

**THE NEW INVISIBLE HAND?  
THE IMPACT OF ALGORITHMS ON  
COMPETITION AND CONSUMER RIGHTS**

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**HEARING**

BEFORE THE

SUBCOMMITTEE ON COMPETITION POLICY,  
ANTITRUST, AND CONSUMER RIGHTS

OF THE

COMMITTEE ON THE JUDICIARY  
UNITED STATES SENATE

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**THE NEW INVISIBLE HAND?  
THE IMPACT OF ALGORITHMS ON  
COMPETITION AND CONSUMER RIGHTS**

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**WEDNESDAY, DECEMBER 13, 2023**

UNITED STATES SENATE,  
SUBCOMMITTEE ON COMPETITION POLICY,  
ANTITRUST, AND CONSUMER RIGHTS,  
COMMITTEE ON THE JUDICIARY,  
*Washington, DC.*

The Subcommittee met, pursuant to notice, at 3:02 p.m., in Room 226, Dirksen Senate Office Building, Hon. Amy Klobuchar, Chair of the Subcommittee, presiding.

Present: Senators Klobuchar [presiding], Hirono, Welch, Lee, and Hawley.

**OPENING STATEMENT OF HON. AMY KLOBUCHAR,  
A U.S. SENATOR FROM THE STATE OF MINNESOTA**

Chair KLOBUCHAR. All right. Thank you everyone for being here today. A few things on our agenda in Washington, but as we await word, like, you know, the white smoke coming from the Vatican to see if we have any kind of progress on an agreement, it does give us this pause in time to focus on a really important issue for our country.

And so, I call to order the hearing of the Subcommittee on Competition Policy, Antitrust, and Consumer Rights. This hearing is titled, “The New Invisible Hand? The Impact of Algorithms on Competition and Consumer Rights.”

I’d like to welcome our witnesses. I got to say hi to all of you, and also, of course, Ranking Member Lee. Mike and I work together really well, and I appreciate his work, and his staff’s work in working with our staff to plan this hearing.

In today’s digital economy, we are constantly interacting with algorithms, whether we’re shopping online, paying rent, booking a flight, hailing a ride, buying insurance, or looking for a new app to download. Often, the products we see, the prices we pay, or the services we receive are determined by an algorithm.

And I think even for some of our more astute visitors today to this hearing, and people who may be joining us, including Senator Hirono who just joined us, I don’t think when we look at our phones and we see things pop up, that even when we know these algorithms are playing a role, do we really think that we are being manipulated by them?

I think we think we're smarter than that, but actually, it is happening all the time. And so, the focus of this hearing is really what's going on, and how it is affecting competition and prices that consumers are facing.

In many ways, the services that are built with algorithms can improve our lives. We know that algorithms help make sense of vast amounts of information to surface and order search results, identify patterns, and improve products.

But algorithms also have the potential to create or exacerbate competition problems. Even when used with the best intentions, algorithms that are built with data that reflect past patterns of bias or discrimination can perpetuate those patterns into the future. And algorithms also are responsible for pushing harmful content to kids. Today's hearing will explore these issues to help Congress understand how to safeguard competition and protect consumers.

In October, this Subcommittee heard testimony about the potential for competitors to use a third-party algorithm to fix prices in housing markets, driving up the cost of rent and leading to higher vacancy rates.

Corporate landlords have figured out that it's better for them and their bottom lines to delegate their pricing decisions to algorithms to push rent so high that some rental properties sit empty rather than offering housing that people can actually afford. And they're doing this not the old-fashioned way by talking to each other, which would be clearly—some of this would be illegal depending on the course of conduct, but they're doing it by delegating it to an algorithm.

As I said in October, landlords shouldn't be sharing prices in an effort to boost prices. Instead, they should be competing on price and on quality.

Price fixing and other forms of collusion are illegal under the antitrust laws. When competitors that should be competing decide instead to delegate their independent pricing decisions to an algorithm, the result is little more than a sophisticated cartel hiding in code. Whether the conspiracy takes place in a server room or a boardroom shouldn't matter under the antitrust laws, but it isn't clear whether our current antitrust laws are sufficient to stop that practice.

Most courts require proof of an explicit agreement to fix prices before condemning the conduct. But that agreement may not exist when a computer is coordinating prices instead of humans. It may even be possible for independent price-setting algorithms programmed to maximize profits to learn to collude on price without any human intervention.

Price fixing isn't, of course, the only concern. Dominant platforms can and do use algorithms to preference their own products and services, and bury those of their competitors.

The United States needs laws that are up to date, and as sophisticated as the monopolists we are trying to reign in. That's why Senator Grassley and I have introduced the American Innovation and Choice Online Act—you may have heard about it on TV. There was a lot of ads run against it. Hundreds of millions—which is co-sponsored by several Members of this Committee, and is specifi-

cally targeted to address this type of anticompetitive conduct by Big Tech platforms.

Dominant firms may also use algorithms to protect themselves from competition. For example, the FTC recently sued Amazon for monopolizing e-commerce markets, in part, by surveilling prices across the internet and punishing independent businesses that sell on Amazon's marketplace that offer lower prices anywhere else. This conduct deters price competitions, hurts consumers, and gives Amazon free reign to charge exorbitant fees to small businesses that uses the platform.

