political brinkmanship often overshadows truth.

In the U.S., the Republican Party—driven by strategic social and economic interests—is the clear a culprit. Today's GOP has decided it is politically useful to adopt a skeptical stance on climate science. As a 2017 New York Times editorial notes:

> The Republican Party's fast journey from debating how to combat human-caused climate change to arguing that it does not exist is a story of big political money, Democratic hubris in the Obama years and a partisan chasm that grew over nine years like a crack in the Antarctic shelf, favoring extreme positions and uncompromising rhetoric over cooperation and conciliation. (Davenport & Lipton 2017)

The tragic part is that the climate debate did not have to take this tragic turn into partisan dysfunction.

In the early 1990s the issue of climate change had yet to be fully subsumed under partisan warfare. The Republican leadership, including President George W. Bush, was sensitive to the concerns of environmentalists. William Reilly, the EPA administrator under Bush, recounted his efforts to institute a cap on sulfur dioxide emissions in an interview with the New York Times (see Gabriel 1989):

> Darman [Director of the Office of Management and Budget] delivered his most damning blast. According to officials present, he argued that Bush should simply write off his pledge to be an environmental President: Bush could never make nature lovers a Republican constituency, Darman said coolly… The President took notes but said little through the 90-minute meeting. Then on Friday, June 9, he flew to Camp David to make his decisions, keeping even his closest advisers guessing. Reilly's best clue to the outcome came late that night, when he had a long talk with Bush's chief of staff, John H. Sununu, who was to receive the final decision papers from the President by helicopter the next day, and Reilly realized Sununu agreed with him. This was a surprise, for Darman and Sununu have formed an alliance as the two most powerful figures atop the President's staff. But on the matter of air pollution, Sununu, a former New Hampshire Governor, who has long favored controlling acid rain, a problem in his home state, broke with the budget director. Sununu ignored, as did the President, the advice to write off the environment on political grounds.

All told, President Bush may not have been a committed environmentalist, but he was receptive to, and willing to act on, sound science.

It is hard to imagine a similar dynamic today. Climate change has proven too thorny an issue, with too many impacted economic interests, to be civilly settled by rational debate. Where there is monied interest, political machinations are not far behind. Maibach et al. (2014) suggest:

> The pervasiveness of this misperception [on climate science] is not an accident. Rather, it is the result of a disinformation campaign by individuals and organizations in the United States—and increasingly in other nations around the world…who oppose government action to reduce carbon emissions… The claim that climate scientists are still arguing over the reality of human-caused climate change was designed to resonate with the sensibilities of political conservatives who are inherently suspicious of government intervention in markets and societies.

Once interest groups form a mutually beneficial alliance with political parties, attempts at careful, science-driven deliberation risk being overshadowed by the furor of partisan bickering.

Today, many Republicans deny the existence of climate change outright or, if they dally with the truth, often resist any implication that humans are responsible, or that government can (or should) do anything about it. Both the explicit and tacit forms of climate denial may not be great for the long-term health of the planet, but it helps secure political and financial support for the GOP and its political goals in the present (Antonio & Brulle 2011).

Critical news outlets write scathing headlines like “Why conservatives keep gaslighting the nation about climate change” or “How Fox News is Helping Destroy the Planet” (Roberts 2018; Kennedy 2019). Sadly, these articles may not matter. The people who read them are already convinced of the danger, and those who need a healthy dose of science are too busy clambering down their own partisan rabbit holes.

III. Weaponizing Uncertainty

Lying, as we have seen, can be politically risky. Too obvious a lie and you risk being caught without plausible deniability. Logically, a safer strategy is to strategically manipulate the certainty/uncertainty binary to further political goals. This can be achieved in a variety of ways: undermining the certainty of the opposition, sowing general uncertainty, or flooding the market with incredible certitude to counteract an undesirable narrative.

The approach towards manipulating certainty can range from the explicit to the subtle:

> [S]uch as in the statement: "there is scientific uncertainty about the causal linkage between twentieth-century greenhouse gas emissions and global temperature increases." Or uncertainty discourse might be an outcome of more certain claims. For example, opposing scientific claims might be juxtaposed and lead to the inference that scientists, collectively, are uncertain about some aspect of nature. (Zehr 2000, 87)

Whether you attempt to flood the market with incredible certitude or undermine justified confidence, the end goal is the same: to shift the tenor of confidence in the public sphere.

Undermining Credible Science

Fred Seitz, a physicist by training, has the dubious distinction of being a scientist best remembered by his attempts to surprise… well, science. In June 1996 he published a letter in the *Wall Street Journal* accusing the IPCC report on climate change of gross academic fraud and overt politicization:

> In my more than 60 years as a member of the American scientific community, I have never witnessed a more disturbing corruption of the peer-review process than the events that led to this IPCC report… [there was a systematic effort] to remove hints of the skepticism with which many scientists regard claims that human activities are having a major impact on climate in general and on global warming in particular. (cited in Oreskes & Conway 2010, 208)

This outrage, of course, was political theater. Seitz was not a climate scientist by training, had not attended the conferences that led to the IPCC report, and had no firsthand knowledge of the review process.

When climate scientists who *were* involved in the process reached out to the *Wall Street Journal* to correct the record, their efforts were met with resistance, and publicly the *Journal* continued to stand by Seitz and its coverage of the IPCC report in general. Ultimately, attempts to cover for Seitz's original letter, and ignore science in favor of dubious opinion pieces, turned what had started as an isolated scientific issue into a prime example of journalistic dysfunction.

Unfortunately, the *Wall Street Journal's* dubious treatment of the IPCC report, and climate science more generally, was hardly an isolated incident. By the mid-90s it was clear that an anti-climate change agenda had gained a firm foothold in public debate. The scientific establishment lamented what was becoming a "concerted and systematic effort" to "undermine and discredit the scientific process." New media outlets began to amplify the voices of individuals who eschewed traditional peer-reviewed channels in favor of "waging in the public media a vocal campaign against scientific results with which they disagree" (in Oreskes & Conway 2010, 209). In this context, "going public" with these critiques in a general interest publication was sound strategy. The goal was not to convince academics, who could see though the pseudoscientific charade, but to strike a blow against climate change on the battlefield of public opinion.

Countering Certitude with Incredible Certitude

Another aspect of the Republican strategy is finding and elevating the small minority of scientists who express skepticism for the mainstream consensus. One such individual is Judith Curry, professor and chair of the School of Earth and Atmospheric Sciences at the Georgia Institute of Technology. While Curry does not argue with the basic principles of climate change, she has downplayed humanity's influence on global conditions for decades. In 2013, by then a well-established skeptic of the anthropogenic model, Curry was invited by Republicans to attend a House subcommittee hearing. In the capacity of an expert witness, she testified that "I've been trying to understand how there can be such a strong consensus, given these uncertainties?" This scientific agnosticism resonated with Republican committee member Dana Rohrabacher, who rhetorically asked "We've gone through warming and cooling trends, but how much of this has anything to do with human activity?" Underlying Rohrbacher's scientific skepticism was a clear political agenda: the belief that climate change hysteria was a thinly-disguised "excuse by government to control human activity, meaning our lives and our freedom" (testimony cited in Harris 2013). Curry's credentials and professional affiliation—a rarity among climate change skeptics—made her a particular compelling compliment to the Republican narrative.

Outright Denial

With the ascension of Trumpian politics, climate skepticism has reached a fever pitch, and denialism has moved from the fringes to the center of partisan pride (De Pryck & Gemenne 2017). In 2012 Trump, then a mere disgruntled citizen, tweeted, "The

concept of global warming was created by and for the Chinese in order to make U.S. manufacturing non-competitive." This may seem like a bald-faced conspiracy theory—which it is—but Trump was not the first public figure, nor hardly the last, to brazenly embrace pseudo-science (Uscinski et al. 2017). Trump's hostility towards expert consensus continued to grow over the years and in 2019 he tweeted from the bully pulpit of the presidency:

> The whole climate crisis is not only Fake News, it is Fake Science. There is no climate crisis, there's weather and climate all around the world, and in fact carbon dioxide is the main building block of all life.

This cast a pall both on the science and, in line with Trump's broader anti-media messaging, undermined the ability of the MOI to advance truth. While Trump may be more visible than most politicians, his hostility towards climate science is hardly unique. Indeed, a general "war on science", when it conflicts with party interests, has become a defining feature of today's political battleground (Otto 2016).

Skepticism among party elites is echoed amongst the rank-and-file membership. In 2010, two years into Obama's presidency, there was a thirty-point gap between Democrats and Republicans who believed that "dealing with global climate change should be a top priority for the President and Congress." Eight years later, in the midst of the Trump presidency, the divide between Democrats (68%) and Republicans (18%) had grown to a staggering 50% (Pew 2019). Although the MOI posits that public belief converges towards a common truth over time, the reality, against all science and rational expectation, is that a profound divergence in the certainty of climate change has emerged as a core dynamic of public debate. Political incentives, it seems, may set the stage for

the emergence of this disconnect between truth and belief, and the truth-seeking capacity of the MOI is undermined by this partisan strategy.

IV. Journalism Struggles to Bridge the Gap

Henry Pollack (2005, 24), an earth scientist, popular science writer, by training and social commentator by inclination, offers a bleak assessment of journalism's ability to accurately distill and present complex scientific issues like climate change:

> [Educating the public is] a big responsibility for both scientists and the media, and unfortunately one for which they are both generally unprepared. Scientists are frequently uncommunicative, the media are impatient and internally competitive, both groups misunderstand and to some extent mistrust each other, and neither typically feels a strong responsibility to educate the public about science.

There is a litany of reasons why the news struggles to accurately capture the nuance of complex issues like climate change. The most obvious challenge is that "science is a long movie, and the news media generally take snapshots" (Schwartz 1999, cited in Pollack 2003). As discussed in the previous chapter, the typical short-form news presentation—a few minutes of airtime, a few hundred typed words—cannot possibly do full justice to complex issues like climate change. However, medium is only part of the challenge. There are also narrative factors that complicate the presentation of certainty.

Uncertainty as a Narrative Foil

The certainty/uncertainty binary is a useful narrative foil and an easy way to set up a debate between opposing perspectives. As Zehr (2000, 91) notes, "scientific disagreement was presented almost as a journalistic reflex" to help "situate" a particular article in the broader discussion of climate change. For example, a 1991 *New York Times* article on the climate crisis began with the lines "In a contest between uncertain science

and uncertain economics, negotiators from around the world convened in Nairobi yesterday for what promises to be a contentious effort." In this case, however, the use of the term "uncertain" may have been narratively compelling, but it was objectively misleading. By this time the IPCC report on climate change had been out for a year and the scientific verdict was clear.

The False Equivalency Conundrum

Certitude provides another narrative tool: the ability to set up an issue as a conflict between opposing sides. In 1994 an article in a general interest magazine opened with two dueling quotations. One read: "New York and Miami will be flooded as sea levels rise from melting polar ice. There will be famine. Health threats. Civil unrest. We have to take action now to prevent a global catastrophe." The other read as if it concerned another planet entirely: "The weather forecasters can't tell us for sure whether it will rain tomorrow, but they're going to predict the temperature for the whole planet 50 years from now! In the 1970s they were telling us the next ice age was coming. Global warming is just another false alarm." The author himself took a position between these two extremes, acknowledging the potential dangers posed by a warming planet, but emphasizing the scientific uncertainty. The piece ended with the rhetorical question and non-answer: "Can anything be learned from the global warming controversy? Perhaps the best advice is to 'chill.'" (excerpts, both from the quote and the magazine author, cited in Zehr 2000, 85). Needless to say, while 'chilling'—and all the cognitive can-kicking it applies—might be comforting in the short term, it is not a viable long-term strategy for dealing with global

warming. The more time elapses, and the more the evidence favors one perspective over another, the harder it is to justify this agnosticism.

To be sure, presenting issues as a debate between opposing perspectives makes for a compelling narrative. The drive to simplify issues into a contest between liberal and conservative perspectives, or between climate believers and skeptics, creates "exactly the sort of conflict that makes for a good news story" (Coe et al. 2004, 237). Framing an issue as a debate between two clearly articulated perspectives is just *easier* than digging into the details, and makes it simpler for media outlets to capture the "pithy sound bites" necessary for tight narratives (Coe et al. 2004, 237).

Don Shelby, the Peabody-award winning journalist, cautioned those in the media against this conflict-driven approach:

> [W]hat I tell them is that “balance” doesn’t mean you present stories evenhandedly. It means you present them like a set of scales, and if the vast weight of the evidence is on one side of the argument, that’s the side that should get the vast weight of your reporting. You don’t push on the other side to falsely balance the scales. You tell the truth. That’s the “balance” we used to talk about in journalism. Today what we too often see is called “false balance,” because it presents both sides as if they have equal weight of the evidence, when that is objectively not true (Cited in Otto 2016, 22-23).

What Shelby calls “false balance” is often referred to as “false equivalency,” and it describes a growing disconnect between the norms of balanced journalism and reality.

In the case of climate change, there are not two “expert” sides of the issue. Scientists stand in unified agreement and any contrary perspective comes from outside the scientific community. The failure to present an accurately indexed account of climate coverage was poignantly and humorously demonstrated on John Oliver’s *Last Week Tonight*. To represent an “accurate” picture of climate consensus, Oliver invited three “skeptics” to argue the issue of climate change against ninety-seven scientists. It is

sobering to think that whenever a mainstream news outlet invites a climate denier, either a politician or a purported expert, they are introducing certitude bias into the public discussion of the issue.

The fact that each side of the climate debate may feel obligated to carry the argument can also conflate credible certitude with non-credible certainty. To underscore the obvious: pitting adamant perspective 'A' against unwavering position 'B' does not average out to measured analysis; it simply creates a cacophony of contrary confidence.

There is another perspective to consider. Journalistic hedging may also be a lasting legacy of a well-intentioned but fundamentally misguided attempt by the government to promote "fair" journalism. The Fairness Doctrine of the Federal Communications Commission, enacted in the late 1940s, required licensed broadcasters to maintain "a basic standard of fairness" by presenting both sides of controversial issues. This approach to fairness-by-inclusion *might* implicitly assume, of course, that there are multiple sides to the issue in question. This assumption may hold for inherently social debates like gun rights where, as argued previously, in the absence of a universal truth competing perspectives should be free to hash out their differences in the public arena. To a degree, this more measured approach to managing public debate resonates with traditional MOI theory: let many perspectives enter the debate, and leave it to the market to sort out which views are sound.

Journalists may, in fact, genuinely believe that every perspective deserves to be given voice. There is, however, a more cynical interpretation. In coverage of potentially sensitive subjects, this narrative hedging can also provide social cover for media outlets.

Bennet (2007) argued that journalists take the middle ground—or, at least, give voice to opposing perspectives—not just as a means of balanced reporting, but to forestall charges of being biased. There comes a time, however, when attempts at balance run counter the heart of good journalism. Not every story has two sides, and giving uplifting fringe viewpoints does not further public deliberation.

It is a notable irony that for years Fox News, one of the least objective media outlets, embraced the slogan "fair and balanced" for its coverage. Fox News, an early entry into cable news, built its business out of partisan coverage (DellaVigna & Kaplan 2007; Jones 2012). From climate change to elections, was an outlier in entertaining fringe theories and the scientific minority (Feldman & Maibach 2012). Indeed, the impact of partisanship on news coverage and public debate is one of the most powerful forces in contemporary politics. These themes are explored further in the following chapter.

CHAPTER FIVE: PARTISAN UNREALITY

I never submitted the whole system of my opinions to the creed of any party of men whatever, in religion, in philosophy, in politics, or in anything else, where I was capable of thinking for myself. Such an addiction is the last degradation of a free and moral agent.
– Thomas Jefferson, 1789

The ideal subject of totalitarian rule is not the convinced Nazi or the convinced communist, but people for whom the distinction between fact and fiction (ie the reality of experience) and the distinction between true and false (ie the standards of thought) no longer exist.
— Hannah Arendt, 1951

The current era of hyper-partisanship underscores the tension between tribalism and truth. When society's driving motivation is to *beat* an adversary rather than be *right*, the public market ceases to act as an effective engine of knowledge. This damn-the-torpedoes approach to truth has fractured the once unified public sphere into parallel partisan markets. These forums are not simply divided along ideological lines, they also diverge on ostensibly objective issues. From simple facts like the size of inauguration crowds, to critical issues of scientific objectivity, the nation is unable to achieve broad consensus about reality. Herein lies tragedy: at the very time that the country is politically deadlocked, the market mechanism that is supposed to arbitrate between viewpoints is itself handicapped by factionalism.

This chapter explores how partisanship corrodes the public sphere. The first section offers historical context for partisan rhetoric coupled with traditional models of communication. While lying in politics is as old as history, communication theory suggests that incentives to mislead are tempered by the potential repercussions of being caught. The second section argues that this rhetorical balancing act is increasingly irrelevant in the face of social and political trends. The backdrop of hyper-partisanship

allows politicians to stretch the truth and indulge incredible certitude without risking a critical foundation of support. New media, rather than fulfill the traditional role of keeping politicians accountable, has itself become subsumed within by the growing partisan divide. Rather than facilitate unified debate, mediums like cable news, the internet, and social media ensure that public sphere remains fractured. The chapter closes with the 2016 election as a theory in context of the market's struggle to temper incredible certitude and outright lies.

I. A Crisis of Truth and Confidence

While Trump's bountiful dishonesty had center stage during his presidency, he was hardly alone in peddling lies, false confidence, and half-truths While Trump's cozy relationship with Fox is an extreme case, the principle of mutualism is broadly generalizable. Partisan news outlets are unlikely to challenge their preferred candidates. Elites, in turn, shift their rhetorical calculus between incredible certitude because they can stretch the truth without repercussion from outlet or audience.

From climate change to vaccines to domestic extremism, politicians seem increasingly willing to compromise accuracy in the service of political expediency, no matter how bald-faced the fib. Clearly, something is deeply amiss in national politics. Political journalists widely panned Donald Trump's advisor Kellyanne Conway's phrase "alternative facts" as patently absurd. Yet, epistemological nonsense notwithstanding, Conway's assessment of the social climate that influences the production and distribution of knowledge was soberingly astute (Blake 2017). It is not simply that the citizenry is

divided between warring parties but that the country appears increasingly split between separate worlds, each mutually alien and abhorrent to the other.

Toggling between MSNBC and Fox News risks a severe case of cognitive whiplash. Rather than opting to share a unified, national MOI, the two parties are entrenched in their own circles of debate, information, and "truth" with increasingly little overlap. Venture further afield to peruse extreme right-wing outlets like Breitbart, Infowars, or One America, and any trace of ideational common ground disappears entirely. This epistemological chasm spans from absurd arguments like the size of inaugural crowds, to profound disagreements over scientific fact in the face a once-in-a-lifetime pandemic. It is not just that the parties have different policy preferences; they can't even consent to a basic set of facts to serve as a foundation for debate.

To be clear, periods of deep social division and partisan news coverage, are nothing as old as democracy itself. The nation had hardly been founded before partisan newspapers were advancing their narrow agendas, gleefully tearing into the opposing—with accusations real or invented—whenever possible (Pasley 2001). Well into the nineteenth century, before the rise of the rise of modern standards of professional journalism, many news periodicals were operated by political parties (Schudson 1981; Streitmatter 2018). The partisan news coverage, unsurprisingly, was not particularly encumbered by factual accuracy. Nor were political parties solely to blame, the predecessors of modern journalists were often more devoted to sensationalism than common sense. The "yellow journalism" of the 1800s was salacious and unencumbered facts, and would seem perfectly at home in today's tabloids or the less reputable corners

of the internet (Kaplan 2008).

While the publishers have changed, partisan-slanted news continues to thrive. From Fox to MSNBC, Breitbart to Slate, many cable and online news sources eschew objectivity in favor of a decidedly political bent (Levendusky 2013; Arceneaus & Johnson 2013). In partisan coverage the issues are "framed, spun, and slanted so that certain political agendas are advanced" (Jamieson et al. 2007, 26). This may be sound strategy to advance a particular partisan end but the strategy often inhibits the pursuit of an objective truth. Partisans are likely to reject any statement, however measured, from the opposition, and accept incredible certitude from confederates without critique or reflection (Zaller 1992; Popkin 1995; Bisgaard & Slothuus 2018).