The public understands that Big Tech tactics hurt consumers and deter innovation. Just this week, a jury in California found Google's App Store policies—allowing it to take up to 30 percent of a developer's revenue—violate antitrust laws. The Department of Justice has also sued Google for monopolizing the search engine market. The recent trials showed that Google's exclusive contracts, which guarantee its search engine default status, starved competitors of the data necessary to develop competing algorithmic search tools.

And because algorithms run on data, the more the companies rely on algorithms, the more they will be incentivized to track consumers to collect data raising privacy concerns. This is why I've long supported comprehensive Federal privacy legislation so that consumers can control how their personal data is being used, including the right to opt out.

Moreover, the output of an algorithm is only as good as the data fed into it. "Garbage in, garbage out," as they say. This means that if an algorithm is trained on data that reflects racial, economic, or other biases, it can lead to bias or even discriminatory results. For example, after being trained on a company's past hiring data, an algorithmic tool used to screen job applicants weighed two factors most heavily when making recommendations about whom to interview: the name Jared, and the interest in lacrosse. True fact.

Finally, the proliferation of artificial intelligence and machine learning has a potential to supercharge these issues and to create new ones. That's why earlier this week, Ranking Member Lee and I sent a letter to the Department of Justice and the FTC asking for more information about their enforcement efforts related to algorithms and additional tools they need to do that work.

While many of these issues raise tough questions, I think one thing is clear. We need vigilant enforcement of our antitrust laws. We, of course, passed our Merger Filing Fee Modernization Act on a, I think, 88 vote in the U.S. Senate, to move up when that money was going to be collected to allow our antitrust enforcers to do their jobs, as well as passing Senator Lee and my Venue bill at the same time.

So that is our part, but we know there's so much more we have to do, and that's why we're having this hearing today. I consider this the beginning of this discussion. We know there will be AI legislation coming down the pipe. We also know that many other Members in the Senate are interested in this, as well. So with that, I turn it over to Senator Lee.

**OPENING STATEMENT OF HON. MICHAEL S. LEE,  
A U.S. SENATOR FROM THE STATE OF UTAH**

Senator LEE. Thanks so much, Madam Chair. And that was a good day getting that passed. Wasn't it? We like that bill.

As our economy continues to modernize, algorithms have drawn increased attention as a tool for calculating prices, and calculating costs, and doing all sorts of things that we would never have dreamed just a few short years ago could be made by reference to or with the assistance of an algorithm.

Although algorithms are efficient, they can be used by businesses to collude in setting prices, and to reduce the quality of products in a way that can perpetuate bias. Algorithms are neither good nor bad, but rather, like a company's size, it depends on the context. It depends on how they are used.

There's nothing inherently sinister about an algorithm. They can do only what they've been designed to do, and for that reason, we can fairly say that the devil is in the details. It depends on the quality of the data that's being fed into them, and what businesses do with the algorithms that may be problematic, especially if the business in question has monopoly power or engages in collusive price setting.

Today's hearing concerns algorithms and their potential impact on competition. Now, it can be used in a number of ways that may impact competition, in ways that are either pro-competitive, pro-competition, or anti-competition.

First, algorithms are able to help determine prices. Using an algorithm is a much more efficient, and in some cases fast, perhaps accurate way to set prices rather than engaging in a more traditional, price-setting method.

For example, consumers experience this when using, just to cite one example, popular rideshare apps. Algorithmic pricing could be very problematic if used improperly. When executives use algorithms to collude and to set prices, this can impede competition and undermine the natural balancing of the market. Algorithms present a new and easier way to engage in this behavior, and to engage in it in a way that makes its detection a little more difficult.

Second, algorithms impact competition by affecting the quality of products. Facebook, Google, TikTok, Twitter, and others have been a sale for the content that their algorithms sometimes produce, or alternatively restrict, or throttle, or advance, or silence, or partially mute.

These algorithms are likely written with the intent to fuel engagement and keep users on the platform to consume more and more content in a period of time, or to keep the user on the app for a longer period of time. It's the clickbait model, basically, but on a trillion-dollar societywide basis.

Why fuel engagement? Why use the clickbait model, or something else, algorithmic, or otherwise, to fuel engagement? Well, more time spent on the platform means more digital ads, and that, in turn, as those eyeballs are scanning more and more ads, means a lot more money for the platform.

Now, Google and Facebook are a digital advertising duopoly rife with all sorts of conflicts of interest. Those conflicts enable what

basically amounts to insider trading, exacerbating the monopoly rents that Google and Facebook already collect, and further incentivizing those companies to keep people on their platforms for as long as possible.

Breaking up the ad tech stack is an important first step toward reigning in the power of Big Tech platforms, and making sure that they don't use algorithms in an anticompetitive, predatory, harmful manner. Additionally, Big Tech companies have exploited algorithms to exert their market position in order to push content, perpetuate bias, and control expression, speech, and even elections.