Even in light of the proud/sordid tradition of American partisanship, the current situation of American politics is far more extreme than most of our history. We are now, as numerous historians have suggested, as divided as any period since the Civil War (Brownstein 2008; Taranto 2017). Americans may not be killing themselves in by the hundreds of thousands, but the anger between the Blues and Greys echoes in todays deep-seated tension between Blue and Red America. The 2016 and 2020 elections were particularly rancorous, and the ascension of Donald Trump to the presidency has only intensified social discord. Trust in the media is at an all-time low, and the spread of misinformation and conspiracy at an all-time high (Jurkowitz et al. 2020; Gramlich 2020). While this sociopolitical dysfunction is lamentable, it is not surprising. For anyone who has followed the news over the past decade, the rancor on display during the 2016 election was not an immaculate contention, appearing fully-heated overnight; it simply

embodied the buildup of cultural and partisan friction in the US that had been building for decades.

The underlying question is whether the current era of political coverage is simply improvising on the age-old tune of partisan contention or whether it represents an entirely new dynamic. This chapter argues the latter: new digital communication technology has broadened the tribal schisms already fracturing the MOI to an unprecedented degree. That "alternative facts" exist is not surprising; we have become a nation of alternate ideational markets.

II. Historical Partisanship & Certitude

While today's sociopolitical disfunction may seem all-encompassing, the current morass was not inevitable. In *The Audacity of Hope*, then-senator Barak Obama (2006, 25) pined for the "time before the fall, a golden age in Washington when, regardless of which party was in power, civility reigned and government worked." While "the golden age" may never have been quite as idyllic as Obama wistfully remembers, things have certainly taken an acrimonious turn. Debate used to be more civil, our government more functional, and the public less divided.

Lying *Should* Be Risky

Outright falsehood, according to a traditional market theory, should be a risky strategy. Being caught in a lie, presumably, carries a reputational cost that undermines both the message's effectiveness and the politician's personal ambitions. Democratic strategist Jamal Simmons has argued that "most presidential campaigns try not to tell direct lies. They may tell extremely shaded versions of the truth. Lying usually does get

you in more trouble in the end—though obviously not always" (Cited in Montopoli 2012). The reality, however, is not that simple. Lying *is* a viable strategy if politicians think they can get away with it, or judge that the potential benefits outweigh the risk. Callander and Wilkie (2007, 264) write:

> The source of a candidate's ability to lie can be many and varied. We caution against interpreting the willingness of a candidate to lie as purely a moral issue. In essence lying is an ability, and variations of this ability, as well as the willingness to utilize it, can arise for a variety of moral, personal, or societal reasons. For example, party affiliations as well as political histories often impose constraints on what can be credibly claimed by different politicians.

The crux of this argument lies is that specific context can constrain a candidate's willingness to lie to the public. Unique and specific considerations may limit *who* can lie or, more generally, the extent to which politicians might try to push their luck by stretching the truth.

In a working paper Alessandro Bucciol and Luca Zarri (2013) analyzed the magnitude of lies by American politicians compiled on the PolitiFact.com database. They suggest that "while many politicians frequently make partly false claims (i.e. what we term 'grey' lies), fewer of them frequently make completely false claims (that is, 'black' lies)" (5). The "blackest" lies are easy to identify and criticize. It is not hard to call out a flat-earther for being wrong to the point of absurdity, but most issues—particularly those that remain contentious over time—are not so conveniently clear cut. Putting 'black' lies aside, the vast area between base dishonesty and total candor leaves lots of room for strategic messaging. Politicians, obviously, have private convictions about contentious issues; but how they choose to communicate to the public is often a strategic decision balancing hyperbolic certitude against guarded circumspection.

The Media *Should* Temper Incredible Certitude

Ironically, the two entities that have garnered the most blame for today's informational dysfunction, the mainstream media and mass communication technology, were once heralded among the most positive forces in democracy (Coronel 2003; Bennett 2005). In a private letter Thomas Jefferson (1787), writing with the idealism born of the new republic, emphasized the role journalists play in ensuring good governance:

> The people are the only censors of their governors: and even their errors will tend to keep these to the true principles of their institution. To punish these errors too severely would be to suppress the only safeguard of the public liberty. The way to prevent these irregular interpositions of the people is to give them full information of their affairs thro' the channel of the public papers, & to contrive that those papers should penetrate the whole mass of the people. The basis of our governments being the opinion of the people, the very first object should be to keep that right; and were it left to me to decide whether we should have a government without newspapers or newspapers without a government, I should not hesitate a moment to prefer the latter. But I should mean that every man should receive those papers & be capable of reading them.

Jefferson's sentiment resonates with MOI theory, and modern view of free speech more generally. Hard as it may be to believe in today's atmosphere media distrust and sociopolitical disfunction, scholars used to argue that new technology strengthened democracy, promoted greater political accountability, and limited the amount of incredible certitude in public messaging (Bennett 1990; Hart & Childers 2004; Gaber 2007).

There is evidence that, at least for a time, journalistic oversight worked as theorized. In *Verbal Certainty in American Politics*, Hart and Childers (2004) ran a content analysis of speeches from presidents and presidential candidates from the mid-20th century through the G.W. Bush presidency. Their central finding was that, in aggregate, the certainty of presidential speeches has markedly *decreased* over the past fifty years. They suggest this is partly a function of increased media scrutiny. Greater

exposure, combined with "the democratizing forces operating in a modern, contentious society," helps ensure that the presidents and candidates are kept "in check" (Hart & Childers 2004, 523). The prevailing wisdom is that 24/7 media exposure means that every false statement runs the risk of attracting national attention and loss of credibility. By the same token, hedging becomes an increasingly attractive strategy (Kernell 2007; Goodall et al. 2006). Calculated equivocation may not make for stirring stump speeches or lofty rhetoric, but it is less likely to precipitate embarrassment or ridicule.

Hart and Childers (2004, 533) went on to reflect on the power of journalists on political debate, musing whether the press has:

> [b]ecome so intimidating that leaders avoid making generalizations for fear of the ensuing deconstructions by the press? Has the cynicism endemic to popular culture made it hard for a rhetoric of certainty to be heard at all, much less respected?

This assertion certainly conforms to traditional theories of democracy and communication. The media has long been assumed to be the watchdog of public interest, keeping politicians in check and moderating the quality of debate in public sphere (Ettema & Glasser 1998). Politicians *should* complain about journalists nosing in their business: that is their job. Donald Trump is (partly) right claiming that journalists are antagonistic, though his focus is warped. Media is not the "enemy of the American people" as Trump argued throughout his presidency, but of elites who might abuse their positions of authority for personal gain. The public *should* be happy to see those in power squirm as they held accountable for their actions.

The Times, They Are A-Changin'

Asserting that the press intimidates politicians into circumspection seems to ring hollow in light of the brash 2016 election, the four years of the Trump presidency, and the chaotic 2020 election. There was a superabundance of certitude over this period, and constant news coverage seemed to do little to temper Trump's rhetoric or that of many prominent republicans. Yet a single presidential term—particularly one as atypical as Trump's—does not necessarily undermine the broader implications of Hart and Childers' theory. They themselves acknowledge that discrete periods, arising either from historical context or the actions of specific individuals, may temporarily buck the general trend of diminishing political certitude. It may very well be the case that the Trump years were an aberration, a four-year blip against the gradual march towards measured and cautions rhetoric.

However, it is also plausible that Hart and Childers findings are not generalizable beyond the George H.W. Bush presidency. It is not that the methodology, findings, or conclusions from *Verbal Certainty in American Politics* are unsound; they *are* an accurate representation of the period of study. Rather, it may be that the 1950s through the late 80s is an atypical period, an interlude of relative unity in the wider arc of factionalism in American society.

III. The Decent into Partisan Madness

Consider Hart and Childers work in broader historical context. In the *Polarized America*, political scientist Nolan McCarty and his collaborators (2010) indexed polarization in among members of congress. From the 1940s through the 80s differences

among the parties was relatively modest. This was the era, today it seems like fantastical fiction, of moderates and bipartisanship. Right-leaning Democrats and left-leaning Republicans had considerable overlap on policy preferences. In fact, prevailing wisdom at the time was that parties should gravitate towards the "median voter" to maximize electoral competitiveness (Mayhew 1974). As a consequence, while each party had a brand, the functional distinction between the two was fairly modest. By the 90s, driven by a series of social, electoral, and political factors, the parties in Washington began to steadily diverge. By the new millennia there was little common ground between the parties, and similarly diminishing desire to reach across the aisle in to find common ground.

A parallel trend towards division emerged in the general population over the same period (Layman et. al. 2006; Sides & Hopkins 2015; Drutman 2020). In 1980, partisans reported a roughly 30-point gap in favorability rating between party members and the opposition; i.e., while self-identified Republicans prefer their party, they did not despise the loyal opposition. This relative harmony was short lived. Over the next thirty years in-group perception remained relatively stable while views of the opposition plummeted. By 2012, the partisan "favorability gap" had swelled to nearly 50 points (Drutman 2020).

Inter-party distrust and disgust became so all-consuming that Lee Drutman (2020), a senior fellow at the American Reform program, now regards "hatred" as *the* defining force in contemporary politics. Not truth. Not compromise. Not progress. Hatred. Partisan division is the greatest it has been since the Civil War, when political rancor led to wholesale slaughter. Today, Democrats and Republicans may not be killing

each other in the fields but, as the 2020 capitol insurrection vividly illustrates, at times it seems that the line demarcating healthy democracy and political chaos is awfully thin.

In light of the current political climate and the power of factional rancor, political scientists Abramowitz and Webster coined the term "negative partisanship" to capture the dynamics of inter-party hostility. According to their perspective:

> The concept [of negative partisanship] is pretty simple: Over the past few decades, American politics has become like a bitter sports rivalry, in which the parties hang together mainly out of sheer hatred of the other team, rather than a shared sense of purpose. Republicans might not love the president, but they absolutely loathe his Democratic adversaries. And it's also true of Democrats, who might be consumed by their internal feuds over foreign policy and the proper role of government were it not for Trump. (Abramowitz & Webster 2017; see also Abramowitz & Webster 2018)

To call negative partisanship "blind hatred" is be all-too-appropriate; as illustrated in the earlier discussion of motivated reasoning, entrenched beliefs inhibit receptivity to alternative perspectives, challenging information, and oftentimes to truth.

Patrick O'Brian, the historical novelist, reflected on the tension between group loyalty and rationality. Replacing his use of "patriotism" with "partisanship," one of his oft-quoted excerpts reads: "But you know as well as I, partisanship is a word; and one that generally comes to mean either my party, right or wrong, which is infamous, or my party is always right, which is imbecile."[12] Group cohesion may be comforting at an individual level, but the instinct for solidarity is not necessarily conducive to critical thinking or healthy public debate. Unfortunately, in today's hyper-partisan atmosphere, the market forces seem all-to-willing to cater to those imbeciles who prize identity over accuracy.

[12] The original quotation from O'Brian (1969, 194) reads "But you know as well as I, patriotism is a word; and one that generally comes to mean either my country, right or wrong, which is infamous, or my country is always right, which is imbecile."

A central claim of public opinion research is that when citizens must balance party cues and objective policy information they gravitate towards the former and tend to ignore the latter (Popkin 1991; Zaller 1992; Cohen 2003). As Beck et al. (1997, 8) note, "For millions of Americans, the party label is the chief cue for their decisions about candidates or issues. It is the point of reference that allows them to organize and simplify the buzzing confusion and strident rhetoric of American politics." Critically, party identification is useful both for people who are relatively ignorant of politics—people who are typically in possession of few if any other reasons to support or oppose a policy—and for those who are relatively engaged, sophisticated, and knowledgeable about debates regarding a given issue.

On the one hand, the heuristics tradition holds that rationally ignorant voters will often seize on party cues in lieu of doing more work to determine their opinions (Downs 1957; Popkin 1991; Schaffner & Streb 2002). On the other hand, as Zaller and others have shown, people who have have the most information and follow politics most closely are the first to follow cues from partisan elites (Zaller 1992; Baum & Groeling 2012). This trend among the politically engaged is particularly problematic. If the most active voters were genuinely driven by the desire to uncover facts, one would expect them to entertain ideas across the sociopolitical spectrum. The fact these very individuals appear more attentive to tribalism than truth suggest that the MOI does not function as advertised.

Once an issue is politicized assessment is no longer a discrete question of truth or falsity. Rather, the debate devolves into just another battlefield in the larger war between

parties. As issues gather political valence, party members' partisan loyalty can trump objectivity. After this tipping point has been reached, motivating one's party is no longer an issue of being the most truthful or circumspect, but of being the most compelling. Thrall (2007, 457) maintains "the greatest rewards for elites lie in seeking resonance with strongly held values, not in telling the truth. Clearly, the natural equilibrium of such a marketplace of ideas is not policy consensus but conflict, not a singular public truth but contending value judgments about the world and how it should look." As Thrall argues, an idea's ultimate success is not contingent on truthfulness, but on their resonance with established partisan belief. But what is more, it is no longer a given that finding truth is even helpful to partisans, it may even be politically undesirable: reaching a general truth consensus deprives parties of a useful platform to rally support.

Consider the effect of partisanship on public perceptions of gun violence. In 2000 there was a 15% spread in public opinion across the two parties about the proper course of action that should be taken to curb shootings. However, before the nation could agree on a consensus strategy, the issue of guns—and the Second Amendment more broadly—was subsumed within the larger red/blue culture war. Rather than coalesce around a generally accepted approach, public attention over the last two decades has doubled the partisan divide on guns (Gallup 2017). At an immediate level, the gun debate is further proof that traditional MOI theory overemphasizes the importance of time. Extended public attention, rather than lead to general truth-consensus, is just as likely to split public opinion as issues are subsumed by partisan posturing. Moreover, once issues devolve from a marketplace of facts to one of factions, the importance of truthfulness is

marginalized. Debate over the breadth of Second Amendment protections remains so heated, so stubbornly contentious, that support/opposition for gun regulation ownership is now a stronger predictor of partisan inclination than race, gender, or support for social issues like gay marriage or abortion (Enten 2017).

A Decline in Trust

In recent years, public perception of the media has become a point of partisan contention in its own right. For much of the 20th century the public largely trusted the news (Pew 2016). This era gave rise to some of the most legendary and trusted names in journalism, a handful of anchors whose reach spanned millions of households across the nation. Foremost among his contemporaries was Walter Cronkite, CBS's preeminent anchor from 1962-81. Not only was Cronkite the consummate professional, he was also publicly beloved. In the 60s and 70s, following a series of highly publicized opinion polls, he enjoyed a widespread reputation as "the most trusted man in America" (Zimmer 2009). It's hard to imagine any journalist, network, or anchor enjoying the same reputation today.

The widespread popularity of journalists began to erode under rightwing attacks starting in the 1970s. Barry Goldwater and Richard Nixon used the media as a political foil on the campaign trail. This line of attack against the mainstream outlets was followed in short order by right-leaning organizations. Criticism of mainstream media was a central theme of radio programs like Rush Limbaugh, and a staple of conservative TV networks like Fox. Marc Hetherington and Jonathan Ladd (2020) from the Brooking Institution note that "Fox News' longtime slogan, 'Fair and Balanced,' implicitly accused

other news organizations of bias. Even though this slogan was dropped in 2017, critiquing the "mainstream media" is still a mainstay of Fox programming." Against this backdrop Donald Trump attacks against the media as "lamestream" and "enemy of the people" were not unique, they were just another salvo in the culture war against the news.

Over several decades, these continual partisan attacks had the predictable effect on public opinion (Pew 2016; Gallup 2020). Since 1972 Gallup polled the public about trust in the mainstream media. When the survey was introduced in the roughly 70% of respondents reported a "great deal / fair amount" of trust in the news. This level gradually decreased, and by 2004 a majority of respondents no longer reported confidence in the media.

Looking beyond the topline measure speaks to the politicization of the news as an institution. While conservatives have long complained that the media has a liberal bias, their dissatisfaction was not always acute (Lee 2005). In 1998 the Gallup survey reported a modest gap in trust between Democrats (59%), Independents (53%), and Republicans (52%). By 2020 this gap had grown into a chasm: while 73% of Democrats had faith in the media, the levels for Independents (36%) and Republicans (10%) had fallen precipitously. This erosion in confidence undermines healthy democratic debate. If the media watchdog is considered less trustworthy than the politicians they monitor, they have little hope of tempering debate.

IV. Technology Compounds Partisanship

Digital technology presents a twofold challenge to traditional market theory. New platforms like cable news and social media allow citizens to seek out like-minded

individuals. Once these communities are established, they cease to function like traditional ideational markets. Rather than truth, partisans barter in confidence and conformity.

Fracturing Public Sphere

Recall that historically the public sphere was dominated by a handful of major newspapers and broadcasters (Schudson 1981; Streitmatter 1998). The days of a relatively simple information environment, however, are long gone. In recent decades new forms of media, including cable broadcasting, Internet news, and social networks have simultaneously expanded and divided the once unified public sphere. Just like any market where firms specialize to fill a specific niche, media companies no longer have to be generalists to compete. New mediums provide networks the ability and economic incentive to cater to discrete audiences (Carsey & Layman 2006; Poole & Rosenthal 1997; Jacobsen 2000).

It is important to remember that while the media is a laudable Fourth Estate in democratic theory, in reality news organizations are a business like any other. The descent into hyper-partisanship, while detrimental to the overall quality of the public sphere, represents a considerable economic opportunity for media corporations. The more divided the population, the greater the incentive for targeted news coverage over a one-story-fits-all approach. Savvy media executives, knowing that different audiences have different political preference, will modify content accordingly.

This audience-based considerations not influence which stories are covered, but how coverage itself is presented. Apropos to the current discussion, decisions on how to

portray certitude likely differ between mainstream and partisan media. Just as the "median voter hypothesis" seems outdated, so too is coverage aimed at the average viewer. Prognostication that would have alienated a general audience, like a conservative's staunch assertion that a liberal policy will bring about the end of times, may find a more receptive home among partisans.[13]

When the political choir chooses the preacher, measured debate is a likely casualty. Partisan audiences may actually gravitate towards messages which abandon tentativeness and paint the opposition in certain—and certainly unflattering—terms. As with economic markets, partisan demand for high-certitude content now incentivizes its supply. Outlets like Fox and One America News clearly demonstrate that hyperbolic certainty—even when it crosses over to the absurd—is better for ratings than a measured approach. This results in a self-perpetuating cycle: political differences promote partisan news coverage, and partisan coverage reinforces and perpetuates divisive rhetoric. Rinse, repeat, and partisan media grows from the fringes to become established players in the marketplace of ideas.

Echo Chambers

New media platforms also influence how citizens consume political information. The psychological literature on motivated reasoning suggests that information gathering falls into two distinct categories: reasoning with the ultimate goal of finding and independently "correct" answer, and deliberation where the primary objective is to

[13] Alas, it is true. The end *is* nigh, and has been on the precipice of collapse for the better part a year/decade/century/millennium. If you need a survival kit send me a note, I know I guy...

confirm and reinforce what one already believes (Kunda 1990; see also Kruglanski 1980 & Kruglanski & Adjzen 1983). In the former case, with the goal of uncovering ostensibly correct objective answers, one would expect something resembling Bayesian updating after the receipt of signals from elites. Pundits who offer assessments with certitude that appears justified in retrospect get rewarded, while those who miss the mark are punished in the court of public opinion.

However, when citizens primarily seek to reinforce existing beliefs, theories of motivated reasoning suggest that citizens actively avoid information inconsistent with their beliefs (Kunda 1990; Slothuus & deVreese 2010). What is more, technologies like Internet chatrooms and social media networks are the perfect drug for those in need of a quick-fix of confirmation. Online communities allow members to revel in comradery and forestall any danger of cognitive dissonance. At best, this is a form of friendly comradery. At worst, this kind of self-selection can be cultish. In his book *Going to Extremes* Cass Sunstein explains (2009, 4):

> A good way to create an extremist group, or a cult of any kind, is to separate members from the rest of society. The separation can occur physically or psychologically, by creating a sense of suspicion about non-members. With such separation, the information and views of those outside the group can be discredited, and hence nothing will disturb the process of polarization as group members continue to talk.