This even applies to what our children are viewing online. We can all agree, I think, that this is bad when it specifically happens to children, especially when Big Tech pushes inappropriate content to underage viewers, whether teenagers, or in many cases, much smaller children. They don't yet have the maturity, the judgment, the self-control to make wise decisions about the content that they consume. And in some cases, they can be really affirmatively harmed by it.

All of us have the instinct to protect children. I believe that the effective enforcement of antitrust laws in this area could result in increased competition and new alternatives. And with those new alternatives, you could have some companies doing a better job than others at making sure that the content provided to children wouldn't be harmful to them.

Now, this is also true of course, when it comes to adults. Neither the Government nor Big Tech should be telling people what to believe or how to vote, or at least should proceed with the knowledge that if they tell people what to believe or how to vote, they may have backlash in the marketplace, at least if there is a marketplace with robust competition to be had.

Because if there isn't, they're going to continue to do whatever they want, relying on their monopoly or duopoly status, relying on the absence of meaningful competition, knowing full well that they can simultaneously advance their economic, you know, their financial, and their political, or other interests.

It's nothing short of alarming that Google, precisely because of its monopoly and its lack of algorithmic transparency that impairs in the nature of the use of algorithms, can control the information that a user sees to the extent that it does with no repercussions in the market.

According to Dr. Epstein's research, Google is feeding people biased information quite deliberately that it furthers the progressive political agenda and reminds liberals to vote on election day while intentionally failing to give conservatives those same reminders.

Now, Google significantly ended the partisan vote reminder and began sending the vote reminder to all users, but only after they were caught doing so in the last election. That is significant. That is itself, perhaps, an indication that there's a breakdown in the market. That, perhaps, is an indication that the antitrust laws can have something meaningful to say here—and that they should.

Now, I want to be clear, every American, including any business, has whatever right to pedal whatever sort of political message that that company, or that business, or that person may want, whether it's for a political party represented by an elephant, or one rep-

resented by a donkey, or for that matter, a giraffe. They can do that if they want. It's part of the First Amendment. They enjoy that First Amendment protection.

But if they're doing that, especially doing that in an audience that doesn't consist overwhelmingly of Republicans, or of Democrats, or whoever they're trying to pitch these messages to, they would be doing so at the risk of alienating, in our country, about half the population anytime they side with one political party over the other. The fact that they did so, so boldly, so effectively, so unapologetically in this instance, to me, suggests there's something terribly, terribly wrong. We know that there is, in that marketplace. It's one of the reasons why we need to address the stack.

We have an obligation to our constituents to protect them from this significant threat and to defend competition itself—not for the purpose of any political party, or cause, or message, but because consumers themselves deserve better than this. They deserve what happens naturally when there is competition in the marketplace. I look forward to our hearing today and to hearing from each of you.

Chair KLOBUCHAR. Very good. Thank you, Senator Lee.

I'm now going to introduce the witnesses.

Bill Baer is a visiting fellow in governance studies at The Brookings Institute. He previously served as Assistant Attorney General for the DOJ Antitrust Division. Previously, he was a partner at Arnold & Porter, and headed up the firm's antitrust practice group. He was also the director of the FTC's Bureau of Competition.

Damon Hewitt is the president and executive director of the Lawyers' Committee on Civil Rights Under Law. Previously, he was an attorney at the NAACP Legal and Educational Defense Fund, and served as executive director of the Executives of Alliance for Boys and Men of Color.

Dr. Robert Epstein is a senior research psychologist and co-founder of the American Institute for Behavioral Research and Technology. He is the former editor-in-chief of *Psychology Today*, and is the founder and director emeritus of the Cambridge Center for Behavioral Studies. He has taught at several universities.

Sarah Meyers West is the managing director of the AI Now Institute, where she researches topics at the intersection of artificial intelligence, society, and policy. She is also a visiting scientist at the Network Science Institute at Northeastern University. She was formerly a senior advisor on AI at the Federal Trade Commission.

Last, but not least, Roger Alford is a professor of law at the University of Notre Dame Law School, where he focuses on topics at the intersection of international business and the law. Previously, he served as Deputy Assistant AG for International Affairs at the DOJ Antitrust Division.

All right. So now we're going to swear you guys in. You never know, people and algorithms—you've got to swear.

I will now swear in the witnesses. If the witnesses could stand—you are. Thank you.

[Witnesses are sworn in.]

Chair KLOBUCHAR. Thank you, and you may be seated. So, I'll start by recognizing you, Mr. Baer. Thanks for being here.

**STATEMENT OF HON. BILL BAER, VISITING  
FELLOW IN GOVERNANCE STUDIES, THE  
BROOKINGS INSTITUTION, WASHINGTON, DC**

Mr. BAER. Chair Klobuchar, Ranking Member Lee, Senator Hirono, it's good to be back. And thank you for the opportunity to address, as you both have noted, one of the many challenges we face in harnessing the power and maximizing the potential of AI.

The growing use of pricing algorithm presents one such challenge. I'm no expert in AI, believe me. But from the vantage point of a long-term antitrust enforcer, I am concerned that misuse of this tool is growing and puts consumers at risk of paying supracompetitive prices for all sorts of goods and services.