While Sunstein focuses on religious cults, political partisanship—particularly when it reaches a fever pitch of blind loyalty—functions in much the same way. Factionalism not only diminishes ideational common ground between parties but, critically, it reinforces this division by reducing the desire to bridge gaps once they are created.

The result of is a twofold blow against truth: an uncritical audience embraces confidence, which in turn encourages the partisan outlet to give their viewers more of what they desire:

> What we find in our data is a network of mutually-reinforcing hyper-partisan sites that revive what Richard Hofstadter called "the paranoid style in American politics," combining decontextualized truths, repeated falsehoods, and leaps of logic to create a fundamentally misleading view of the world. "Fake news," which implies made of whole cloth by politically disinterested parties out to make a buck of Facebook advertising dollars, rather than propaganda and disinformation, is not an adequate term. By repetition, variation, and circulation through many associated sites, the network of sites make their claims familiar to readers, and this fluency with the core narrative gives credence to the incredible. (Benkler et al. 2017, cited in Dagnes 2019)

These self-reinforcing communities are commonly referred to as "echo chambers." Notably, while echo chambers are a vector to spread new ideas, these are *not* information markets. Self-selection ensures there is no genuine competition, no rigorous process to separate good arguments from bad. The predictable result: when a bad idea enters an echo chamber it spreads freely, because there is no mechanism to check its spread.

This is not just an academic curiosity; insular communities pose a very real threat to the health of society at-large. Academics and social commentators have written about the negative effects of echo chambers on political division (Matuszewski & Szabó 2019; Barberá 2020), vaccine skepticism (Schmidt et al. 2018; Chiou & Tucker 2018), climate science (Elsasser & Dunlap 2013; Jasny et al. 2015), and many other important sociopolitical debates. While new media did not create any of these issues, social media has made any hope for resolution far less likely. It is hard to reach a broad truth-consensus when everyone already firmly believes they are right.

Partisan Gatekeeping & Selective Access

New media channels also undermine longstanding market safeguards. Recalling the discussion in Chapter Three, for most of history the media was able to function as information gatekeepers, controlling the newspapers, radio networks, and TV channels that fed the information environment. If politicians wanted to reach a broad audience, their messages first had to pass journalistic muster. This arrangement may not have been perfect, but it helped temper the spread of suspect information.

The Internet and social media bypass this firewall, upending the traditional dynamic in the MOI. Elites are now able to connect directly with citizens, without having to depend on journalists or temper their language. The poster-child for social media in politics, of course, is Donald Trump. In a 2017 interview with Fox News Trump acknowledged the role of social media in his rapid ascendency:

> I doubt I would be here if it weren't for social media, to be honest with you... Tweeting is like a typewriter – when I put it out, you put it immediately on your show… When somebody says something about me, I am able to go bing, bing, bing and I take care of it. The other way, I would never get the word out.

Trump's early success through Twitter created a self-perpetuating cycle of coverage. His mainstream popularity and direct outreach allowed a political novice, with little experience and a skeleton campaign, to generate a groundswell of interest. Success on social media made Trump newsworthy, and journalists picked up the story as is their profession.

Once Trump achieved mainstream coverage, the effect was intensified. The sociologists Paul Lazarsfeld and Robert Merton (1948, cited in Mills & Barlow 2014, 146) argue that simply appearing on the news is a considerable political asset:

> The mass media bestow prestige and enhance the authority of individuals and groups by legitimizing their status. Recognition by the press or radio or magazines or newsreels testifies that one has arrived, that one is important enough to have been singled out from the large anonymous masses, that one's behavior and opinions are significant enough to require public notice.

At some point, as Trump continued to climb in the polls and seemed poised to clinch the Republican nomination, journalists began to second-guess their role in making Trump a frontrunner. In 2015 John Sides of the Washington Post wrote an article titled *Why is Trump Surging? Blame The Media* arguing, as many others were at the time, that rating-chasing news outlets helped fuel Trump mania.

Kyle Pope, editor of the *Columbia Journalism Review*, argued that the media's double-take on Trump was a failure of modern journalism. Pope (2016) argued:

> Reporters' eagerness first to ridicule Trump and his supporters, then dismiss them, and finally to actively lobby and argue for their defeat have led us to a moment when the entire journalistic enterprise needs to be rethought and rebuilt. In terms of bellwether moments, this is our anti- Watergate…journalism's fundamental failure in this election, its original sin, is much more basic to who we are and what we are supposed to be. Simply put, it is rooted in a failure of reporting.

The catch, of course, is that by the time news outlets began to question how they covered the election, there was little they could do to stop the momentum. By that time Trump *was* the frontrunner, and not covering him would have been journalistic malpractice. Just as significantly, journalists were powerless to stop Trump's wilder flights of fancy from reaching the public sphere. Even if they wanted to stop covering his campaign, or chose to edit his remarks, Trump could always rely on social media to disseminate his messages directly.

Of course, not every news outlet was as self-critical as the Washington Post or the New York Times about their role catapulting Trump to the presidency. For right-leaning

outlets, Trump was a ratings goldmine without the morning-after guilt. Trump and conservative outlets quickly formed a symbiotic relationship.

On one side of the equation, Trump used access as a bargaining chip. Trump disproportionately favored Fox, granting a third of his interviews as president to either Fox news or Fox Business (Bump & Rieger 2019). But even that striking figure is misleading: the majority of the remaining interviews were carried on local radio or television outlets. Comparing Fox to other mainstream outlets, the difference is starker: nearly half of Trump's interviews were granted to his favorite network (Bump 2017; Bump & Rieger 2019). Conversely, organizations perceived as hostile, like CNN, struggled to maintain White House press credentials, and were never granted direct interviews.

In return, conservative media eschewed its watchdog role and became a complacent lapdog, reinforcing rather than challenging Trump's narrative. Trump was not only assured of soft-ball questions, conservative hosts often softened his most egregious gaffs. Philip Bump (2020), a Washington Post journalist covering presidential politics, described the mutualistic dynamic:

> [T]here's a reason he [Trump] gives more interviews to Fox News than to other networks, there's a reason he gives more interviews to Hannity than other Fox News hosts. If Ingraham took it upon herself to gently guide Trump back onto the proper path, Hannity does little more than reiterate Trump's rhetoric back to him for the president's input.

From a purely partisan standpoint, it is a win-win when everyone—the candidate, the network, and the audience—is rooting for the same team. From the perspective of the national marketplace of ideas, however, overtly friendly relationship between politicians and news organizations undermines the quality of political debate.

VI. 2016: A Contest of Certitude and Circumspection

When discussing the rhetorical calculus balancing of certitude versus circumspection, it is hard to imagine two candidates with more divergent personalities and strategies than Donald Trump and Hillary Clinton. On one end of the spectrum, Clinton was consistently described as "careful" and "calculated" (Kohn 2014; Rucker et al. 2016). Donald Trump, in contrast, fully embraced the persona of a brash, pull-no-punches political outsider. Over the course of 2016, the temperament of each candidate became a major issue in its own right. The political battle lines, in effect, were drawn between a candidate who embraced "incredible certitude" and one who made a science of circumspection.

Building on her broad experience—as senator, 2008 presidential candidate, and Secretary of State—Clinton cultivated and projected a carefully crafted persona. Her brand was that of a "a methodical, hardworking public servant," and her campaign hoped that for "voters who worry about a complex world, Clinton will be the candidate most equipped to show voters that they will not be taking a risk by putting the world in her hands" (Dickerson 2014). And while this strategy appealed to many, it also presented the broader challenge of making Clinton seem genuine and empathetic, not simply calculated.

Ezra Klein, a reporter covering the 2016 election, highlighted the fundamental tension between Clinton the private individual and Clinton the public candidate:

> [In public] She is careful, calculated, cautious. Her speeches can sound like executive summaries from a committee report, the product of too many authors, too many voices, and too much fear of offense. And then there is the Hillary Clinton described to me by people who have worked with her, people I admire, people who understand Washington in ways I never will. Their Hillary Clinton is spoken of in superlatives: brilliant, funny,

> thoughtful, effective. She inspires a rare loyalty in ex-staff, and an unusual protectiveness even among former foes.

This incongruity between a candidate's private and public face reflects Hart & Childers' (2004) vision, and that of traditional communication theory more generally, of how a modern candidate *should* act. The ever-present media threatens to exacerbate every miscalculation or mistake, making it safer to stick to sure ground and carefully scripted talking points. While hindsight is twenty-twenty, in retrospect it is clear that Clinton was too careful and cautious for her own good. Her careful circumspection may have been as much a liability as an asset.

If Hilary Clinton exemplified the political norm, Donald Trump embodied its comprehensive opposite. Trump's ascendency challenged the prevailing wisdom of a generation of academics is that a successful politician must be careful and cautious in public. Trump's campaign tapped into something deeper than objective truth or falsity. His strategy was, in many ways, an evolution of his business philosophy that he outlined in his book *The Art of the Deal*:

> The final key to the way I promote is bravado. I play to people's fantasies. People may not always think big themselves, but they can still get very excited by those who do. That's why a little hyperbole never hurts. People want to believe that something is the biggest and the greatest and the most spectacular. I call it truthful hyperbole. It's an innocent form of exaggeration — and a very effective form of promotion.

There is, of course, a grey area between "a little hyperbolae" and outright falsehood. While voters might tolerate a degree of exaggeration as a rhetorical flourish, one would think that they would ultimately distrust a candidate who was consistently playing fast-and-loose with the truth.

Trump's troubled relationship with objective truth was well documented over the course of the campaign. Fact-check services exemplified by Politifact, Factcheck.org, or the *Washington Post's* fact-checker, provided a real-time gauge of candidate truthfulness over the course of the election. A March 2016 article by Lippman et al. from Politico, for example, analyzed hours of campaign speeches, finding that Trump averaged one misstatement every five minutes. Indeed, the ready availability of fact-checking services has given rise to a cottage industry of academics harping on Trump's troubled relationship with the truth.

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The crux of the issue is exemplified by two quotations, one from a Trump critic and other from a supporter, each with a different interpretation of his confidence and unapologetic certainty. The first comes from Graydon Carter (2017), the editor of *Vanity Fair:*

> [N]o amount of grifter charm can conceal his alarming disregard for facts and truth. It's this combination of utter ignorance and complete certitude that his detractors find most terrifying. Trump not only doesn't know the unknowns but appears to have no interest in even knowing the knowns. Fact-checkers can't keep up. How often does Obama play golf? Who cares—let's inflate the number by 50 percent. What's the murder rate in a major American city? What the hell—let's multiply it by 10.

If the public sphere was founded on truthfulness, Trump would never have become president. However, not every citizen—as clearly demonstrated by the election itself—had the same reaction to Trump's persona or rhetorical flourish. As Trump supporter suggested in a June 2016 interview:

> So, I like to believe that a lot of that is just maybe, like, some political marketing. I see where he's coming from with it, but it's not like there's not already something like a wall there, and it's not like bills and such haven't been proposed previously. But I would take it more as political marketing — I think he's making a stand and wants to be a little bit more outrageous with it to draw attention to the ideology that he wants to stand for things that people aren't standing for. And, honestly, I think he's a marketing genius.

As many have observed during and after the election, it is the sentiment and confidence behind Trump's words—rather than any relationship to objective truth—which lay at the heart of his appeal

Kristiansen and Kaussler (2018) defines Trumps casual relationship with the truth as "The Bullshit Doctrine," which emphasizes rhetorical punch over factual accuracy. In their view "Trump is indifferent about the relative truthfulness of his own claims while simultaneously caring deeply about the reception of those claims," more concerned about "popular perception and the symbolic significance" of his rhetoric than its factuality (Kristiansen & Kaussler 2018, 23). This emphasis resonates with a marketplace driven by certitude and values, not truth.

Recall, in the earlier quotation from Carter, that citizens worried about the *normative* threat of crime are not focused on *factual* measures of the actual crime rate. The example of crime is particularly telling. Trump often exaggerated or misrepresented crime statistics on the campaign trail. After his convention speech a journalist from CNN challenged Newt Gingrich, acting as a campaign surrogate, about Trump's apparent

willingness to distort the fact that, in general, national crime had decreased dramatically. To which Gingirch replied "the average American, I will bet you this morning, does not think that crime is down, does not think that we are safer... People feel more threatened. As a political candidate, I'll go with what people feel." Gingrich, I suggest, was exactly right. A market is driven by values, rather truth, is better able to explain contemporary politics.

CHAPTER SIX: A NEW ERA OF PROPAGANDA

We will never know whether the Russian intervention was determinative in such a close election. ... What does matter is this: The Russians successfully meddled in our democracy and our intelligence agencies have concluded they will do so again.
— Representative Adam Schiff, 2017

We have met the enemy, and he is us. — Walk Kelly, 1972

During the 2016 election a series of ads ran across multiple social media platforms depicting Jesus arm wrestling Satan, accompanied by the caption:

> Today Americans are able to elect a president with godly moral principles. Hilary is Satan, and her crimes and lies had proved just how evil she is. And even though Donald Trump isn't a saint by any means, he's at least an honest man and he cares deeply for his country. My vote goes for him!

As the election drew to a close, it became clear that this message—and thousands like it—were products of a Russian disinformation campaign. These messages are more than just another batch of fake news of misplaced confidence, they represent the probing first steps into a new era of information warfare. Social media platforms, through mechanisms impossible in the pre-digital era, have the potential to sow discord and undermine the political process from within. Two things are abundantly clear: Russia clearly believed digital propaganda to be a viable strategy in 2016, and similar programs have been—and will continue to be—expanded and refined by our adversaries in the coming years. However, despite the uproar and outrage, there is little consensus about how concerned America should *actually* be about this novel threat (Paul 2016; Lewandowsky et al. 2017; Badawy et al. 2018).

There has certainly been a steady uproar of criticism and concern over the past several years. Academics, pundits, and government officials have been sounding the

alarm about the public's acute susceptibility to digital propaganda. Security officials warn of future attacks. Books have been published with alarming titles like *The Plot to Destroy Democracy* and *Information Wars*; sharing a common theme that America is woefully unprepared to meet this emerging threat. An op-ed in the *New York Times* deemed Russia's "cyberpower" a "perfect weapon" to sow chaos in the digital age (Lipton et al. 2016). Similar angst has echoed through the halls of Washington, with congresspeople skewering social media platforms as vulnerable vectors for Russian propaganda.

These concerns are all the more urgent because of the precarious state of American political debate. The Internet allows adversaries to cater messaging toward targeted key social groups, strategically exploiting and exacerbating existing social divisions to undermine the political process. In 2017 Mr. Lansing, head of the US Broadcast Board of Governors, testified before Congress that "The Russian strategy seeks to destroy the very idea of an objective, verifiable set of facts."[14] America may already have been sliding toward a post-truth society, and Russia is all-too-willing to help push us further down the path of dysfunction. Underlying all the concern is a nagging suspicion that Russia may have tipped the balance in a razor-thin election.

However, not everyone is convinced that the digital public sphere is an effective medium for misinformation. There are a growing number of scholars who argue that the impact of Russia's efforts has been overstated (Benkler 2020). Skeptics argue that, however outraged one should be at the Kremlin's intent, the ultimate effect on democratic process is inherently limited. Russia did not try to meddle directly at the ballot box,

[14] https://www.csce.gov/international-impact/events/scourge-russian-disinformation

which would clearly pose a tangible threat to the election process. Rather, Russia's various efforts included flooding the digital sphere with the aim to exacerbate social division, which skeptics argue were inherently limited (ICA 2017). Even if Russia successfully influenced the beliefs—and more importantly the electoral behavior—of a number of citizens, the effect is modest compared to the behemoth of the American public sphere.

But which view is closer to reality? Does Russian meddling truly pose an existential threat to democracy? Or is social media mischief simply an inexpensive low-risk gambit from an adversary too weak to engage in historical forms of information warfare? The fact that the debate remains heated, without any clear consensus, suggests that longstanding models of propaganda and persuasion need to be critically reevaluated in the digital era (Sears & Kosterman 1994; Jowett & O'Donnell 2018).

This chapter seeks to calibrate our understanding of the vulnerability and resilience of the American marketplace of ideas by correcting several common misconceptions. The goal is *not* to argue that Russia did not systematically favor Donald Trump, nor is it to suggest that the Kremlin failed to influence the information environment. Rather, the driving argument is that hostile intent should not be conflated with efficacy. Despite Moscow's desire to leverage digital technology to undermine the American public sphere, my argument is that even if the Russians did tip the 2016 election, their efforts do not indicate that such events are easy to replicate or that the marketplace of ideas is particularly vulnerable to foreign interference.

That said, the reason for America's resilience should not comfort democratic theorists or free-speech boosters. In an ironic twist, the very factors decried in the preceding chapters—certitude bias, exponential growth of the information environment, and hyper-partisanship—collectively insulate the domestic marketplace of ideas arena from foreign misinformation campaigns. In the words of the satirist Walt Kelly (1987), "we have met the enemy, and he is us." The public sphere is resilient to interference not because it is innately wise, but because it is so ponderous that any meddling is a whisper against the cacophony of domestic dysfunction.

A team of researchers at Harvard's Berkman Klein Center for Internet and Society employed network analysis to assess how media producers and audiences interact and share information, and textual analyses to trace messages through the information environment. Their findings suggest that "The Russians are there. They are trying. But in all these cases, American right-wing media did the heavy lifting to originate and propagate disinformation" (Benkler 2018, see also Benkler et al. 2018). Their findings suggest that:

> [T]he fundamental driver of disinformation in American politics of the past three years has not been Russia, but Fox News and the insular right-wing media ecosystem it anchors. All the Russians did was jump on the right-wing propaganda bandwagon: Their efforts were small in scope, relative to homegrown media efforts. And what propaganda victories the Russians achieved occurred only when the right-wing media machine picked up stories and, often, embellished them. (Benkler 2018)

This perspective may alleviate concerns about Russia, but in so doing offers little comfort about the health of the domestic public sphere.

Indeed, Russia has become a convenient scapegoat to blame for many of the United States' preexisting maladies. The social schisms at the heart of Moscow's strategy

of division were entrenched before any foreign interference. Hyper-partisanship, distrust and disdain of the media, personal vilification of opposing politicians; these are crises of our own creation (Abramowitz & Saunders 2005; Iyengar & Hahn 2009). Nor was Russia responsible for the majority of crackpot conspiracy theories, media mistrust, and post-truth politicking that consumed the 2016 election. In short, while Moscow's efforts are clearly hostile, these digital misinformation campaigns may not be as effective as many pundits would have us believe.

While Russian interference is used to motivate discussion, the vulnerabilities exposed over the past elections are generalizable across time and potential adversaries. Government analyses suggest that other adversaries, including but not limited to China and North Korea, will follow Moscow's example and attempt similar influence campaigns (Bodine-Baron 2018; Bolton 2021). Furthering our understanding of the frontiers of propaganda in the digital age will help highlight democracy's veracity/vulnerability in the future meddling.

The overarching goal of this chapter is to debate about digital propaganda, identifying the actual strengths and weaknesses of the American marketplace of ideas in order to help analysts collect the necessary data and make sensible arguments about the extent of democratic vulnerability. The discussion begins by outlining the basis for concern, examining the unique vulnerability of the digital public sphere to outside influence. This theory is then applied to understand Russia's 2016 attempt to use digitally promoted material to skew the information environment, sow division, and undermine the political process. The remainder of the chapter, the crux of the argument, explains why

the angst is frequently disproportionate to the actual threat. The case against the efficacy of digital propaganda rests on three factors—the atypicality of the 2016 contest, the inertia and stability provided by a vast domestic market, and the persuasive limits of social media—underlying why we should not be overly alarmed by the new era of foreign misinformation campaigns. The discussion closes with a cautionary note against total complacency. Just because digital propaganda is *generally* ineffective, there is one key dimension of the sociopolitical arena that seems to be a potential vector for foreign influence: when trusted domestic voices co-opt foreign messaging as their own.

I. The Case for Concern

Before continuing, it is worth clearly defining what is meant by "digital propaganda." There is an important difference between hacking-and-dumping existing information, as was the case with WikiLeaks, and trying to inject novel misinformation through social media channels. Yaffa (2020) emphasizes the distinction:

> The 2016 theft of Democratic National Committee e-mails by Russian military-intelligence hackers, and their subsequent dissemination via WikiLeaks, seem to have had an effect on the electorate, even if that effect is hard to measure. What I.R.A. trolls managed to achieve, however, was more diffuse, and considerably less significant. In 2016, they inflamed hot spots of American discourse, then ran away when the fire began; their priority appeared to be scoring points with bosses and paymasters in Russia as much as influencing actual votes in the United States. Russian disinformation—and the cynical, distorted world view it entrains—is a problem, but the nature of the problem may not be quite what we imagine.

It is this latter component—the work of social media trolls rather than online hackers, a distinction between propaganda and espionage—that is the subject of the present discussion.

At first blush, weaponizing misinformation is as old as politics itself. Propaganda leaflets, embedded agents fomenting discord, even an institution as seemingly innocuous

as Voice of America have all attempted to shift adversaries' beliefs. The fundamental question is whether the current era of international propaganda is simply an improvisation on an old theme, or does it represent a truly novel threat? Many argue, with good reason, that the digital age is indeed a fundamental departure from past epochs of information warfare.

Digital propaganda campaigns are low-risk, low-cost undertaking with a potentially phenomenal return on investment. If misinformation spreads virally through social media, potentially breaking through to tarnish mainstream debate, a relatively modest initial expenditure can quickly overwhelm the market with mischief. Critical analyses by Jamieson (2020) and Mayer (2018), among many, argue that Russia's efforts had a pernicious impact on the American MOI, successfully eroded confidence in the electoral process, and probably tipped the election to Donald Trump. This concern is has led commentators like Weisburd et al. (2016) to argue:

> Globally, the implications of Russia's social media active measures are dire. Social media has played a key role in controversial decisions such as Brexit, and in politics and elections around the world, including those of France, Estonia and Ukraine. In heated political contests such as Brexit and the U.S. presidential election, Russian social media active measures could tip the balance of an electoral outcome by influencing a small fraction of a voting public.

What further proof is needed than tipping a critical election to emphasize the clear and present danger of digital propaganda to American society? The intent is hostile, the danger real, and democracy unprepared for this new era of information warfare. At the very time when the volume of misinformation is greatest, traditional democratic institutions appeared the least able to safeguard the information environment from outside influence.

What is more, 2016 was only an initial foray into digital misinformation. If Russia or other adversaries believe the attacks were effective, it is likely to encourage similar attacks in the future. Nor should we expect a simple repeat of 2016. Just as we are trying to learn the lessons of 2016 to better prepare for future meddling, adversaries are similarly refining their tactics. Indeed, we may be entering into an informational arms-race as each side evolves new tools and strategies.

Three themes animate the argument for concern: the ability of digital mediums to bypass traditional market safeguards, the ability to target campaigning on specific districts and demographics, and the narrow timeframe required to have an effect. Independently, each element stresses the market's ability to efficiently separate truth from misinformation. Collectively, these factors threaten to undermine the political process and, potentially, sway electoral outcomes. Consider each element in turn:

Bypassing Safeguards

First, echoing the critique of the public introduced in chapter three, the sheer volume of digital content represents a considerable challenge in its own right. It is not only simple and inexpensive to create vast quantities of digital misinformation, the potency of these messages can be amplified though social media. A message that goes viral can reach a far broader audience that could ever have been accomplished in the pre-digital era.

The dynamics of social networks also bypass traditional market safeguards like journalistic mediation and impartial fact-checking (Allcott & Gentzkow 2017). Just as domestic elites can use the Internet for direct outreach, bypassing the professional

scrutiny of journalists, so too can foreign agents. As Russia demonstrated in 2016, where trolls assumed the names of American individual or organization, social media platforms allow malicious actors to mask their identity. This ability to obfuscate source not only allows hostile forces to operate under the social radar, the lack of reliable source and context cues makes it more difficult to resist persuasive messages (Tormala & Petty 2002; Pornpitakpan 2004).

Selective Targeting

The 2016 election dramatically illustrated the eccentricities—and unique vulnerability—of the US electoral system. Despite the fact that Hillary Clinton won the national tally by 2.9 million votes, Donald Trump won the electoral college by a hair-breadth margin of eighty thousand votes across three key states: Michigan, Wisconsin, and Pennsylvania. The fact that elections typically come down to a handful of predictable battleground states dramatically lowers the threshold necessary for a disinformation campaign to change political outcomes. This lesson was not lost on the Russians, as the post-election Mueller report (2019) clearly indicates their efforts were targeted to maximize potential impact. At a direct level, as with any savvy political consulting firm, Russia focused their efforts on the battleground states (Lee & Hunt 2017).

But the more profound power, and contingent peril, of social media stems from the fact that messages can be targeted to specific communities. Russia's campaign to sow distrust and social animus did not have to start from a blank slate. Rather, like a villainous fulcrum, Russia only needed to leverage and exploit existing schisms to serve their ends. Russia's strategy was multi-tiered. Some messages were akin to domestic

character advertisements, championing Trump and vilifying Clinton. Russia effectively became a proxy SuperPAC, coordinating their messaging—at times directly—to compliment the Trump campaign.

Russia's primary effort was not to persuade—in this era of hyper-partisan relatively few voters are likely to cross party lines—but rather to selectively and strategically suppress voter turnout. These efforts focused on the African American community (Morgan 2018; Davidson 2018; Overton 2019). For decades, registered African American voters have overwhelmingly identified as Democratic (83%) over Republican (10%) (Igielnik & Budimanand 2020). This pattern is mirrored, though to a lesser degree, in the Asian American and Hispanics communities. Given this stark divide, suppressing the absolute vote count in these communities provides the Republican party a relative electoral advantage.

Russia's objective was clear: by sowing distrust against Clinton and the electoral system in general, Russia sought to dishearten and dissuade voters from engaging in the political process. A US Senate Intelligence Report (2019, 38-9) notes:

> [N]o single group of Americans was targeted by IRA information operatives more than African-Americans. By far, race and related issues were the preferred target of the information warfare campaign designed to divide the country in 2016. Evidence of the IRA's overwhelming operational emphasis on race is' evident in the IRA's Facebook advertisement content (over 66 percent contained a term related to race) and targeting (locational targeting was principally aimed at African- Americans in key metropolitan areas with), its Facebook pages (one ofthe IRA's top- performing pages, "Blacktivist," generated 11.2 million engagements with Facebook users), its Instagram content (five of the top 10 Instagram accounts were focused on African-American issues and audiences), its Twitter content (heavily focused on hot- button issues with racial undertones, such as the NFL kneeling protests), and its YouTube activity (96 percent of the IRA's YouTube content was targeted at racial issues and police brutality).

Similarly, a report by the Computational Propaganda Research project (cited in Davidson 2018) notes:

> Messaging to African Americans sought to divert their political energy away from established political institutions by preying on anger with structural inequalities faced by African Americans, including police violence, poverty, and disproportionate levels of incarceration. These campaigns pushed a message that the best way to advance the cause of the African American community was to boycott the election and focus on other issues instead.

The common theme among Russia's many efforts was to enflame racial tension and to undermine trust in the political system. By encouraging voters to stay home, or cast a ballot for Jill Stein in symbolic protest against Clinton and the Democratic establishment, Russia hoped to tip the electoral scale towards Trump.

The Market Does Not Have Time to Calibrate

The final cause for concern resonates with another pillar of MOI theory: time. The relationship between time, debate, and truth is complex. There is no universal standard for what constitutes "good" market performance; clearly any benchmark is contingent on context and sociopolitical stakes. Is society any worse off if it takes a day, a year, or a millennium to determine how many tardigrades can dance on the head of a needle? Probably not. But when the stakes are high, like election meddling, market efficiency is critical. The speed at which disinformation can enter and disseminate through social media presents a unique challenge to the generally ponderous marketplace of ideas. Mischief only has to remain undetected during a narrow electoral window. The threat must either be detected and accepted quickly; if society takes too long to reach an accurate truth-consensus irreparable harm may already have been inflicted. Defining "too long" in the content of a misinformation campaign, of course, is not straightforward. In the 2016 election, for example, there are compelling arguments for and against the resilience of the public sphere.

On one hand, these attacks expose time necessary for the market to separate fact from fiction as a core vulnerability of the MOI. The rapid spread of misinformation, combined with persuasive appeals, means that opinion can quickly shift at key points in an election cycle. In theory, this gives the market very little time to process and reject the deluge of falsehood. In the worst-case scenario, once a piece of misinformation goes viral the market is likely to be completely overwhelmed in the short term. And the short-term, particularly in very time-sensitive events like elections, may be all that matters. By the time a concerted effort was taken to curtail the Russian campaign, the damage had been done and the election decided. After that point, the time it takes for Americans to accept reality is largely academic.

Nor, contrary to MOI theory, is it clear that extending the time for debate would lead to better results. The viciously partisan backdrop surrounding the election ensured that many Americans refused to accept the reality of the attack despite the clear warning from intelligence professionals (Kiley 2017). Even today, a half decade after the initial attack, a nontrivial percent of the population refuses to believe foreign governments have meddled in US elections (Hartig 2020). As with other intractable non-debates—global warming, vaccines, evolution, etc.—after a point, no additional length of time or quantity of information will appreciably shift public opinion.

II. Counterpoint: Digital Propaganda Has Less Impact Than Many Believe

Holding with this, the core of the current argument is that the danger of digital is more modest under most circumstances than Russia's apparent success has led many to believe. Even if Russia caught a whisp of lightning in a bottle in 2016, and even if one

grants that their initial campaign enjoyed success, that initial effort seems to have set the high-water mark for mischief. The fact that we are not under constant siege from foreign information warfare is not for lack of ill-will—goodness knows America has enemies aplenty— but rather because the tactics and tools may be difficult to wield.

There is clear evidence that Russia tried to repeat their initial tactics in the 2018 and 2020 elections, but with notably little effect (Yaffa 2020). Nor have other nations, despite the bruhaha about China or North Korea, successfully emulated Russia's example. Indeed, if digital propaganda is so pernicious and the public sphere so vulnerable, one would expect to find continual evidence of the danger. But we haven't. The relative quiet may simply be a function of will. Russia, harboring longstanding animosity towards Clinton, may have felt particularly invested in the outcome of the 2016 election. Biden may simply have been perceived as more tolerable to the Kremlin, and was therefore spared another full-scale disinformation campaign.

Alternately, it may not be lack of will but of capacity, that has limited the impact of digital interference. The potential arguments as to why we should not be overly concerned about digital misinformation campaigns fall under three general themes: 2016 was an exceptionally vulnerable election, the domestic market is too vast to perceptibly shift, and the very nature social media platforms limits the potential scope of impact.

III. Argument 1: 2016 Was a Perfect Storm

First and foremost, it is worth emphasizing the obvious: 2016 was a surreal year. For American politics. For the marketplace of ideas. For life in general. One must be careful not to draw general themes from a rare event. The 2016 election—and indeed, the

whole Trump presidency—was an aberration in terms of vulnerability to outside influence. The specific historical backdrop, Trump's actions as candidate and president, and unpreparedness in the face of a novel threat, created near-perfect conditions for a misinformation campaign.

Ellen Nakashima (2020), writing for the Washington Post, emphasized the difference between the 2016 and 2020 elections:

> For Russia, the conditions present four years ago were lacking this year. In 2016, Americans and the federal government were unprepared for the broad Russian campaign that swept across porous Democratic computer networks, unsuspecting social media companies and exposed election systems. This year, Americans were aware of the threat of Russian interference. Twitter and Facebook removed Russian accounts before they could gain large followings. State and local elections officers strengthened network security.

At a direct level, as Nakashima notes, content providers and lawmakers are better prepared to respond to future attacks. America may have been caught off guard the first time around, but it will be hard to mirror the same success twice. Indirectly, there are now far greater geopolitical consequences for getting caught in a future attempt. While Russia may have escaped grave repercussions the first time around—in no small part due to the unique occupant at 1600 Pennsylvania Ave—the US is unlikely to be so tolerant in the future.

Russia Did Not Create Division

If one is searching for the root cause of our sociopolitical dysfunction, lies, and misinformation, the blame falls squarely at the feet of American society. Against this tumultuous backdrop Russia played a peripheral role; an ill-tempered bleat against the bellow of domestic partisan warfare. The essential point, often overlooked in the wider furor over Russia's hostile campaign, is that the social schisms at the heart of Russia's

strategy were well entrenched before any foreign interference (Abramowitz & Saunders 2005; Iyengar & Hahn 2009). Moscow was not responsible for the majority of crackpot conspiracy theories, media mistrust, and post-truth politicking that consumed the last election.

The more pressing question is whether Russia's attempt to exacerbate division and suppress voter turnout was effective in the broader context of domestic politics. Once again, there is reason to think that the ultimate impact of Russia's efforts may be overstated. It is important to remember that the Kremlin is a relative newcomer to the sordid science of strategic voter suppression. The US was a nation created on a foundation of systematic racism, and racially-targeted voter-suppression has remained a lamentable staple of American politics. Indeed, a large—and yearly growing!—body of scholarship is devoted to contemporary political tactics of racially-targeted voter suppression (Murillo 2017; Epperly et al. 2017; Igielnik & Budiman 2020).

The scope of Russia's influence, therefore, needs to be assessed against this backdrop of domestic racial politics. Clearly, since Russia and the Republicans had their thumbs on the same side of the scale, their efforts likely had a cumulative effect on voter suppression. This leads to two hypothetical questions: First, how many more voters were suppressed by the combined efforts of Russia *and* Republicans than would have been the case had the latter acted alone? Secondly, was the additive effect of Russian meddling enough to meaningfully influence the content of the information environment, the opinions of African American and other minority communities, and ultimately the electoral process itself?

One interpretation is that Russian mischief was sufficient—and sufficiently independent—from domestic actors to have a meaningful impact, and potentially tip a close election. Alternately, one could argue that the Republican party had decades refining the twisted science of voter suppression, and far more resources to promote a political agenda. Thus, even if one grants that Russia had an independent effect on turnout, it may not have substantively change African American opinion or turnout from what would have been the case in a typical racially-charged American election. Clearly, given the complex web of social, political, and informational factors, it is impossible to definitively adjudicate between the two perspectives.

To this point, a number of US states have since warped the lessons of 2016. Republicans turned Democratic talking points about protecting elections from foreign meddling into a debate about domestic election security; thereby ignoring a real issue to counter a largely illusory threat. This disconnect is apparent in opinion polls. Data from the Pew Research Center suggests that Democrats are far more likely (82%) than Republicans (39%) to view foreign meddling as a major problem (Doherty 2020). Conversely, Republican talking points tend to focus on the security of voting itself rather than of the information environment. This is reflected in Republican and Democratic support for measures like ending same-day registration (51% to 22%), eliminating automatic voter registration (51% to 22%), and requiring government-issued photo ID to vote (91% to 63%) (Bialik 2018).

As a tangible consequence, Republican lawmakers in 43 states have proposed at least 250 laws that would make voting more difficult. Gardner et al. (2021) note that,

while the official Republican position is that securing voting is a patriotic defense of election integrity, the reality is that these efforts have clear racial undertones:

> [I]n most cases, Republicans are proposing solutions in states where elections ran smoothly, including in many with results that Trump and his allies did not contest or allege to be tainted by fraud. The measures are likely to disproportionately affect those in cities and Black voters in particular, who overwhelmingly vote Democratic — laying bare, critics say, the GOP's true intent: gaining electoral advantage.

In the months between November 2020 and June 2021, 17 states successfully passed 28 laws making it harder for citizens to vote (Alas 2021). The irony, of course, is that these new laws may do more to suppress the minority vote than Russia has ever been able to accomplish.

The Trump Factor

Finally, no discussion of the 2016 election would be complete without delving into the unprecedented nature of the Trump candidacy. Trump's electoral strategy would not have been effective in isolation; his style of politics "could only be successful because established institutions—especially the mainstream media and political-party organizations—had already lost most of their power, both in the United States and around the world" (Persily 2017, 64). No foreign adversary was responsible for this degradation in domestic trust; American society had been steadily chipping away at the credibility of its own institutions for decades.

Trump himself helped produce the ideal backdrop for digital propaganda. If the Russian campaign did tip the election to Trump, it did so in part thanks to Trump's unprecedented campaign. By emphasizing divisive issues, eschewing fact and data for vitriol and personal attacks, and by welcoming rather than condemning Russian meddling, Trump fostered favorable conditions for foreign impact. No previous campaign

in American history in which a trusted figure like Trump provided so much political cover for malicious foreign messaging. And indeed, even after taking office Trump continued to dismiss Russian responsibility for any wrongdoing during 2016.

The Trump campaign, however, did not simply turn a blind eye to the Kremlin's efforts, they become complicit collaborators. While Robert Mueller may have never said the word "collusion" in his 2019 Congressional testimony, his eponymous report was hardly exonerating. The Trump campaign did more than cheer from the sidelines; there is compelling evidence that they shared polling data with the Russians to help target their efforts (Mueller 2019; Bump 2021). Without this kind of insider support, it is hard to believe that future foreign interference campaigns will gain nearly so much traction.

It is also hard to imagine any major candidate behaving as Trump did during and after the 2016 election. It is not simply that Trump had a monopoly on dishonesty—other politicians have shown a similar willingness to embrace incredible certitude over careful deliberation—but that he was uniquely uncritical of Russia and its disinformation campaign (Rumer et al. 2017). Even if there was no direct collusion with the Russian operation, his public statements and his campaign's behavior were far afield of traditional norms. From publicly inviting a hack of Hillary's emails, to his public embrace of Putin, Trump's messaging was remarkably pro-Russian.

In the aftermath of the 2016 election Trump repeatedly accepted Putin's denials of cyber involvement, even over the objections of the domestic intelligence agencies (Nussbaum 2018). It is remarkable to reflect that, in the same week Trump publicly

exonerated Russia, Dan Coates, the former Director of National Intelligence, felt compelled to issue a public statement concerning the US intelligence assessment:[15]

> The role of the Intelligence Community is to provide the best information and fact-based assessments possible for the President and policymakers. We have been clear in our assessments of Russian meddling in the 2016 election and their ongoing, pervasive efforts to undermine our democracy, and we will continue to provide unvarnished and objective intelligence in support of our national security.

In normal circumstances such a stark public disagreement between a sitting president and a senior intelligence official would have been a major news story. As it was, the spat between Trump and Coates was just one of many times that Trump offered his own narrative in willful defiance of all the evidence. Echoing the earlier discussion of watchdog jujitsu, Trump often tried to flip the script, turning what should have been a political vulnerability into a campaign talking point reinforcing his broader political message. In a typical 2020 Tweet Trump shifted the focus from Russia to two of his favorite political foils, the "lamestream" media and China:

> The Cyber Hack is far greater in the Fake News Media than in actuality. I have been fully briefed and everything is well under control. Russia, Russia, Russia is the priority chant when anything happens because Lamestream is, for mostly financial reasons, petrified of... discussing the possibility that it may be China (it may!)

Trump, in short, made little public effort to temper the effectiveness of Russian disinformation. If anything, Trump's political inclination to magnify and profit from social division, may have done more to advance the Kremlin's message than the IRA could ever have hoped to accomplish on their own.

It is hard to imagine McCain or Romney turning a similarly blind eye to a traditional adversary. Nor is it likely that future candidates from either party—however

[15] https://www.dni.gov/index.php/newsroom/press-releases/item/1888-statement-from-dni-coats

rhetorically hyperbolic or politically nationalist—will share Trump's unapologetic willingness to embrace an adversary over the cries of domestic intelligence agencies.

V. Argument II. Opinion Inertia in a Massive Public Sphere

The public sphere is not insulated from foreign interface because the domestic marketplace of ideas is innately wise, efficient, or overly concerned by truth. Quite the opposite: the fact that the US market is innately vast, noisy, and inefficient is, ironically, our own best insulation against foreign meddling. Any propaganda campaign is unlikely to be more than a blip in the broader debate. It is hard enough for established domestic sources to meaningfully shift public opinion on contentious issues, the bar is far higher for outside sources who lack the credibility and resources of national agents. Even if digital misinformation is systematically focused towards a particular outcome, it is unlikely to shift the overall tenor of sociopolitical debate.