Sometimes competitors agree directly on a pricing algorithm. We brought a case when I was at DOJ that addressed that kind of competitor-to-competitor agreement. But often companies outsource to a third-party AI price fixing by using the same vendor to collect the data on supply and on demand, and recommend pricing or output behaviors that facilitate price coordination.

Your hearing last October on rental housing markets showed how property management companies allegedly were using third-party vendors to collect competitively sensitive pricing information from competitors, feed that data through sophisticated algorithms, and recommend unit-by-unit prices so landlords could charge higher rent.

Similar antitrust challenges are pending involving hotel operators in Las Vegas and in Atlantic City, using that same kind of third-party pricing algorithm to suggest profit maximizing strategies to the hotels that increase margins and limit a consumer's ability to bargain hunt online.

These AI-facilitated hub-and-spoke conspiracies extend further up the food chain, too, literally. This fall, DOJ and six attorney generals, including those from Utah and Minnesota, charged Agri Stats with operating an information exchange that obtained sensitive price and output information from turkey, chicken, and pork producers, analyzed the data, and provided feedback that allowed these competitors to reduce output and increase price with confidence that their competitors would do the same.

Again, the basic behavior's not new, but the use of pricing algorithm seems to make coordination both easier and quicker. The good news is that these hub-and-spoke conspiracies have traditionally been held to violate the antitrust laws. The bad news is that algorithmic collusion using third parties seems to be on the increase. Detection is not easy, and AI makes success more likely,

But my big worry is whether our current antitrust jurisprudence can handle fact patterns where the machines learn how to collude with little or no human involvement. An unlawful agreement under Section 1 of the Sherman Act requires a showing of a meeting of minds between rivals, a conscious commitment to a common scheme.

At the same time, the courts have held that consciously parallel behavior, sometimes called "tacit collusion," is not enough to violate Section 1. Courts require plus factors, proof that something more than parallel unilateral action was afoot. But what if competitors individually develop pricing algorithms that set profit maximiza-

tion as the goal, and machine learning leads to pricing outcomes that result in widespread oligopolistic pricing in markets where discounting previously was the norm?

I think about the 1983 “WarGames” movie. There, a young computer nerd, played by Matthew Broderick, hacks into the super computer controlling the U.S. military’s nuclear arsenal, and activates a game called Global Thermonuclear War. He thinks it’s just a game, but the computer, the Whopper, treats it as the real thing and takes actions that trigger escalating responses from the then-Soviet Union.

We were on the brink of thermonuclear war until Broderick directs the computer to play tic-tac-toe. In seconds, the whopper—this is the 1980s—runs every series of possible moves, learns that the game is unwinnable, and stops the escalation.

I worry about an algorithmic pricing scenario where companies individually write code that simply instructs the machine to profit maximize. The machine gathers public pricing info from competitors, learns in nanoseconds that price competition is eluding losing strategy, and it stops discounting, and stabilizes prices.

Does the industry-wide implementation of pricing algorithms that predictably lead to such a result, even without direct communication between competitors, constitute and illegal agreement under Section 1? That’s a little unclear under current law.

So, what can be done? My written statement makes a couple suggestions.

First, enforcers need to determine whether my doomsday scenario is actually a real-world concern. One way to do that is in merger investigations to make sure they use second-request to see how the pricing algorithms employed by merging parties react to each other’s pricing decisions.

In addition, the FTC could use its authority in under Section 6(b) of the FTC Act to do a deep dive into selected industries and learn, better understand the prevalence and real-world impact of pricing by algorithm. The FTC potentially could employ its unfair methods of competition authority under Section 5 to challenge the use of AI that results in anticompetitive outcomes, even if the evidence is not sufficient to show an agreement in violation of Section 1. In addition, companies need to monitor the pricing behavior of their machines just as they’re responsible for the actions of employees that lead to anticompetitive results.

Finally, Congress, I think, should consider legislation that addresses the growing risks that competition posed by algorithmic pricing, either as part of this broader effort to set guardrails for the use of AI, or antitrust-specific legislation that holds competitor responsible for the knowing use of pricing algorithms that that they know or should have known results in tacit collusion and reduced competition. Thank you.

[The prepared statement of Mr. Baer appears as a submission for the record.]

Chair KLOBUCHAR. Very good. Thank you. Mr. Hewitt—where we challenge you to cite a 1983 movie.

[Laughter.]

Chair KLOBUCHAR. Go ahead.

Mr. HEWITT. I’ve seen that movie, and it’s a very good film.



**STATEMENT OF DAMON T. HEWITT, PRESIDENT AND  
CHIEF EXECUTIVE OFFICER, LAWYERS' COMMITTEE  
FOR CIVIL RIGHTS UNDER LAW, WASHINGTON, DC**

Mr. HEWITT. Good afternoon, Chair Klobuchar, Ranking Member Lee, Senators Hirono and Welch, and others in absentia. My name is Damon Hewitt, president, and executive director of the Lawyers' Committee for Civil Rights Under Law, where our mission is to ensure that Black people and other communities of color have the voice opportunity and power to ensure that all the promises of our democracy are made real, and not just words on paper.