The Market is Large

Logically, the larger the market, the greater the threshold of influence needed to effect meaningful change. Inertia, in short, is our greatest defense. It is easy to fixate on the figures describing the hostile information campaign; thousands of advertisements shared millions of times across numerous platforms. It is important to remember, however, that these poison messages are only a tiny portion of the overall information environment. While it is impossible to tally the total number of ads created, viewed, and shared domestically it is hardly an exaggeration to say the count is staggeringly immense.

The closest estimates, a glimpse inside the typical black-box of social networks, comes from content providers themselves. For example, in 2018 Twitter publicly released

an assessment about the extent of the Russian operation. Armed with this data, a team of analysts at Symantec, the digital security company, estimated that Russia had created roughly 3,300 accounts, responsible for nearly 10 million Tweets (Cleary 2019). This may seem like an awful lot of content, until you realize it is just a drop in the ocean of social media. Nate Silver (2018), the statistical guru heading the analytics team at 538, put the Russia campaign in context:

> Platform-wide, there are something like 500,000,000 tweets posted each day. What fraction of overall social media impressions on the 2016 election were generated by Russian troll farms? 0.1%? I'm not sure what the answer is, but suspect it's low, and it says something that none of the reports that hype up the importance of them address that question.

Similar arguments of relative scale can be made for any social media platforms. Russia may have raised a ruckus in isolation, but it their efforts fade to a whimper against the roar of domestic argument.

Net Spending

Another potential proxy for information volume is net spending. Before delving into the specifics of the Russian operation, it is helpful to reflect on the financial heft of the US media market. Social commentators often decry the rampant spending in politics. The reality, however, is that politics is only a small fraction of the whole marketplace. Companies in controversial industries like fossil fuels, like political parties, have a tangible interest in shifting public opinion. Over recent decades the world's five largest oil companies have spent over $3.5 billion dollars to improve their image and downplay the risks of climate change, with peak annual budgets measured in the hundreds of millions (Brulle et al. 2020). Remember, this level of spending is not punctuated by elections, but is a continual push on the market every year.

More generally, the analytics firm Statistica estimates that annual advertising spending in the US has exceeded $200 billion dollars every year since 2016. Admittedly, equating the relative expenditure of commercial, domestic political, and foreign propaganda is a crude gauge of overall efficacy. The point is simply to emphasize the huge sums of money that are spent on a yearly basis to sway opinion. While tens of millions of dollars might seem like a hefty sum for a disinformation campaign, one must question the efficacy in context of the larger public arena.

With this context in mind, how much *did* Russia spend to motivate the concern and angst? The Mueller Report (2019) suggests that the IRA propaganda machine was run much like a commercial firm, with a set budget and targeted goals for exposure. While the exact scope of the effort it unknown, US intelligence estimates that the IRA spent roughly $1.25 million dollars a month during the election season. For the sake of discussion let us assume that Russia spent a total of $20 million in to influence the US election. In reality, precision about Russian spending is not particularly critical. Doubling or tripling the rough estimate would do little to change its value relative to the election season as a whole.

For context, the Clinton and Trump campaigns together spent over $800 million (Shorey 2016). OpenSecrets estimates that, across all sources, domestic groups spend between $6.5-11 billion during the 2016 election cycle (OpenSecrets.org 2017). What is more, the estimates for 2016 is significantly *lower* than the 2012 or 2020 contests, and there is every reason to think that future elections will be even more costly.

In terms of the potential threat from foreign propaganda these election figures, by sheer weight of volume, should offer solace. Even if one assumes that Russia targeted all their spending to advance a targeted outcome, their net effort amounted to less than .5% of spending on the presidential election. While it is possible that Russia may have gotten a large return on a relatively small investment, the sheer size of the market for political advertising makes it less likely that the Russia's efforts had a meaningful impact on the outcome.

Everybody Targets

Of course, estimates of overall spending is only part of the equation. Many have rightly pointed out that adversaries with a desired outcome could exploit our political system to maximize return on investment (Gordon Stone 2017). Over the past several election cycles only a handful of states were genuinely competitive at the national level. Reflecting on the 2016 election, Philip Bump (2016) noted:

> The most important states, though, were Michigan, Pennsylvania and Wisconsin. Trump won those states by 0.2, 0.7 and 0.8 percentage points, respectively — and by 10,704, 46,765 and 22,177 votes. Those three wins gave him 46 electoral votes; if Clinton had done one point better in each state, she'd have won the electoral vote, too.

If one wanted to maximize return on investment on disinformation, it makes sense to target these key voters across a handful of competitive states. Indeed, the Mueller report makes it clear that the IRA, like any savvy political consulting firm, focused their efforts on these critical regions. If the contest was truly decided by a mere 80,000 votes—a sliver of the estimated 135 *million* cast national—this would appear to dramatically lower the threshold of mischief and misinformation necessary to swing the outcome (Bump 2016).

Once again, however, context is key to understanding the scope of the threat. To emphasize the obvious, the Russians were not the only players trying to game the US election. Just as foreign actors emphasize the tipping-point within states, so too do domestic interest groups, parties, and campaigns. In 2012, for example, just three highly contested states—Florida, Virginia, and Ohio—represented 47% of all TV spending by the presidential campaigns (Peterson 2016). One might even argue that the acknowledged importance of swing states would work *against* concerted foreign efforts to swing an election. The fact that the vast resources of domestic presidential campaigns—representing hundreds of millions of dollars—supersaturate the handful of competitive states makes it *more* likely that foreign operations would simply be overshadowed by domestic actors.

VI. Argument 3: Social Media Attacks are Self-Limiting

A final theme concerns the volatile nature of social media. At first blush, social media platforms appear as appealing vectors for disinformation. It is relatively easy for foreign powers to infiltrate social networks, disguise their identity, and act unchecked by traditional journalistic safeguards. Digital networks are also inexpensive, particularly in comparison to traditional outlets like TV which are both expensive and have practical barriers to entry. The economists Alcott and Gentzkow (2017, 221) are quick to point out that:

> [T]he fixed costs of entering the market and producing content are vanishingly small. This increases the relative profitability of the small-scale, short-term strategies often adopted by fake news producers, and reduces the relative importance of building a long-term reputation for quality.

This emphasis on anonymity, without worrying about what the market will believe *after* it has time to calibrate, makes online sources an appealing avenue for disinformation by otherwise untrustworthy sources. Had the IRA's messages been traced directly to Russia during the campaign, they would have had far less effect on public debate. That said, even in best-case scenarios for online propaganda, the emphasis on anonymity and quick returns is not necessarily as effective as many some believe.

It is helpful to distinguish between the dynamics of online communities and the public sphere at-large. In the general marketplace, citizens are presented with numerus perspectives; indeed, competition between viewpoints is one of the fundamental principles of the model. This seems dated. The partisan outlets are increasingly mainstream, like Fox. Online, it is even easier to frequent only those sites which support, rather than challenge, one's views. In the context of election interference, "partisanship is one of the key lines of demarcation allowing web sites to attract a relatively loyal audience. It is therefore not surprising that many of the most widely visited political blog sites—and certainly among those with the most loyal audiences—tend to be overtly partisan" (Baum & Groeling 2009, 26). While this tendency towards reinforcement rather than enlightenment may be an ill-omen for democracy in general, it is a silver lining in terms of the spread of misinformation.

Remember that social networks are content providers, not news organizations. Their driving incentive is not to present users with balanced information, but to maximize engagement. This economic drive, combined with the lack of strict regulation, makes it easier than ever for like-minded individuals to seek out and share information with those

who are similarly inclined (Colleoni et al 2014; Barberá 2015). Thus, if a citizen's natural inclination is to gravitate towards partisan news, these networks are all-too-ready to serve up like-minded content.

The ease of connecting with like-minded individuals, however, also represents an inherent limitation of digital propaganda: the dynamics driving the rapid spread of information within networks simultaneously inhibit the likelihood of general exposure. The fact that social networks a) facilitate like-minded communities and b) are guided by content algorithmics geared towards a receptive audience, limits the reach of misinformation campaigns.

Learning Has Occurred

The final consolation, though it was of little help in the 2016 election, is that learning has occurred in the wake of the attacks. Content providers, now aware of the problem, have implemented tools to identify misinformation and shut down troll accounts. While these efforts will not eliminate the problem—stopping a determined aggressor is like a game of cyber whack-a-mole—there is reason to think that the volume of misinformation is unlikely to return to the levels seen during the 2016 campaign. Though as we will discuss in the next chapter, attempting to reform and safeguard the digital public sphere is a complicated, and potentially perilous, process.

VII. Credibility Laundering, a Cautionary Tale

However, one vulnerability is particularly pernicious, remains difficult to dismiss. When digital disinformation goes truly viral, breaking free of social networks to influence messaging in mainstream mediums, the danger to the domestic marketplace of

ideas grows exponentially. Going "viral" in context is not the typical definition of exponential information diffusion, but rather the clinical concept of co-opting host resources to propagate one's own information (be it genetic or, in the case of information warfare, memetic).

Remember that the anonymity of online misinformation is a Catch-22 for attackers: while it is easier to share content without triggering suspicion, such messages lack the persuasive punch provided by known and trusted sources (Petty & Cacioppo 1984; Tormala & Petty 2002; Pornpitakpan 2004). A more insidious strategy is to leverage social media to influence known actors in the general marketplace of ideas. Once messages are co-opted by mainstream voices, foreign agents are able to launder their credibility to further their ends.

This is not as far-fetched as it may seem. The IRA, building on the divisiveness of the Black Lives Matter movement, created messages under the guise of like-sounding organizations such as "BlackMattersUS" or "Blacktivist" (Timberg & Stanley-Becker 2020). Thus, citizens might conflate foreign propaganda and domestic debate. However, using clever names or taglines does not address the major limitations of online media.

The greatest end-goal of a foreign campaign is not simply to vaguely emulate known actors, but to coopt legitimate domestic sources. The potential for misinformation to leap from online to mainstream news is facilitated, in part, by the aforementioned issue of hyper-partisanship. Partisan news outlets may be too *credulous—too willing to believe* the worst of the opposition—to critically evaluate misinformation. The audiences in turn,

already self-selecting into partisan news coverage, have little inclination to question the message or trustworthiness of messengers.

While transcending online trolling to mainstream outlets is difficult—it requires a reasonably plausible message and a lapse in critical skepticism from the would-be target—it is not impossible. Indeed, in a limited capacity, it has already happened. Researchers at the Atlantic Council's Digital Forensics Research Lab (2017) traced how a Russian propaganda about a nonexistent "secret weapon," through a series of successive forwards and reposting's online, ultimately found its way onto mainstream outlets including Fox News. Fox anchors—bolstered by conservative credentials and market reach—effectively became unknowing accomplices in spreading misinformation (MacFarquhar & Rossback 2017). Though the record was ultimately corrected, it was several days before conservative outlets dropped the story. One can imagine how a similar lapse in scrutiny, combined with an even more poisonous message, could have very real consequences for public option. Once messages leap from social to mainstream media—magnified both in scope and source credibility—it becomes more difficult for the market to self-correct. Nor is this example of a faux-weapon unique. There are many instances where it appeared that rightwing media and the Russians were reading from the same script.

VII. Concluding Remarks

To be clear, the digital MOI *is* susceptible to malicious influence; all the op-eds warning of American unpreparedness are not pure alarmism. Russia did have *an* impact in the 2016 election. Potentially, a confluence of social, political, and technological

factors allowed Russia to tip the election. Given the razor-thin margins of the contest, and the complexity of the information environment, this conclusion cannot be ruled out. Moreover, there remains an ever-present possibility that they will continue to attempt similar mischief in the future. Even with proposed reforms of social media and online news, this vulnerability is likely to remain for the foreseeable future. The public, and the marketplace of ideas at-large, is poorly equipped to consciously counter the insidious allure of digital propaganda. Full stop.

That said, there is a critical distinction between *intent* and *consequence*. There is clear evidence for the former, but a more ambiguous argument for the latter. Even if one argues that Russia meaningfully impacted the 2016 election—something that has not been proven—this may have been the worst-case scenario: a deeply divided nation unable to mount a timely response to a novel axis of attack. In the following years content providers have become somewhat savvier at identifying and blocking malicious content, the majority of the public is aware of the danger, and Washington has signaled increased willingness to retaliate against future campaigns. While Russia tried again to meddle in the following elections, their efforts met with little success. This is either because they are waiting for an opportune moment to launch a new major propaganda campaign, or simply because the tactics are less effective after the element of surprise.

The most optimistic interpretation is that whatever Russia decides in the future may not matter. While one can be rightfully indignant at the affront to national sovereignty, the bigger threat to democracy may come from within. The moral of the story is that we are our own worst enemy; self-interested individuals, politicians, and

special interests have systematically undermined faith in our institutions and political process for decades. If anyone "broke" the market's ability to process truth, it is us. Against this backdrop of systematic dysfunction, it is not clear whether Russia, China, nor any foreign force has had—or is likely to have in the foreseeable future—a significant impact on the content of the public sphere or shift political outcomes.

CHAPTER SEVEN: THE UNCERTAINTY OF CERTAINTY

Uncertainty is the only certainty there is.
— John Allen Paulos, 2003

Up to this point the discussion has advanced theoretical arguments for systematic certitude bias in the public sphere. The project's original plan was to compliment these chapters with a series of quantitative content analyses to assess whether, and to what degree, news coverage skews elite confidence in the public sphere. The first study was intended to compliment chapter four's discussion of global warming, focusing on the expressed certainty of different sources of news over time. The second assessed whether journalistic mediation—specifically, the distillation of campaign speeches into soundbites—skewed the apparent rhetoric of presidential candidates. Though neither study yielded clear results, this does not necessarily mean that certitude bias does not exist, or that it is beyond our ability to measure. Rather, the lack of cohesive findings speaks more to the limitations of the methodology than offer any insight, one way or another, into certitude bias and the news-making process.

In light of this, this chapter serves the dual role of research summary and project post-mortem. Since the goal was to quantify rhetoric in the news, the first—and most important—research decision was how to measure certitude. The fundamental question was whether to employ traditional content analysis or embrace a computer-based approach. While the manual approach has proven itself with a long publication history, the time and expense of human labor necessarily limits its scope. Automated analysis carries an inverse set of tradeoffs: computers can easily "code" vast quantities of data, but

even the most advanced programs still fall short of the precision and validity human linguistic analysis. Ultimately, the decision was made to use automated content analysis, with the expectation that the analytical power derived from a large sample would compensate for the imprecise nature of the methodology.

In the end, the large sample did little more than gloss over the methodology's intractable shortcomings. With a sympathetic nod to Rumsfeld's unknown unknowns, unanticipated challenges meant both the data gathering process and the automated content analysis fell short of expectations. When high-level results are presented in later sections, it is intended to illustrate the underlying problems in the project; the data itself is too suspect to accept with any degree of confidence.

The ultimate hope is that lessons learned from the present pair of studies, however imperfect in their own right, will inform and improve similar endeavors in the future. The discussion begins with the initial methodological decisions, outlining the decision to use automated content analysis, as well as the attempt to similarly automate the data collection process. The middle sections summarize two initial studies assessing the presentation of certainty in TV news coverage. Each of these sections outlines what was attempted, lays out high-level findings, and outlines potential refinements. Though these first attempts were not successful, the chapter closes by offering practical lessons that can inform and improve future research.

I. Measuring Certainty: Automated Content Analysis With LIWC

Apropos to the current project, a number of studies have successfully employed content analysis to assess various manifestations of certitude in sociopolitical debate.

Two of these studies—Hart & Childers (2004) *Verbal Certainty in American Politics* and Baum & Groeling's (2010) *War Stories*—inspired the current undertaking, and we will return to discuss their designs in section VI.

For now, it is sufficient to note that both of these studies were built around manual content analyses. The manual approach is the most typical—and for decades the only—methodology to code and quantify linguistic content, and there is much to be said for a hands-on approach. Given the current state of automated content analysis technology, there is still no substitute for manual analysis. A well-trained group of researchers, once they have achieved a critical threshold of inter-coder reliability, can pick up linguistic nuances and context clues that are lost to programs (Song et al. 2020). Even the most advanced computers cannot mimic human understanding of language, and the programs typically used in social science content analysis—as we will discuss shortly—are cruder still. Indeed, if researchers had access to infinite time and resources, there would be little impetus to look beyond the traditional approach.

In practice, however, methodological choices often come down to a balancing act of project scope, desired precision, and cost. It is in regard to these pragmatic considerations that automated content analysis shows its greatest advantage. Substituting a program for human coders allows for a "systematic analysis of large-scale text collections" at a fraction of the cost of human coders (Grimmer & Stewart 2013, 268). Whereas the cost of human coding is proportional to the volume of material, once a program license has been purchased automation enables the analysis of vastly larger quantities of data than would be feasible manually (Tausczik & Pennebaker 2010; Young

& Soroka 2012). As the current project focused on broad trends over time, rather than a discrete body of text, the decision was made to employ content analysis. The program chosen was Linguistic Inquiry and Word Count (LIWC).

II. The Appeal and Shortcomings of LIWC

At the heart of LIWC is a series of thematic dictionaries classifying words as belonging to a common concept (Pennebaker et al. 2015). LIWCs developers started by linguistically classifying like-words, and through repeated iterations used a team of human coders to validate the groupings. One of LIWC's dictionaries is *certainty*, based on 113 words like "always" and "never." This metric serves as the primary dependent variable for each of the two studies. To create a score, LIWC "reads" a section of text, and calculates the average frequency of all category mentions per 100 words of text.

The primary attraction of this approach is efficiency. Theoretically, the greatest challenge for a researcher—the only real limit to potential scope—is the time and effort needed to curate the appropriate text for analysis; the program itself can process thousands of pages of data per minute. In fact, for LIWC increasing the quantity of data is *generally* more of a help than hinderance. In the spirit of the law of large numbers, increasing content that the incidental addition or omission of a handful of key works do not disproportionally shift the calculation.

The analytical challenges grow as statements shrink. LIWC's developers caution against analyzing any entries under 50 words, and even once this threshold is surpassed the results should still be treated with caution. While there is clearly no magic number

after which the results suddenly become valid, *ceteris paribus* the validity of an excerpt's score increases with length.

As a simple example of the finicky nature of short segments, consider a hundred-word passage that contains two mentions of "always" and one of "never," which would receive a LIWC score of 3. Removing just one of these words would have a dramatic shift in the LIWC score, but is it fair to say that one the former hypothetical is actually more confident than the latter? Probably not. Indeed, it is not hard to imagine that a human assessor—focusing on the overall message and not individual words—would not be able to distinguish between the two.

That said, this tool was never intended for discrete statement-level analysis; it is not meant to be a *replacement* for human coding, but an *alternative* means of assessing linguistic trends. LIWC's developers readily acknowledge that "despite the appeal of computerized language measures, they are still quite crude," and therefore you should not draw overly broad conclusions from the results (Tausczik & Pennebaker 2010, 30). Instead, LIWC's value lies in scope and efficiently: by casting a wide net automated analysis can address high-level themes that would be prohibitively time consuming or expensive for manual coding.

Interpreting LIWC is Not Intuitive

Before continuing it is important to reiterate that it is unfair to LIWC—and misguided practice in general—to draw broad conclusions from a handful of specific passages. With that caveat in mind, consider the following four statements pulled from section IV's analysis of climate change coverage for illustrative purposes:

Statemen 1: An *expert* on Fox News, October 2007, LIWC *certitude* score of 3.32

> Well, that is absolutely incorrect that most scientists say that. Indeed, a 2003 survey of more than 500 climate scientists internationally were posed the question: Do you believe that the science is settled enough to turn the issue over to policymakers? And only a minority said so. Indeed, barely more than half believed that humans are primarily responsible for the moderate warming that's occurred. And, of course, of that, slightly more than half, many of those would say that our current warming is not a crisis and does not intend to be so.

Statement 2: A politician on Fox News, August 2008, LIWC *certitude* score of 3.12

> Neil, thanks for having me here. No, not at all. Global warming is junk science. You know, we started the Free Enterprise Action Fund a few months ago not only to make our investors money, but also to make sure that companies make decisions based on facts and not myths. Global warming is a myth. Global warming, this theory is junk science that is propagated by the U.N., the European Union, radical environmentalists. You know, the U.N. science behind global warming puts oil-for-food into shame -- in the shade in terms of scandal.