As technology grows in this country and plays a growing role, our work has expanded to include what we call "digital justice." We're looking at the intersection of racial justice, privacy technology, focusing on the ways that predatory data practices, discriminatory algorithms, and other online harms disproportionately impact consumers of color.

Across our economy, algorithms are used to make decisions about all aspects of our lives, determining who can run a house, who can get a loan, who can get a deal, and consequentially who cannot.

One of the greatest civil rights challenges of our generation is to ensure that our new data-driven economy, does not replicate or amplify existing discrimination. As Ranking Member Lee said earlier in his remarks, AI is not the problem, but it's like putting discrimination and the problems that do exist on steroids if we don't watch out.

We have to ensure that the technology well serves all of us. Because algorithmic technologies are built using societal data that reflect generations of discriminatory practices, such as redlining and segregation, they often reinforce past patterns of discrimination.

For example, scoring algorithms used by auto insurers result in higher rates and fewer options for residents of majority Black neighborhoods who don't have other options. Retail websites have been found to charge different prices for the same products based upon consumer demographics. Mortgage approval algorithms are more likely to reject Black applicants even when they have less debt than white applicants. Things that absolutely make no sense.

The harms of algorithmic discrimination are already denying millions of Americans equal opportunity in our economy. Instead of aiding consumers, AI tools often create gross distortions in the marketplace, reflecting exclusion rather than fairness for consumers and creating closed doors in the virtual world that have discriminatory effects in real life.

In my written testimony, I catalog dozens of examples showing how algorithmic systems harm Black communities and other communities of color. Left unchecked, these harmful impacts will continue to grow as AI becomes ingrained in every aspect of our daily lives.

Senators, my message today is simple: The tools of the future are locking us into the mistakes of the past. But it does not have to be that way. Congress must act quickly to enact legislation that can ensure algorithmic systems are safe, effective, and fair for all consumers.

Now, we've faced similar challenges in this country before to unlock opportunity. Congress passed the Civil Rights Act of 1964

to prohibit segregation and interstate commerce alongside other legislation to address discrimination in employment, housing, and other critical aspects of the lived experiences of daily lives of Americans in the marketplace.

Today, the mass accumulation of personal data and the use of algorithmic technologies call for return to our civil rights legacy to ensure that everyone has an equal opportunity in the new digital marketplace and fair access to the information goods and services it enables. We believe at the Lawyers' Committee that legislation coming down the pike should reflect at least six key principles.

First and foremost, AI regulations should protect American civil rights by including an explicit anti-discrimination provision that prohibits algorithmic discrimination.

Second, AI tools should be evaluated and assessed for discrimination and bias, both before and after deployment. As Mr. Bayer mentioned earlier, these machines learn and they evolve. So, we can't just test one time. We need ongoing review, assessment, and audit.

Third, developers and deployers of AI should have a duty of care requiring that products that they offer are safe and effective. As with any consumer product, the developers and deployers should be liable if these products are not safe and effective.

Fourth, AI regulation should include transparency and explainability requirements so that consumers know when, how, and why AI is being used in a way that impacts them.

Fifth, data protection requirements should limit the use of personal data and safeguard consumer privacy. Data protection is necessary to ensure that personal information is kept secure and not used against consumers unfairly.

And finally, AI regulation should establish robust oversight and enforcement of mechanisms, empowering Federal officials with adequate authority and resources in providing a private right of action to remedy algorithmic harms in the private sector.

We believe this type of legislation will help to limit discriminatory impacts of AI, and will be good for all consumers. Thank you. I look forward to your questions.

[The prepared statement of Mr. Hewitt appears as a submission for the record.]

Chair KLOBUCHAR. Thank you very much, Mr. Hewitt. Dr. Epstein.

Dr. EPSTEIN. I'm going to turn on the screen. Oh great.

**STATEMENT OF ROBERT EPSTEIN, PH.D., SENIOR RESEARCH  
PSYCHOLOGIST, AMERICAN INSTITUTE FOR BEHAVIORAL  
RESEARCH AND TECHNOLOGY, VISTA, CALIFORNIA**

Dr. EPSTEIN. Ms. Klobuchar, who's one of my very favorite of America's leaders because she's one of the few Members of Congress who has never taken a dime from Google. And Mr. Lee, who helped me and my team to get Google to back off in a national election. Thank you, sir, immensely. It's my first chance ever to thank you.

Thank you, and other Members of the Committee, I'm here to tell you about an existential threat to our country that is so well hidden—I warn you, by the way, some of what might turn up on the

screen in the next minute or two might be disturbing. I apologize in advance, but it's necessary that you see it.

It's so well hidden that you might know nothing about it. It's a threat posed by Big Tech monopolies, eerily predicted by President Eisenhower in 1961.

In 2016, Google alone shifted more than 2.6 million votes to Hillary Clinton—whom I supported—using subliminal techniques I had been studying and quantifying since 2013.

Four days later, a leaked video showed Google's leaders devastated by Trump's win, telling their employees they would not allow Trump to win the Presidency again. They would guarantee his defeat through their, quote, "great strength and resources and reach."

They made good on this promise in 2020, and in 2022, as I explained recently in *The Epoch Times*, they stopped the "red wave" cold. I lean left, but I don't think a private monopoly, one with no accountability to the public, should be able to pick our Nation's leaders.

Who knows how these secretive companies will lean next year, after all. After that all-hands meeting, Google perfected at least a dozen new methods of subliminal control that I have now been studying, using rigorous scientific methods for more than a decade.

To shift votes, we know from leaked emails, that Google relies on what they call "ephemeral experiences"——

[Large viewing screen is displayed.]

Dr. EPSTEIN [continuing]. Fleeting content such as search results, search suggestions, and UpNext videos on YouTube, content that impacts undecided voters and then disappears, leaving no paper trail.

Since 2016, my dedicated team has been building increasingly more sophisticated monitoring systems that preserve and analyze ephemeral content. This is Google's worst nightmare, because it means we are surveilling them just as they surveil us and our children 24 hours a day.

In other words, we are giving you, our Nation's leaders, the ammunition you need to finally hold Google and other tech companies accountable to the public.

[Large viewing screen is displayed.]

Dr. EPSTEIN. Our research, which we publish in prestigious peer-reviewed journals, allows us to measure the power Big Tech has to shift votes, while our monitoring systems let us see whether these manipulations are actually being used. In one case so far, we shared our data with Senators Lee, Johnson, and Cruz. They sent a strong letter to the CEO of Google, which ceased some of its election manipulations that very day.

It turned off the political bias in its search engine, and stopped sending partisan "Go vote" reminders on its homepage. Through our monitoring, we detected those changes the moment they were made. We preserve ephemeral content through the computers of a representative sample of real voters. One must monitor through the computers of real people because Big Tech sends out personalized content. To see what they're sending people, you must look over the shoulders of real people, just like the Nielsen company does with television viewers.

Algorithms, my friends, I'm sorry to say, cannot be regulated because they are inherently opaque even to the programmers. And even if you did regulate, we still need to monitor to make sure there is compliance. We started small, but have deployed bigger systems with each election.

In 2022, we preserved more than 2.5 million ephemeral experiences through the computers of more than 2,000 voters in 10 swing States. We are now building the world's first nationwide digital shield, and we just released a public dashboard. It's at [americasdigitalshield.com](https://americasdigitalshield.com).

[Large viewing screen is displayed.]

Dr. EPSTEIN. It's what you're seeing on your screen, and it shows our cumulative findings in real time as we are receiving the data. We are collecting and displaying data 24 hours a day through the computers of more than 13,000 voters in all 50 States, and so far, we have court-admissible data in 15 States.

We have thus far—excuse me, the extreme political bias we are seeing in content being sent to voters along with the highly sexualized and violent content being sent to America's kids confirm my worst fears: The technological elite, as Eisenhower called them, are now in control of our democracy, and they're systematically indoctrinating our children.

If we can secure funding to expand our system so we have court-admissible data in all 50 States, the tech companies will back down in 2024. And even if they don't, we will have incontrovertible evidence of election rigging on a massive scale.

If no monitoring system is in place, Google alone will be able to shift between 6.4 and 25.5 million votes in the 2024 Presidential election, leaving no paper trail and making a mockery of the free and fair election. Thank you for your attention and for protecting our great Nation from threats, both foreign, and, I hope, domestic.

[The prepared statement of Dr. Epstein appears as a submission for the record.]

Chair KLOBUCHAR. Thank you. Dr. West, thank you.

**STATEMENT OF SARAH MYERS WEST, PH.D., MANAGING  
DIRECTOR, AI NOW INSTITUTE, NEW YORK, NEW YORK**

Dr. WEST. Thank you, Chair Klobuchar, Ranking Member Lee, and to the Members of the Committee for inviting me to testify on this important set of issues. I deeply appreciate this Subcommittee's ongoing attention to the role of algorithmic systems in shaping the economy at large, often in ways that harm consumers while benefiting centralized actors.

In the most basic sense, algorithms are simply instructions that computational systems follow. They frequently involve using statistical techniques and applying them to very large amounts of data to arrive at a decision. For example, processing personal data to tailor a price to the maximum the system predicts a buyer will be willing to pay.

Now, while many of the underlying techniques have existed for decades, such systems are supercharged by the surveillance business model that's been promulgated by the tech industry. This drove the creation of technologies that collect detailed and often intimate information about us as we move about our lives. This busi-

ness model produced information and power asymmetries that have profound societal effects.

Now, firms that are positioned at key choke points in the economy are best positioned to leverage data in a manner that is harmful both to competition and to consumers. This creates extended potential for collusion in markets where this otherwise would not be possible.

This is most visible when we see systems go awry, like when the price of hand sanitizers spiraled at the start of the pandemic. But frequently it takes shape in more invisible ways that are harder to identify from the outside. And my fellow witnesses have identified several examples in real estate and car insurance.

This works the other way around, too, though. For example, Dr. Veena Dubal has studied the use of algorithmic models to determine the wages of rideshare drivers, which effectively has served to drive down their take-home pay across the board.

What this means is that people are being placed in a dual bind. On the one side, they experienced personalized pricing that extracts as much money as possible from them, and on the other algorithmic, wage discrimination that drives down their pay.