Statement 3: An expert on NBC, July 2007, LIWC *certitude* score of 2.06

> Yeah. Well, there are--there's global warming pollution, principally CO2, from burning coal, burning oil, and burning gasoline, and the natural part of the atmosphere holds in some of the sun's heat, which makes temperatures comfortable like today, but we're thickening that layer dramatically, 70 million tons every day now, and that traps much more of the heat inside the atmosphere. And that's causing radical changes that we have to stop causing.

Statement 4: A journalist on NBC, December 1997, LIWC *certitude* score of 0.00

> The Arctic North, a frontline in the science of global warming, researchers braving snow and bitter temperatures here where some believe global warming will hit soonest and with the most impact. What they found recently is that the arctic has already experienced an unprecedented acceleration in warming over the last 70 years. Another frontline, the computer, complex models developed more than a decade ago by NASA's David Rind, predicting the warming worldwide. Mr. DAVID RIND: Initially people were--first they were disbelieving, then they were shocked by the potential magnitude of the problem, and now people have more or less fallen into an acceptance mode--this is how it is, this is how it will be.

The four examples are arranged in descending order of LIWC certitude score, ranging from 3.32 to 0.00. For context, the LIWC average for *certainty* in everyday speech, the closest analogue to TV coverage provided by the developers, is 1.31. Having read the passages, remember that none of your complex musings about the substance of

each vignette, informed by a lifetime of experience and linguistic training, was shared by LIWC. The program simply "read" four approximately 100-word passages, counted the number of key words in each, and produced a simple ratio at the end.

Not only are these ratios alien to our natural experience with language, even if you try to calibrate your thinking to LIWC's approach the results likely defied your initial expectations. Clearly, there is a lot to unpack from the preceding statements and scores, much of it problematic. The most notable shortcomings fall into two categories: issues with LIWC's ability to process certitude in narrative context, and those errors rooted in the transcript collection and curation process itself.

Story vs. Statement Level Analysis

The next set of challenges concern the level of analysis feasible through automation. One can always analyze an entire story through LIWC; this high-level approach provides more than sufficient word count for meaningful analysis. However, this approach necessarily obscures any potential themes *within* the transcript. For example, if you are interested in the speech of individual contributors—e.g., the confidence of politicians versus experts—you are flat out of luck. The current project attempted to overcome this limitation though a Python program which split transcripts to allow individual-level analysis. Details on this process are outlined in the following section.

For now, let us return to the challenges of interpreting automated content analysis as illustrated in the four example statements. While it is conceptually appealing to analyze the constituent components within a news transcript, by definition such attempts

strain score validity by decreasing the word count in each entry. The repercussions are not easily remedied.

Even if you discount the shortest statements (the polite studio-back and forth), the narrative norm of modern TV news is a staccato back-and-forth between speakers, soundbites, and studio analysis (Hallin's (1992). While this may make for engaging storytelling, this presentation does not lend itself to automated content analysis as individual segments are too short to analyze confidently.

Recall the four example excerpts. It is important to stress that each is *atypically* useful in the context of statement-level data. Each was specifically chosen to be roughly 100 words; in theory long enough for LIWC to process. Within the full dataset—presumably the news in general—most statements were not only shorter than the four above, most would fail to exceed the 50-word threshold cautioned by LIWC's developers. The suggested word-length threshold, however, is only the tip of the proverbial linguistic iceberg.

Remember that LIWC only aggregates selected dictionary words; it is wholly blind to intent and context. And with something as politically fraught as the global warming debate, intent and context are not simply useful to understand a message, they are *essential.* Imagine asking a normal citizen to read the four segments, and then assess the respective certainty about climate change. Their initial interpretation about the probability of global warming would, in all likelihood, not correspond to the segment LIWC scores. To understand the disconnect between how people and the program interpret passages, it is important to distinguish between certain of *expression* and that of

substance. Certainty of expression is simply the forcefulness of language. No more, no less. Certainty of substance, in contrast, is a holistic reading of a passage that corresponds to an underling theme or argument. Both LIWC and humans can address the former, but only a human reading can interpret the latter. The first two segments from Fox underscore this disconnect between expression and substance. Each of these excerpts clearly cast doubt on climate science… but they do so in the most expressively confident terms of the four!

The issue gets further complicated when you aggregate many segments into a group average. For example, finding the average certitude of politicians discussing an issue like climate change. In this case, the *expression* of certainty might be high across all contributors, but the *substance* varies tremendously. There is along history of Democrats forcefully arguing *for* the reality of climate science, and Republicans just as vehemently arguing against this conclusion. As humans, the substantive difference between the two factions is immediately and unquestionably clear. For LIWC, all the program "reads" from the issue is that everyone is certain. The result of this dueling certitude is not a measured assessment falling somewhere between the two battling factions, but simply a compounding pitch of blind confidence. The valence of certainty is an intractable hurdle for automated content analysis, and there is no way to detangle underlying meaning or theme without resorting to manual interpretation. Keep this in mind, as we will return to the issue of dueling certitude in section IV.

LIWCs inability to account for message substance is only part of the problem. The two NBC excerpts, which clearly express a confident narrative about the reality of

global warming to a human reader, embody other shortcomings with the automated approach.

In many ways, statement three is the only one of the four that generally fulfills expectations: it is an expert speaking with more certainty than average speech, and the underlying message about the reality of global warming is clear. The "expert" in question, as it happens, is Al Gore in his role of citizen-advocate.[16] While you should not read too much into a single excerpt, in passing it is worth noting that Mr. Gore—the poster child for climate awareness—spoke in less certain terms than the preceding examples from Fox. This is not because he was any less sincere in his conviction, but simply a function of his more measured linguistic style.

This interpretation resonates with scholarship suggesting that the norms of experts and scientists may make them sound *less* convincing to a general audience (Pollack 2003). Echoing the discussion in chapters two and four of individual level factors mediating expressed certainty, scientists may occasionally feel compelled to acknowledge uncertainty about details—as any reasonable scientist would concede when dealing with complex issues—in order to appear more credible/thoughtful/deliberate in their overall presentation. For example, a scientist who is confident about global warming may yet express uncertainty about the magnitude of the effect; there is no contradiction in acknowledge the overarching truth, while lacking certainty about the particulars. This nuance, unfortunately, is lost in aggregate linguistic analysis; and the scientist from this

[16] Only currently serving politicians were coded as such. Former politicians, including Al Gore, were coded as "experts."

example might have a lower certitude score than might have been understood in a live setting.

Finally, the fourth statement represents another major shortcoming: the limitations of keyword dictionaries. The story speaks of the "frontline in the science of global warming," and even a casual viewer would not have any difficulty picking up on the scientific community's concern. Indeed, the closing "people have more or less fallen into an acceptance mode—this is how it is, this is how it will be" is as unambiguous of an assessment about the reality of global warming as one is likely to encounter in the mainstream news. Yet, in terms of automated content analysis, the NBC journalist managed to convey a clear message—over a hundred words long—without triggering any of the key *certitude* dictionary words. The result: a story undoubtedly presenting climate change as fact, that nonetheless received a LIWC score of zero.

One could reasonably argue that statement four is a rare case; that most stories with such a clear message about climate change should trigger at least one word in the LIWC dictionary. But once again, it is important to reiterate that entries in this particular dataset, and TV soundbites in general, are typically short. Given the fact that a 100-word entry failed to generate a LIWC score, it is not a stretch to imagine that shorter segments would experience a similar outcome.

However, any attempt to bolster validity by increasing segment length is an imperfect solution. At best, increasing word count may improve LIWC's read of expressive certainty. However, as we see in statement four, no quantify of sample can

bridge the fundamental disconnect between expressive and substantive certitude. Only a manual approach to content analysis will ever be able to address the latter.

The proceeding paragraphs are the most telling in the entire chapter. They highlight foibles of automated content analysis, themes that following sections will expand and elaborate. But more than anything, these fundamental issues are not the fault of the program per-se—the developers acknowledge the intrinsic shortcomings associated with short entries—it is simply a textbook case of the wrong tool for the job at-hand. Had all the pitfalls been known from the start, many of these shortcomings could have been avoided by an alternative approach.

III. Data Collection & Automated Lexis Clipping

The decision to emphasize analytical breadth over depth also informed the sample collection and process. The first step was selecting the source of data, and for this LexisNexis was an obvious choice. Academics have long used LexisNexis' archive of TV news transcripts, including for use in content analysis (Lowry 2008; Patton et al. 2017). The limitation is not the quantity of data, but how to sensibly and efficiently process the avalanche of information.

In the past, as mentioned in the previous section, researchers had a methodological tradeoff: either employ automated content analysis at the story level, or manually read stories to assess the statements of individual contributors. The current undertaking attempted, for the first time, to do both.

This was accomplished by creating a Python script to "read" the output text files, split the transcripts into constituent components based on formatting patterns in Lexis

outputs. This was thought possible because Lexis outputs, in addition to the primary transcript text, also contain contextual information about how each component fits within a full broadcast. These meta-components were a critical element of the data curation process, as they theoretically allow for a significant degree of contextual detail. Ultimately, the Python spitter was able to transform the rich-text Lexis output into a spreadsheet with five initial variables:

1. Date of broadcast: in theory this could be collected by the hour. But for practical purposes, the following studies focused either on day or year.
2. Broadcast network: Fox, NBC, or CNN[17]
3. Sound bite: whether the segment was part of a studio broadcast, or an embedded soundbite. This was identified using the Lexis notation of "begin/end video clip."
4. Speaker: The name associated with each component of text. Note, each time a subject speaks is counted as an independent entry.[18]
5. Speech text: The text associated with each speaker.

The components above comprise the initial stage of the data collection process. Once the core spreadsheet was created, three additional variables were added through a combination of automated analysis and manual identification:

6. Word count: the number of spoken words in each excerpt.
7. Speaker role: a recoding of variable 4 above, this identified the role—politician, expert, or journalist—associated with each speaker.
8. Certitude: scored by LIWC as described in previous sections.

Originally, with a nod to Hallin's (1992) *Soundbite News*, collecting word count was intended for a supplementary study correlating sound bite length and certainty. However, as a previously noted important theme throughout this chapter, the short average segment length made this unfeasible. In terms of the two studies presented

[17] As will be noted shortly, old CNN transcripts proved problematic for the splitter tool.
[18] For example, a scientist appearing as a network expert guest might speak several times in a back-and-forth discussion with the host. Each time an individual spoke—both the scientist and the host—was treated as a unique observation.

below, word count became a critical quality-check cautioning against the validity of the *certainty* score, the subsequent analyses, and the studies in general.[19]

Finally, the study on climate change coverage included an additional component: *speaker role*. Referencing the *speaker name* variable, a team of undergraduate researchers manually identify the type of speaker (politicians, journalist, expert, etc.) associated with each text segment. Details of the manual coding process and the attempted analysis are outlined in section V.

Lexis and Python Problems

The Lexis transcripts and Python splitter also presented unexpected challenges. To begin, recall statement four from the previous section. In a normal back-and-forth-conversation each speaker might be responsible for several unique entries. At an immediate level, this presents several challenges. At an immediate level, the automatic Python splitting generates a lot of noise in the dataset when there is a fast-paced conversation, as is often the case with interviews. In this case, a series of entries—representing two speakers in turn—might only be a sentence or two long, or even a single word like the affirmation 'yes.' This in itself is not an insurmountable issue. A crude fix would simply be to set a word count threshold, under which entries would not be coded. In addition to the somewhat arbitrary nature of this approach, the practical consequence is the loss of a substantial percentage of the data.

[19] Originally, it was hoped that segment length would serve as an independent variable in its own right. However, due to the very short average length of each segment, this was not possible. Moreover, as will be discussed in the
section outlining lessons for future research, the overwhelming frequency of short segments proved to be a major flaw in the two studies discussed shortly.

The more pernicious problem arises when there are inconsistencies *within* the Lexis transcripts themselves. There are times when the transcript notes a new speaker *within* a speech text, rather than follow the typical formatting patterns by listing the new voice in its own entry. The consequence is that multiple speakers—in older transcripts, occasionally an entire news segment—is subsumed within a single entry. For example, statement four includes the notation "Mr. DAVID RIND," followed by Rind's speech. In the resulting amalgamation it is impossible to automatically code the certainty of individual speakers, as the whole would only be coded under the initial contributor.

While these errors are not overly common, there is no way of automatically searching within text fields to separate multiple speakers. While this could theoretically be alleviated though manually searching and splitting the data file, the labor involved would be prohibitive given that the whole intent behind Python splitting was to save time and expense.

IV. TV Coverage of Climate Change

The discussion now turns to the two attempted studies. The first was intended to compliment chapter four's discussion of certitude in the context of the climate change debate. Scholars and social commentators have cast blame at lying politicians, misguided journalists, and even the minority of contrarian "experts" who perpetuate the myth of scientific uncertainty surrounding the topic (Sundblad et al. 2009; Oreskes & Conway 2010). The goal of this study was to assess which actors spoke in the most/least certain terms about the climate crisis, and whether the tenor of confidence evolved over the years.

Data

Data was collected from LexisNexis transcripts of TV news shows. Data was pulled from two channels, Fox and NBC, from 1997 to 2015. To ensure that the coverage focused on climate change, broadcasts were selected based on the phrases "climate change" and/or "global warming." In total, 1,543 TV news transcripts—931 from Fox and 612 from NBC—were downloaded from the Lexis database.[20] Analysis was on the statement level, and depending on length a single transcript could include dozens of statements.

A team of research assistants then read through the output and coded the profession of speakers. This initial Lexis/Python dataset was then refined through a combination of manual coding and automated content analysis. First, a simple word search identified whether each entry was clearly associated with climate change.[21] A team of research assistants then read through the output and identified the profession associated with each speaker. For example, Senator Shelby was coded as a *politician,* Sean Hannity was generously entered as *journalist*, etc. Finally, each box of speech text was run through LIWC, an automated content analysis program, to assess the relative certitude of the language.

[20] An attempt was made to collect data from a third network: CNN. However, older CNN transcripts were formatted inconsistently, making it difficult for the Python Clipper to function. While it might be possible to amend the clipper in the future, CNN is omitted from the current analysis.

[21] This proved problematic in its own right. Even if a term search in Lexis yielded articles that discussed the terms "climate change" or "global warming," a lot of extraneous coverage got collected as well. Further filtering on a statement level, while ostensibly more germane, proved problematic in terms of sufficient sample.

One might be tempted to call the current design a hybrid manual/automated content analysis, but that would not be strictly correct. The only human input was manually classifying the careers of those who appeared on the news. Given the size of the sample, and the sheer quantity of spanning all the entries, it would have been impractical to manually code each individual statement for certitude.

Key Variables

Echoing the discussion from section III, the combination of automated splitting and manual speaker identification process generated a set of dependent and independent variables:

Dependent variable:

- The key DV was the LIWC score associated with each statement/aggregate set of statements.

Independent variables:

- *Date of broadcast*: In theory, LexisNexis metadata means that the time of broadcast could theoretically be broken out by hour. However, given the nearly two decades of coverage yearly reporting deemed to be the most manageable.
- *Network*: Whether the story aired on NBC or Fox News. An attempt was made to include CNN as a third network. However, inconsistencies in older CNN transcripts proved problematic for the Python tool and was not included in the analysis.
- *Speaker type*: The profession associated with each speaker. Originally, this was coded as either:
    - President of the USA
    - Member of the executive branch *other* than the president
    - Politician (congresspeople or governors)
    - Expert
    - Journalist
    - General citizen
    - Other/unidentifiable

Notably, the majority of these categories did not contain sufficient sample for year-by-year analysis, and thus were only useful when discussing the full span of the timeline.

Even collapsing categories into a single unit—for example, combing all politicians into a single group—did not alleviate the problem. The only group with sufficient sample to assess on a yearly basis was, unsurprisingly, journalists; yet their data was particularly problematic for reasons explained shortly.

Hypotheses

If the null hypothesis holds, there should be no variation in the average tenor of certainty across network, time, or actor. However, both theory and history suggest that there *are* significant social and political differences in how this issue is discussed.

Presumably, if the MOI works along logical Bayesian lines, confidence about an objective fact like global warming should increase over time as new information is available, and expert "knowledge" permeates through broader society. This leads to the most intuitive hypothesis:

H1. Certitude across all segments would increase over time.

That said, in the context of an issue with as much political baggage as the climate debate, it is reasonable to expect that groups have varying capacity—and incentives—to accurately portray the confidence surrounding the global warming debate. There is reason to suspect that there *should* be some variation in expressed confidence, either because of strategic messaging, or simply as a function of professional training mediating the speech patterns of journalists and politicians.

However, it is important an important disconnect in "time" in the context of the current study versus the MOI writ-large. The analysis did not begin at the start of the

climate change debate in general society. While accounts of the origin of the exact inception of climate science differ, there is broad consensus that issues of global warming and climate change first entered mainstream debate in the 1950s and 60s. Climate change began to become a political issue in the 70s, and by the mid-1990s the debate had devolved into a partisan issue. In theory, the fact that these milestones predated the project's window of data means that the temporal trends, if any, would already have been baked in before the period of analysis.

Beyond time, a case can also be made for group-level differences in how the certitude of climate change is expressed. Journalists have long been accused of fostering a false-equivalency in the climate change debate, long refusing to take a side, either in the name of "balanced journalism," the professional norms journalistic speech, or other factors contributing to careful and measured rhetoric. Thus, the second hypothesis:

H2. In comparing LIWC scores, journalists will be more likely to have lower average levels of expressive certitude than politicians or experts.

Politicians, of in turn, have neither professional linguistic training nor the journalistic expectation of impartiality. For politicians, the tenor of certainty surrounding the climate debate is a largely strategic decision. This assumption leads to a pair of dueling hypotheses depending on whether politicians are motivated by careful hedging or the rhetorical appeal of incredible certitude:

H4a. In comparing LIWC scores, politicians have lower levels of expressive certitude than journalists or experts.

~ or ~

H4b. In comparing LIWC scores, politicians have higher levels of expressive certitude than journalists or experts.

Finally, experts—ostensibly the most in-touch with the scientific evidence—should express the highest level of confidence about the reality of climate change and global warming:

H5. Experts, by virtue of their scientific training, will have the highest level of certitude in the climate change debate.

Finally, since the climate change debate is politically polarized, one would expect a systematically different treatment of the issue between right-leaning and mainstream media outlets. In the current context, Fox represents conservative media, and NBC as general interest. This leads to a final hypothesis:

H6. In comparing LIWC scores, experts will have higher average levels of expressive certitude than journalists or politicians.

In retrospect, this hypothesis was clearly misguided from the start. Given the power of weaponizing uncertainty / confident counter narratives, it is just as reasonable to suspect that Fox would inflate certainty to advance a partisan argument.

Analysis / Results in Brief

The high-level data and discussion that follows should be taken as illustrative exercise, not as a true reflection of certitude in the climate change debate. As mentioned in previous sections, there are too many compounding errors—a function of the splitter

tool, statement length, limits of automated content analysis, the inability to distinguish valance of certainty, et cetera—to merit any confidence in the findings.

The first foray was to separate certainty both by network and profession of contributor. The first cut was to assess *all news* that had been collected by the Lexis transcripts. However, even though these stories all had *some* mention of climate change/global warming, a tremendous amount of extraneous news noise—effectively, data noise—diluted the analysis to the point of irrelevance.