This is one reason why it's particularly crucial that we address concentration among the firms producing and deploying algorithmic systems.

Another is to mitigate the risk of creating single points of failure that could have ripple effects throughout the economy. Over-reliance on the same algorithmic model can present imminent risks to financial stability. And these risks are not only posed to financial markets, but, you know, the more broadly a single system is used, the greater the consequences could be across housing, credit, payments, transportation.

We all know that algorithmic systems are not infallible. To the contrary, where investigators have looked under the hood, they often find that the underlying data on which these systems are being trained is flawed, and this leads to widespread errors in decision-making. Think about the frustration of having an insurance claim be denied just because the evaluator on the other side was in a rush, or hadn't had their coffee yet this morning.

We can think of algorithmic systems as taking each of those individual decisions and replicating them at massive scale, often with little to no scrutiny before they've been commercially deployed. We've granted a staggering amount of power to the scant few firms that have the data and computational infrastructure required to develop and deploy algorithmic systems, and we've given up consumer sovereignty in the process.

The opacity of algorithmic systems also makes effective enforcement all the more difficult. By denying the public information about how algorithmic systems are affecting their lives, each of us lacks the information that we would need to be able to understand whether a decision's accurate, to whether we have means to seek remedy or how to push back. And this is why effective regulatory intervention that foregrounds bright-line measures is particularly needed in this moment.

To conclude, there are three paths forward that I'd like to particularly highlight.

One is, we need to use existing enforcement mechanisms to ensure strong oversight of algorithmic systems, and robustly enforce the agencies that have the existing authority.

We already have a range of laws in place that can be applied to anticompetitive and harmful uses of AI and algorithmic systems, and we need to make sure that our enforcers have what they need to meet that challenge.

Second, we need specific bright-line rules to curb AI use where it has demonstrated harms to consumers and competition. As an example, the passage of a Federal data privacy law, including a strong data minimization mandate, should be an urgent priority here.

Last, we need legislation that will tackle the market structure and gatekeeper power of dominant digital platforms, which hold an unprecedented amount of economic and political power. Thank you very much for your time, and I look forward to your questions.

[The prepared statement of Dr. West appears as a submission for the record.]

Chair KLOBUCHAR. Thank you. Professor Alford.

**STATEMENT OF ROGER P. ALFORD, PROFESSOR  
OF LAW, UNIVERSITY OF NOTRE DAME LAW SCHOOL,  
SOUTH BEND, INDIANA**

Professor ALFORD. Chairwoman Klobuchar, Ranking Member Lee, and Members of the Committee, thank you for inviting me to testify today to discuss the impact of algorithms on competition.

Let me begin by just saying that this is a matter that is both a global concern and a matter of bipartisan concern. When I was at the DOJ, I traveled the world, and it was rare to go to an antitrust conference where there was not discussion about the monopolization abuse of Big Tech companies.

Likewise, here in the United States, the Trump administration, and the Biden administration, and almost every State attorney general have filed landmark antitrust litigation against Big Tech.

Both Senator Hawley and Senator Klobuchar have written books expressing grave concern about Big Tech abuse of power. Senators across the political spectrum have expressed this concern.

In my written statement, I provided quotes of different Senators from this Committee, and, unless you look at the footnotes, it's hard to know which side they're on, in terms of their expression of concern. Much of the concern relates to how Big Tech has harnessed algorithms to exert market power like never before in history.

Despite the obvious benefits of algorithms, which we can all concede, their emergence creates enormous risks for the abuse of monopoly power, and is a facilitating factor in collusion between competitors. The algorithms themselves recognize that they pose a risk to competition.

When I typed in the query, "How do algorithms harm competition?" ChatGPT unabashedly confessed to me that algorithms can harm competition in several ways, and then it offered a half dozen different ways that it, algorithms, can be harmful. It then concluded with a warning to lawmakers that the fast-paced nature of

technology often outpaces regulatory measures, which I think this Committee should take as a challenge.

With respect to price fixing, we've already talked about different examples. Most recently in the *RealPage* case, the Department of Justice has declared that weather firms effectuate a price fixing scheme through a software algorithm or through a human-to-human interaction should be of no legal significance.

The *RealPage* example is but one that you have already had a hearing about. Other examples in price fixing, we know from 2016 that there was a criminal investigation and prosecution of sellers on Amazon Marketplace that led to a conviction with respect to price fixing through algorithms.

And then, also just most recently with the JetBlue-Spirit merger, information signaling through, so-called flashing is happening where you're signaling to competitors what your pricing behavior should be, and basically encouraging your competitors to change your pricing behavior. All of those are examples have different types of price fixing through algorithms.

According to the DOJ Justice Surrendering and Freedom of Action, and agreeing to abide by the will of a trade association—which by the way I was involved in, in the recent real estate price fixing. I as an expert witness in which \$1.8 billion was awarded against the National Association of Realtors—we know that following the trade association rules should be viewed as and frowned upon.

The same is true with respect to algorithms. Concerted action by an algorithm and reliance on a joint algorithm generates price collusion.