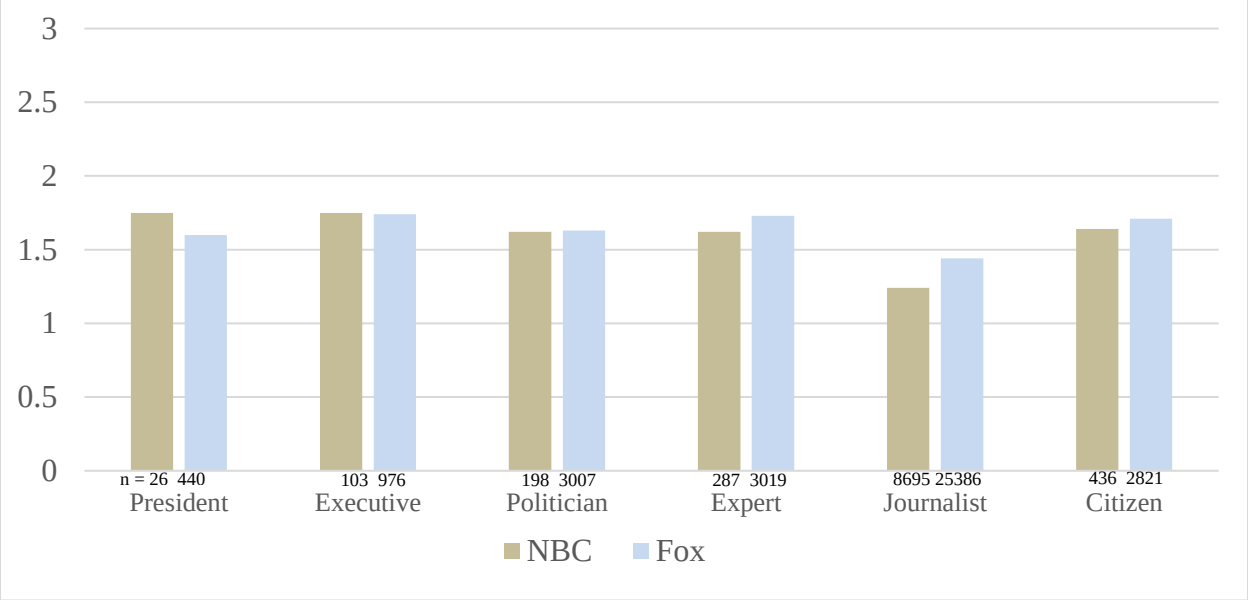

Figure 3 Mean LIWC Certitude by Source, All News

Thus, this first run speaks less about the climate change debate as it does the general speech patterns of contributor groups. The next step was to try to focus the

sample on segments that unequivocally concerned climate change / global warming. This was achieved by selecting excerpts that met the following criteria:

- Had a clearly identifiable speaker
- Exceeded the minimum word count
- Contained the terms global warming *or* climate change

The pros/cons of this approach are discussed in the following subsection. For now, this is what the data looks like when the content is confidently associated with the climate debate:

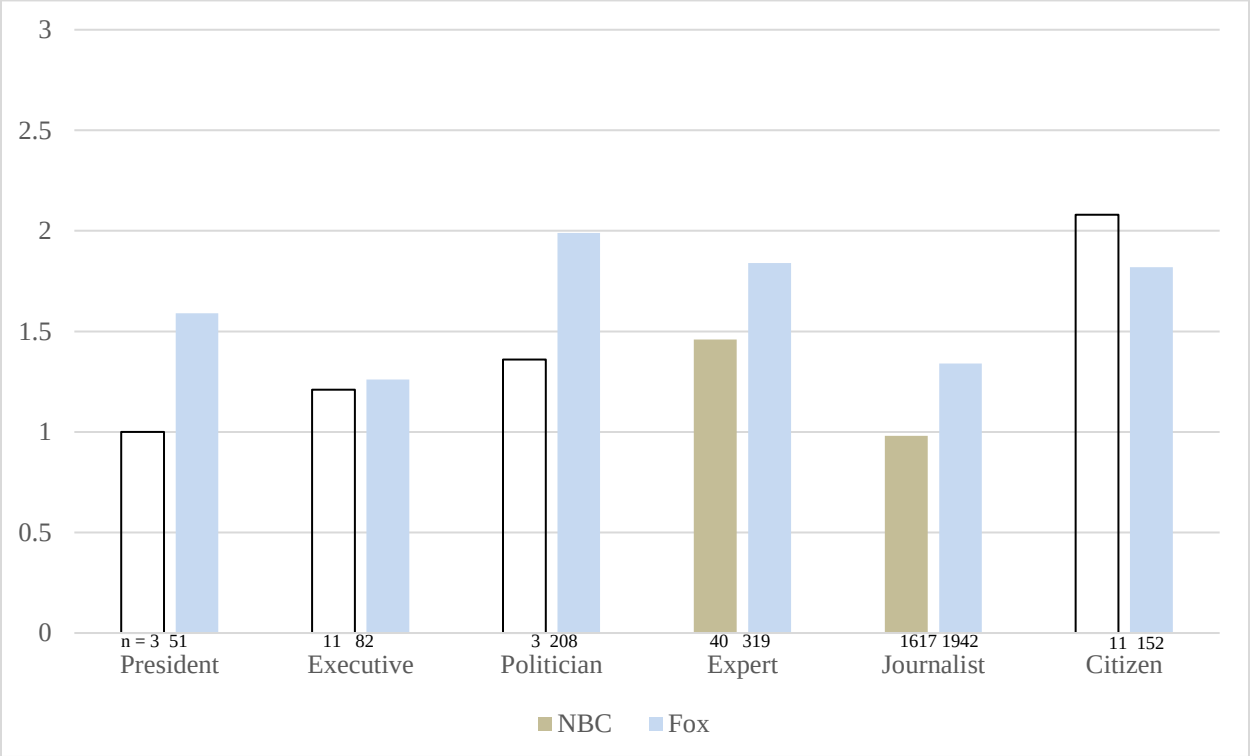

Figure 4 Mean Certitude by Source, Climate Specific News

The most obvious takeaway is that this focused approach culled too much data to usefully analyze any group other than journalists. While the expert sample may seem barely sufficient for analysis, the fact that only forty statements from NBC met the criteria over nearly two decades of coverage should give one pause. Since journalist statements represent the majority of unambiguously climate-related statements, it is theoretically possible to track their certainty over time:

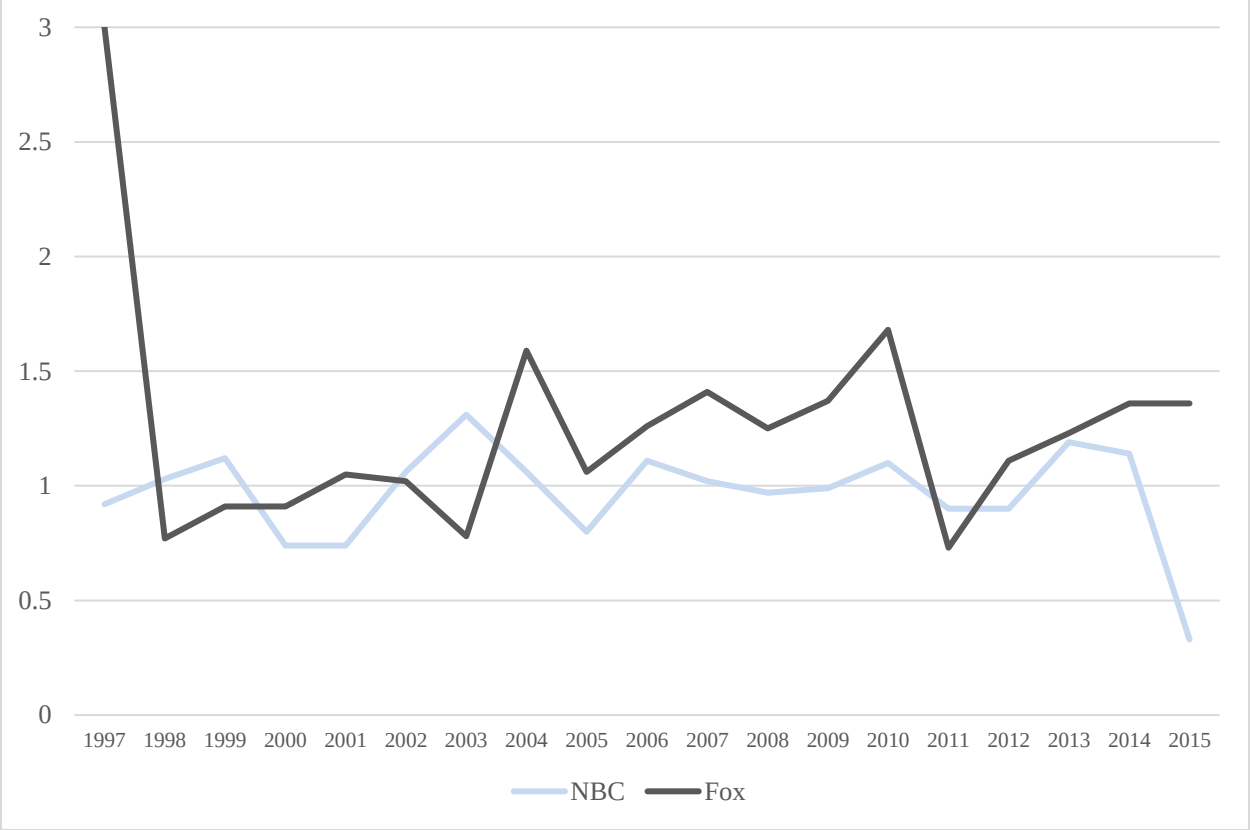

Figure 5 Mean Journalist Certitude Over Time, Climate-specific News

Discuss Limits of Both Data & The Approach

There are several perspectives from which to view the preceding charts. The most obvious, perhaps the most justifiable given all the inherent shortcomings, is to discount everything as meaningless.

Beyond the initial results, the larger question remains of what this actually *means*. As previously noted, this design can only speak to *expressive* confidence, and is totally blind to the certitude of *substance*. And with something as complex as climate change debate, the latter is critically important for sociopolitical interpretation. In short, all that can reasonably be said is that expressed certitude remained near the average of everyday speech (1.3 LIWC score) for the duration of the study. It is not possible to connect these levels, in any way whatsoever, to actual confidence about climate change.

VI. TV Coverage of 2016 Presidential Debates

The next study was intended to compliment the discussion surrounding candidates Donald Trump and Hillary Clinton's expressions of certainty in the 2016 election. There were two driving objectives. The first, at a direct level, was simply to analyze the speech patterns of the respective candidates. This would be a reality-check on whether Trump was indeed incredible certitude incarnate, and if Clinton was indeed as careful in her public speech as pundits believed. The second objective, speaking directly to the dynamics on the MOI, was whether the daily process of news curation skewed the public presentation of candidate certitude. It is to this question that we now turn.

News, Newsworthiness, and Two-Tiered Content Analysis

The universe of political rhetoric in general is impossibly vast. However, focusing on the rhetoric of a limited population—presidents and presidential candidates—is a manageable proposition. Contrasting certitude in presidential speeches against the segments which get highlighted on the news promises new insight into journalistic mediation and addresses shortcomings in the existing literature.

A widely-cited study by Hart & Childers (2004) analyzed speeches from presidents and presidential candidates from the mid-20th century through the G.W. Bush presidency. Their most notable finding is that, on average, the certainty of presidential speeches has markedly decreased over the past fifty years. They suggested that this was due to increased media scrutiny which, combined with "the democratizing forces operating in a modern, contentious society" helped ensure that the president was "in check" (Hart & Childers 2004, 523).

However, Hart & Childers' approach only tells part of the story. Even if presidents gradually decided that equivocation was more strategically sound than certitude, this does not mean that this trend was paralleled in media coverage. Media indexing may yield a gap between presidents' *expressed* certitude and their *apparent* certitude on the news. Thus, the driving argument of this section: *even if new media is changing the individual-level strategic considerations for certitude, the same considerations may not apply to journalists*.

Specifically, do journalists find a certain level of certitude from sources like political candidates particularly newsworthy? If so, and if these high-certitude statements

are disproportionately repeated on the mainstream news, it may skew the candidates' public image even if they are attempting to be rhetorically cautious.

Indexing & Two-Tiered Content Analysis

To assess whether journalistic mediation may skew apparent certitude, the project took inspiration from particularly elegant research design presented in Baum and Groeling's (2010) *War Stories.* This book is motivated by two central questions. First, the authors analyze how faithfully the media reflects elite debate over foreign policy. Building from this, they address the deeper issue of media coverage on the citizenry. The authors use a combination of content-analysis, experiments, and public opinion data to present a staggeringly comprehensive model of the relationship between reality the media, and the public.

The works begin with a deceptively simple premise: the media is primarily interested in the *new* in news. This intuition develops into eighteen hypotheses concerning elite messaging, media coverage, and public opinion. The common theme among them, and the subtext for the work as a whole, is that "costly" elite signals make for more compelling news. In their case, Baum & Groeling define each messages' costliness based on partisan cues. Partisanship is what is expected out of politicians, and cheap talk predominates when members of Congress attack the opposing party or praise their own. Conversely, a highly credible signal is when the speaker risks personal costs by signaling across party lines—e.g., when an MC praises the opposition or criticizes their own party. In practical term, such cases of cross-party rhetoric rise above the daily noise of political banter and become simultaneously novel, credible, and newsworthy.

Baum and Groeling hypothesize that costly messages will be disproportionately disseminated by news channels relative to the total universe of elite discourse. To test the many permutations on this theme they run a series of two-tiered content analysis. First, they analyzed partisan signaling by members of Congress on morning news shows. These morning shows typically follow a talk-show format and, critically, in this less structured setting the media executives have little control over what is said. The result of this initial content analysis, as one would expect, is that only a modest percentage of these morning interviews contain messages that cross-party lines. The innovation, both conceptually and methodologically, is the follow-up content analysis run on the evening news. If the media is a true mirror of reality, per its idealized role, one would expect the evening news shows to roughly mirror the percentages of within and across-party signals from the morning.

In reality, Baum and Groeling find that cross-party signals—relatively rare in the morning news—predominate on evening broadcasts. The important difference is that media producers select only the most newsworthy stories from the morning to repeat in the afternoon. The fact that cross-party signals are disproportionately likely to be repeated strongly suggests that media executives are not impartial, but play an active role in what news is disseminated. The implication, of course, is that what is ultimately shown to the public is does not faithfully represent true elite debate.

Present Design

It was thought that adapting this two-tiered approach could offer insight into certitude bias in the news making process. Baum & Groeling situate journalistic bias in the systematic discrepancy between morning & evening news. In the current context of

the 2016 election a candidate's rhetorical baseline, per Hart & Childers, based on their major campaign speeches. This is then compared, not to evening news per-se, but to the certainty of candidate soundbites broadcast on the news.

Data

Two sources constitute the data for this section. The first data source was the full text of official campaign speeches, publicly available online, between January 1, 2016 and October 31, 2016. The data included 41 speeches by Trump and 35 from Clinton.

The second set of data came from LexisNexis' archive. TV transcripts were pulled the for the 24-hour period following a major campaign speech, and then the Python splitter identified passages that met the following criteria: the speaker was Trump or Clinton, and the excerpt was defined as a soundbite based on Lexis notation. This is distinct from instances when a candidate's speech was broadcast in full, or candidate interviews with journalists. In these cases, while Trump/Clinton would have been identified as a speaker, it would not have fallen within the Lexis notation of "begin/end video clip."

Key Variables

The primary dependent variable was the LIWC-derived *certitude* score. This was complimented by a series of independent variables:

- Network: CNN or Fox News
- Candidate: Trump or Clinton
- Context: whether the segment came from a candidate speech, candidate soundbite, or studio coverage.

Hypotheses

Once again, the null hypothesis is that there is no appreciable difference in certitude based on speaker, network, or presence in a soundbite. However, if journalists and news producers have a systematic preference for high-certitude content, one would expect this would manifest along several dimensions. This leads to a series of hypothesis:

H1. Soundbites from candidate speeches are more certain than the tenor of campaign speech as a whole.

If high certitude makes for pithy and punchy soundbites, one would expect the speech snippets that make it to the daily news to be more certain than the average of campaign rhetoric. Thus, the second hypothesis:

H2: Sound bites are more certain than the general tone of political coverage.

Content adapted campaign speech, of course, is only a portion of the average TV news segment. Sound bites are interwoven with studio commentary from journalists and issue experts. It is potentially informative to compare how candidates are presented on sound bites versus the background tenor of journalistic analysis and discussion. One could argue that, in general, journalists—aware of all complexity of sociopolitical analysis, and ostensibly dedicated to analytical rigor rather than rhetoric—would be *less* certain than presidential candidates. This leads to a final hypothesis:

H3. Journalistic commentary is less certain than sound bites from political candidates.

Presumably, given that journalists are trained professionals, their general tenor of TV news coverage will be more calculated and measured than presidential candidates.

Findings

It is important to reiterate that the results below should not be taken as valid, and any discussion is purely conjectural. If one accepts a grain of truth in the results, figure 6 below—comparing the certainty of candidate speeches vs. soundbites—offers tentative evidence for journalistic certitude bias.

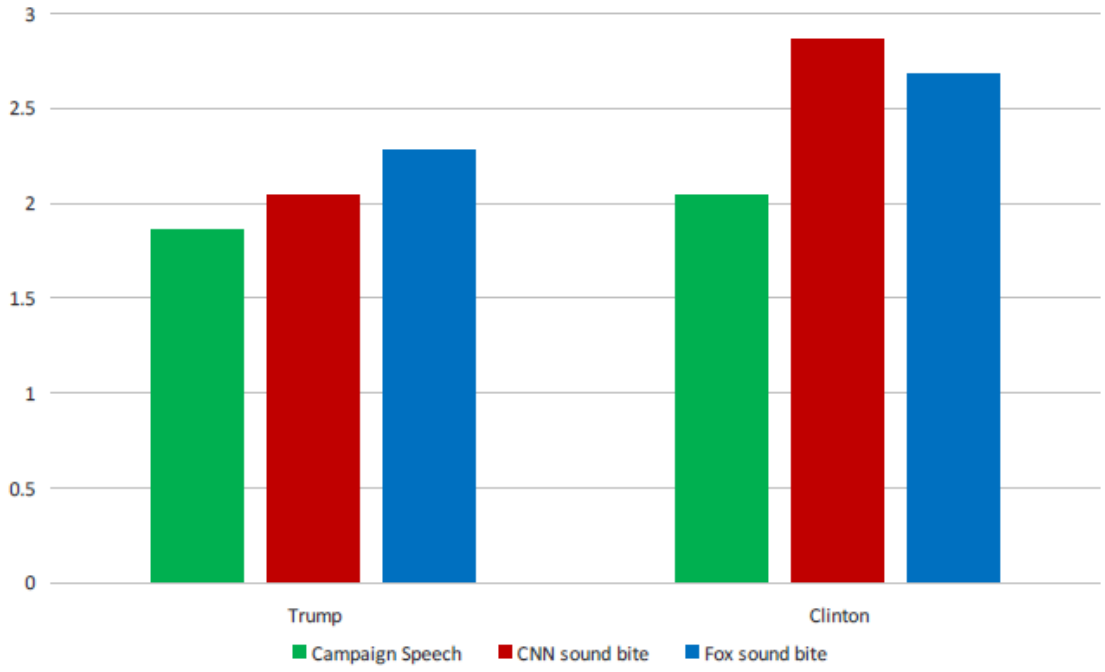

Figure 6 LWIC Certitude of Candidate Speeches vs. Soundbites

Trump soundbites on CNN/Fox have certainty scores of (2.04, 2.08) which are, indeed, more certain than the certainty from his speeches as a whole (1.86). The relative

change is even greater discussing Clinton's certainty. Her CNN/Fox scores (2.86, 2.68) are much higher compared to her stump speeches (2.04)—shifts of 40% and 30%, respectively. However, while this change may seem dramatic, the shift is far less dramatic when you remember that A) these sound bites typically fall under the recommended LIWC threshold of 50 words and B) LIWC generates certainty scores by counting the number of dictionary words per 100. Since sound bites are much shorter than full speeches, a shift of even a word or two can have a significant influence on the apparent LIWC score.

The next question is whether candidate sound bites differ from the backround tenor of certainty in the news. This does not appear to be the case, as there are no consistent trends across networks. See figure 7 below:

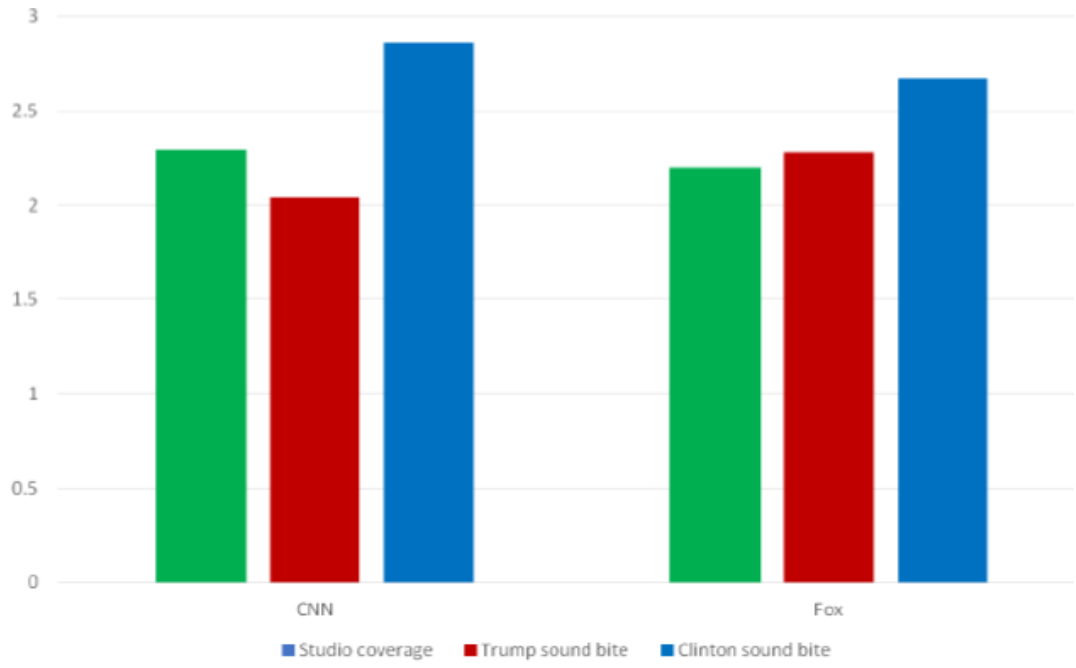

Figure 7 LIWC Certude of Candidate Soundbites vs. General Studio Coverage

Discussion & Pragmatic Considerations

While this project was inspired by Baum & Groeling's *War Stories*, it was quickly apparent that automation was unable to yield an equally elegant two-tiered content analysis. In particular, it is impossible to draw a direct link between a campaign speech as a whole and the small portion that is subsequently included on the news. While Lexis does note the time when a soundbite was aired, there is no way of tracking the origin of the clip in question. While segments from speeches may be played in the following 24 hours, an unknown—but likely considerable—set of candidate rhetoric has a much longer half-life. Put succinctly: the automated process is unable differentiate between a sound bite generated from an immediately preceding speech and those which occurred earlier in

the campaign. Thus, this study falls short of Baum & Groeling's ability to demonstrate active journalistic curation as a source bias.

The only saving grace, had the data actually been robust enough to justify a takeaway theme, is that a direct link between campaign speeches and TV sound bites is not the only potential source of journalistic bias. Even a high-level comparison between general candidate campaign speech and candidate soundbites, whatever the source, might offer evidence that the news *might* offer an inflated portrayal of candidate confidence.

VII. Lessons for Future Research

While the studies and results presented above are not useful in their own right, there is a silver lining for similar endeavors in the future. The most important lesson is the most straightforward: if a research design seems too good to be true, it probably is. While the original intent was to leverage the efficiency of automation to gather, parse, and process a large sample of text, in retrospect, it is clear that this was the wrong approach for the task at-hand.

Automated content analysis can only shed light on certainty *qua* certainty. Ultimately, when dealing with something as nuanced as political confidence, programs are no substitute for old-fashioned manual coding. This is especially true when one is interested in the context and theme of each message.

Though a manual approach necessarily reduces the scope of analysis, this is an unquestionably worthwhile tradeoff in the pursuit of valid results. One can imagine revising the initial attempts at quantifying certitude, but substituting manual coding for automation. For the climate change study, this might involve manually reading a random

sample of climate-related news stories for each year, and basing the trends on these results. This would be very laborious, but not impossible.

The election study is a more likely candidate for a future attempt. The (relatively) straightforward part would entail manually coding candidate speeches; a feasible proposition if this is based on a limited number speeches per candidate. The harder part is to cull through the daily news and code candidate speeches for certainty. While Baum & Groeling's design benefitted from being binary—a political soundbite sent either a within- or across-party signal—a similar attempt focused on certitude would need to develop a manual codebook to distinguish between different levels of certitude. This leaves the ultimate challenge: finding a common rubric to code the certainty speeches *and* soundbites. This would be a difficult, but not necessarily impossible, undertaking.

The final lesson harkens to the proverbial Law of the Hammer: for a researcher armed with a hammer, every problem looks like a nail. This project is centered around certitude, and it is easy loose perspective and view everything through that lens. As noted in chapter two, the public market has many currencies; truth and certainty are just two factors among a multitude. Thus, even if one accepts the premise behind certitude bias, the magnitude of the effect may be too small to measure. Ultimately, it is left to future research to meaningfully support or refute certitude bias.

CHAPTER EIGHT: TOWARDS AN (UN)CERTAIN FUTURE

If men were angels, no government would be necessary. If angels were to govern men, neither external nor internal controls on government would be necessary. In framing a government which is to be administered by men over men, the great difficulty lies in this: you must first enable the government to control the governed; and in the next place oblige it to control itself.
— James Madison, 1788

I know that there are people who do not love their fellow man, and I hate people like that!
— Tom Lehrer, 1965

To be absolutely clear: there is no "solving" the crisis in the public sphere. Incredible certitude, demagoguery, and base lies have always been—and always will be—an immutable part of the human condition. As we continue into the digital age, rather than pine for a fairytale yesteryear of Democratic enlightenment, more pragmatic questions concern what might be done to *alleviate* the challenges brought about by new technology. While there is general consensus that public debate is on the verge of epistemological meltdown, acknowledging the problem is the extent of expert consensus. Given the rapid speed of change in the public sphere there is little agreement among academics, politicians, and technology lobbyists about what can—or should—be done to return a semblance of rationality to debate.

The challenge is deeply rooted. Any attempt to "fix" the public sphere quickly devolves into a democratic Catch-22: the MOI requires a healthy democracy to work efficiently, and healthy democracy cannot exist without an efficient MOI. One cannot exist without the other, and American society has become a political Ouroboros of self-reinforcing dysfunction. We are so mired in accepted overconfidence, unchallenged half-

truths, and hyper-partisanship, there is no easy way to break the vicious feedback-loop created by a divided nation and an equally fractured public sphere.

This brings us back to a central argument: all facets of American society—from the public to politicians—have played a part undermining the MOI. Echoing the opening quote from James Madison's Federalist No. 51, it should not come as a shock to suggest that neither American politicians nor citizens are certified Angeles. Had human nature been more rational or open-minded, we not fall victim to our own biases. As it is, the temptation to advance one's own beliefs over objective truth has always been a thorn in the side of rational debate.

The problem, a theme spanning previous chapters, is that any pretense of a general "public" has been progressively hollowed out from the public sphere. Any attempt to bridge the gap across the divide is just as likely to be met with suspicion and scorn. In this era of hyper-partisanship, the MOI has devolved from a unifying force into an engine for social division with a series of independent markets replacing a national forum for discussion. There is little drive to work towards common ends or beliefs. Without a semblance of social unity, any attempt to reform the public market will be limited in scope and fleeting as each faction remains entrenched in its insular world of belief and alternate facts. It is beyond the scope of this project to prescribe steps to make Americans love, or at least tolerate, one-another. That undertaking is so daunting that it will take a generation of academics, politicians, and citizens to bridge the partisan divide.

The closing themes are not overly optimistic. First, at its heart new technology is not the democratic panacea it was once thought to be. It is not just that the Internet and

social media undermines the efficiency of the MOI, it intensifies longstanding worries about the wisdom of democracy. Secondly, early attempts—like deplatforming—to force the market into sagacity threaten to do more harm than good. Consider these points in turn.

I. Democratic Reckoning

Preceding chapters have addressed pragmatic challenges—exponential volume of information, changing dynamics of communication, etc.—that can inhibit market efficiency. Before closing, it is worth taking the discussion a step further to suggest that the new technology, rather than embody the democratic ideal, can undermine democracy. While I do not suggest that the following controversial arguments are necessarily *true*, aspects of each are worth considering as struggle to understand the new reality of debate on the digital frontier.

In the heady early days of the digital revolution, many embraced the internet as the embodiment of the democratic ideal. John Perry Barlow (1996), the political activist and self-described cyber-libertarian, captured this enthusiasm in penning *The Declaration of the Independence of Cyberspace*:

> We are creating a world that all may enter without privilege or prejudice accorded by race, economic power, military force, or station of birth. We are creating a world where anyone, anywhere may express his or her beliefs, no matter how singular, without fear of being coerced into silence or conformity.

The inequalities in the traditional public sphere would not carry over into the digital future. Technology would be liberating, allowing for a truly egalitarian free market for the exchange of ideas. Today, Barlow's optimism appears more Pollyannish than prescient. Cyberspace may be freer be freer than the pre-digital public sphere, but this has

not made it a more effective engine of truth. On balance new technology, rather than fulfill the dream of a fully democratic public sphere, has fueled the fires of incredible certitude and misinformation.

Some of the reasons—sidelining journalists and proving greater agency—were covered in earlier chapters and are worth reiterating. The impact of new technology, however, is more than an issue of messaging and market access; it challenges the core of democratic theory. Consider several issues in turn:

Undermining the Watchdog

As discussed in chapter three, digital media undermine the journalists' ability to arbitrate debate. Presumably, if journalists fulfill their democratic ideal, they would select only the most reasoned argument into the public arena. This active curation would improve the quality the of the information environment. While Incredible certitude and misinformation may never have been on the verge of extinction, at least journalists were uniquely situated to keep them in check.

Removing professional journalists from their privileged position as information gatekeepers has far-reaching consequences for both the quality of debate and the broader health of democracy. At an immediate level, as argued in preceding chapters, the Internet and social media are making it harder for the media to keep elites and special interests in check. Direct citizen outreach may appeal both to elites and die-hard loyalists but, as we have seen over the past several years, this arrangement offers few checks on unfounded confidence or misinformation.

Empowering the Unqualified Public

The more fundamental challenge, running counter to democratic norms, is the increasing agency afforded to citizens in the digital age. While few could argue with Lincoln's Gettysburg address that democracy is "for the people," in today's climate of sociopolitical turbulence it is less clear that society driven "by the people" is inherently wise.

While wariness of the masses has an elitist ring in today's society, American democracy has always included a kernel of ingrained elitism. Despite all their talk of the self-evident rights of man, the many of America's founding fathers were deeply suspicious of the masses. Alexander Hamilton (1787), capturing the sprit of many of his contemporaries, worried that the "turbulent and changing" public "seldom judge or determine right." Hamilton argued for a "permanent" authority to "check the imprudence of democracy." Roger Sherman, another founding farther, similarly hoped that "the people...have as little to do as may be about the government." Democracy may be the Platonic ideal of good government, but in practice the populace should not be trusted to guide the ship of state.

Echoes of this concern remain topics of intense academic debate, though the language is rarely as overtly elitist. Seminal studies, exemplified by Converse's (1964) *Nature of Belief Systems in Mass Public Opinion,* cast serious doubt on the capabilities of the average citizen to reason through sociopolitical issues. Citizens appeared unable to maintain coherent ideologies, were shockingly ignorant critical information, and did not appear committed to their foundational role in society (Erikson et al. 2002). Over a half-

century later, there is still a steady stream of research suggesting that citizens remain largely ignorant of the political process (Delli et al 1991). It does not take a professorship, however, to gather a superabundance of evidence for everyday ignorance. Whether it is vaccine skepticism in the midst of a once-in-a-generation pandemic, or willfully ignoring foreign interference in an election, it seems a non-trivial percentage of the population cannot appreciate simple truths staring them in the face.

The contemporary spin on elitist theory builds from a "clear presumption of the average citizen's inadequacies. As a consequence, democratic systems must rely on the wisdom, loyalty and skill of their political leaders, not on the population at large" (Walker 1966, 286). If one accepts that the public should leave complex decisions to experts, it is not a great leap to argue that the public should not hold undue sway over sociopolitical debate. One could argue that the public's limited influence on the content of the pre-digital public sphere, in a twist of irony for champions of democratic theory, was a net positive (Caplan 2007). Since the lay public is the *least* well positioned to judge the full complexity of sociopolitical issues, it is arguably for the best that they have little ability to influence the aggregate balance of information in the public sphere.

The danger of giving free voice to every member of the public was clearly highlighted during the Coronavirus pandemic. Misinformation—both about the dangers of the disease and quack cures—spread quickly through online communities that were already suspicious of science and government overreach. Classic MOI theory would suggest that the danger of giving voice to these individuals is limited, because their misguided notions will quickly be overcome by market forces. However, as we have

seen, this type of reality check hampered by a divided market. Insular communities and echo chambers make it difficult for alternative arguments to compete on an even footing. Thus, the digital public sphere allows misinformation is to spread virally *without* any of the social or institutional safeguards of the traditional market.

II. Economic vs. Ideational Markets

There is one final component to consider regarding the digital marketplace: the role of online content providers. The internet may be free to access, but that does not mean that the ensuing exchange of ideas is equally unrestricted. Search engines like Google or social networks like Facebook, while they are platforms for news and debate, are *not* news agencies. Their focus is not, and has never been, primarily driven by informing the public.

It is a false equivalence to suggest that complete freedom of speech necessarily translates into a free MOI. Even if the public sphere is largely free of direct government censorship, commercial forces have a far-reaching impact. In *The Myth of Digital Democracy* Political scientist Matthew Hindman (2018, 18) highlights the disconnect between the ideal and reality of an unregulated market. He begins:

> [W]hen we consider direct political speech—the ability of ordinary citizens to have their views considered by their peers and political elites— the facts bear little resemblance to the myths that continue to shape both public discussion and scholarly debate.

In today's increasingly technology-dependent world, the internal working of corporations—social networks, search engines, and other digital providers—have a profound impact on the con tent of the information environment. In this light, Hindman continues:

> [P]owerful hierarchies shaping a medium that continues to be celebrated for its openness.

> This hierarchy is structural, woven into the hyperlinks that make up the Web; it is economic, in the dominance of companies like Google, Yahoo! and Microsoft… But these hierarchies are not neutral with respect to democratic values.

The problem, of course, is that content providers are *not* journalistic organizations. Nor did they ever have any pretense of being watchdogs of democracy. Content providers are first and foremost businesses driven by the economic market. Their driving concern is user engagement, pageviews, clicks, and ultimately advertising revenue. What is actually said along the way takes a distant back seat. A cynic would charge that, from a provider's standpoint, debate does not have to be truthful as long as it rakes in the dollars.

In this vein, while hyper partisanship, incredible certitude, and outright lies may be bad for democracy, it can be great for business. Hot-button topics or controversial individuals like Trump are boons: whether individuals are screaming support or crying in scorn its one and the same for a content provider's bottom line. The fact content providers' proprietary programing influences who gets shown what online should give us pause. Corporations have no fealty to democratic principles, little regulation, and essentially no electoral accountability.

In a 2019 CBS News interview Mark Zuckerberg, founder of Facebook, was pressed whether individuals who consistently peddled lies should be banned from the platform. Zuckerberg countered that argued that every voice should be heard on social media "What I believe is that in a democracy it's really important that people can see for themselves what politicians are saying, so they can make their open judgments… I don't think that a private company should be censoring politicians or news." Zuckerberg concluded:

> People can agree or disagree on where we should draw the line, but I hope they

> understand our overall philosophy is that it is better to have this discussion out in the open, especially when the stakes are so high. I disagree strongly with how the President spoke about this, but I believe people should be able to see this for themselves, because ultimately accountability for those in positions of power can only happen when their speech is scrutinized out in the open.

At first blush, this resonates with the MOI's emphasis on broad and unregulated market participation. However, a cynic/realist would counter that Facebook's defense of demagogies and liars was driven more by economics than democratic idealism.

Long term there is no reason to think that social media companies or content providers, if left to their own devices, will be able to meaningfully improve the quality of public debate. Even if they offer lip-service about reform or self-regulation, at the end of the day there is no reason to expect that they will be able to overcome their inherent economic conflict of interests.

II. The Moral Hazard of Deplatforming

What, then, can be done to improve the quality of public debate? In an interview Barak Obama in a 2020 interview with the Atlantic argued:

> The degree to which these companies are insisting that they are more like a phone company than they are like *The Atlantic*, I do not think is tenable. They are making editorial choices, whether they've buried them in algorithms or not. The First Amendment doesn't require private companies to provide a platform for any view that is out there. At the end of the day, we're going to have to find a combination of government regulations and corporate practices that address this, because it's going to get worse.

Obama speaks for many who *want* something to be done to improve the public sphere. But just because the market is struggling, and the desire to fix urgent, it is still important to act carefully lest any attempted solution be worse than the problem it is seeking to correct.

The Danger of Deplatforming

To illustrate the challenge of trying to "fix" the digital public sphere, consider an issue that has attacked considerable debate in recent years: the removal/suspension of Donald Trump from social media platforms like Twitter and Facebook. There is a hint of Shakespearian tragedy in these moves. For years, Trump and social media had a symbiotic relationship: they gave him a platform to speak directly to supporters. In turn, he motivated tremendous user engagement. But in the end, like Brutus turning on Caesar, Trump was ultimately powerless to stop these agencies from removing him—permanently in the case of Twitter, two years for Facebook—from their networks.

At an immediate level, removing Donald Trump from his social media megaphone likely had a net positive impact on the quality of information in the public sphere. Trump is a paragon of falsehood and, if one believes that Trump was a once-in-a-generation existential threat to democracy, this step might be defensible as an emergency measure.

On further reflection, however, deeper reflection deplatforming of any kind by social media companies should give us pause. First, one must question whether or not Trump is a unique threat to democracy. While Trump he has become a caricature of incredible certitude and false confidence and lies he is not a cause of the dysfunction, but simply an embodiment of of social and technology logical trends that have been building for years and will continue long after he fades from public attention. It is reasonable to think that future politicians will arise in a similar mold of rhetorical falsehood. Indeed, with Trump as a blueprint and the country further descending into partisan dysfunction,

they will likely crop up with increasing regularity. Some may be less casual with truth than Trump, but there is every reason to think others will be worse still. This leads to an ethical slippery slope, the moral hazard of what level of falsity merits detachment from social media. There is a grey line between acceptable hyperbole and unacceptable duplicity, and decision to split one from the other is an ultimately arbitrary process. Even if it is Trump today, what defines the unreasonable of tomorrow?

There is also the pragmatic challenge of who determines which voices are worthy of market exposure and which should be repressed. There is a case, as we will discuss shortly, for a limited government regulation of online speech. But more than anything, it is clear that the current status quo of private companies calling the shots is a solution just as pernicious as the problem.

At an immediate level, as argued above, content providers have an inescapable conflict of interests between user engagement and the actual content on their platforms. Trump was a profitable source of community engagement and the danger of alienating users, as much as any high-minded explanations about the intrinsic merit of free speech, helps explain why companies like Facebook and Twitter were reticent to cut him off.

Agencies have attempted, and largely failed, to find a middle ground between corporate and social responsibility. Facebook, or example, created independent bodies of "independent" academics and policy analysis to review their suspension decisions. This reliance on outside arbiters may seem appealing at first, in reality it is a deeply unsatisfactory solution, and does little more than gloss over the fundamental problems. At an immediate level, one must wonder about true "independence" when companies select

who sits on their courts of review, and can their makeup at will. More fundamentally, these experts are just as unaccountable to the general public as the companies they serve.

V. Towards an (un)Certain Future

Removing people or organizations—even if they are fonts of falsehood—from participating in social media violates the core tenants of marketplace theory, with the emphasis on free access unregulated speech and competition. A marketplace that defaults to removal as the solution to problems risk sowing the seed of its own disillusionment. We are left at an impasse without an elegant solution: either allow demagogues liars and fraudsters to flood the market, or remove them from the market and undermine the very mechanisms that are supposed to facilitate collective wisdom.

We are left facing an uncertain future about incredible certitude. The status quo is undesirable, and early efforts like deplatforming forcing changes onto the free market are little better. Any steps address the democratic marketplace of ideas must remain a democratic process. Even if government regulation is limited, imperfect, or ultimately an error, it is critical that citizens are able to provide feedback and ultimate judgment through electoral channels. While society may be able to modestly moderate the content of the information environment, neither governments nor corporations can close Pandora's box of new technology. We must learn to adapt and live with the new dynamics of truth and confidence in the digital age.

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