With respect to monopoly abuse, there's so much to be said. I encourage you to look at my written comments, but let me just make a few quick comments about monopoly abuse through algorithms.

In the Federal Trade Commission's complaint against Amazon, Amazon algorithms detected if a seller offers a lower price on any other online store, anywhere on the internet, and it would punish those sellers on Amazon by disqualifying the seller from utilizing the "Add to Cart" or the "Buy Now" button.

I don't even know how to buy anything on Amazon without the "Add to Cart" or the "Buy Now" button, but if you do have any price competition anywhere, then you basically will be taken off of that opportunity. And in Amazon's words when they do that, the sales of those sellers tank.

With respect to *Google* search litigation, I think we've all been riveted by the recent litigation that's happened here in DC against Google on search. We know that Google denies competitors the opportunity to scale. That was the essential argument what was happening with respect to those revenue sharing agreements. Google wants consumers to reach the conclusion that their competitors are inferior. They use a less polite word than that, and it will spend billions to control upstream inputs to deny its competitors the opportunity to improve.

How it does so is simple. Search algorithms require query and click data to train the algorithms to improve search quality results. And in 2021, Google paid over \$18 billion to Apple—or 36 percent of its mobile annual ad revenue—to be the default searching engine

of Safari, and we know what happened with Bing in terms of their search capabilities. Their mobile search capabilities are far inferior to their desktop.

Finally, with respect to *Google* ad tech litigation, we know that Google uses algorithms to rig auctions in the digital advertising marketplace. Because of Google's involvement and dominance on the buy side, and the sell side, and the exchanges, and in the middle, it has information advantages and uses those advantages to exploit it to its own benefit.

My time has run out. Let me just conclude with a recognition that both Senator Lee and Senator Klobuchar had won great success last year, and that was the State Antitrust Venue Act. And I just want to thank you for that. We finally are back in Texas after 2 years of languishing in New York because of the work that you've done, and that's been a significant impact on the litigation that we've been pursuing against Google.

And then finally, the legislation that was attempted last year, the AMERICA Act of S. 1073, I think that that is a great solution. It's attempting to do much of what the litigation is trying to do, and I commend you for that legislation as well. Thank you.

[The prepared statement of Professor Alford appears as a submission for the record.]

Chair KLOBUCHAR. Thank you very much. I'm going to have Mazie Hirono take my place. She's been diligently here to go first, so thank you.

Senator HIRONO. Kind of you, Madam Chair. Thank you very much. So, listening to all of you, we know that algorithms are being used in many different ways, and it is very hard to keep track at the—I feel very—how shall I say? At a loss, as we have to navigate the waters that are before us.

So, one consideration would be, perhaps, that we should have maybe at this point a dedicated digital platform regulator, this for Mr. Baer, and so maybe a competition promoting regulator who could act in this space the way the FCC did, and what is it—*Carterfone* back in 1968.

So, do you think we should be considering a new dedicated digital platform regulator? Or would resources be better spent bulking up our current antitrust enforcers? Do you have anything to say about that?

Mr. BAER. I always have things to say in just about everything, whether they're thoughtful or not. I do think that serious consideration ought to be given to a digital regulator. Whether that's a better idea than simply enhancing the FTC's authority to do it, it seems to me an open question.

One of the cynical observations I'd make is, we've seen companies like Facebook, Meta, Google, others say, just tell us what the guardrails are. Give us some perspective guidance, you know. And there was a huge Facebook PR campaign a couple years ago about that. But the minute anybody puts something on the table, suddenly it's "Katy, bar the door," and we can't do that.

So, I do think looking, though, for some prospective guidance so that companies that want to behave, are able to train their employees to behave, is worth doing. Antitrust enforcement, other than



mergers, is always after the fact. And it takes a long time for the enforcement to catch up with the conduct.

So, in this area, given how fast paced it is, as a number of my colleagues have observed, trying to find a way to get out front makes a lot of sense.

Senator HIRONO. I think that is the concern that so many of us have, that things are moving so quickly that whatever regulatory framework we can put in place is already outdated by the time we figure out how to regulate in this space.

So, Mr. Hewitt, you gave a lot of examples of how there can be all kinds of discrimination happening with the use of algorithms. And I am worried about the potential, more than potential for making discrimination into algorithms, especially if the algorithms are going to be used for things like lending.

And you already mentioned that, you know, in the space of housing discrimination, there are all kinds of discriminatory decisions that can be made and that people are not even aware that it is happening. But it's through the use of algorithms.

So Fair Housing lending—there are Government testers, for example, or shoppers who apply for housing and loans in order to root out potential discrimination. How important is the testing, to this kind of testing, to uncovering discrimination in the housing and lending context where algorithms may be at play?

Mr. HEWITT. Well, thank you, Senator Hirono. Testing is a classic, you know, time-honored, tried-and-true technique that helps to build an evidentiary basis in all sorts of civil rights litigation and enforcement with respect to public accommodations in general. I believe the Department of Justice used testing online to effectuate its charges and settlement with respect to Meta or Facebook.

I would also say, however, that as important as testing is, we would need millions of testers to keep pace and keep up. Which is why we need also legislation that compliments the testing, legislation—regulation that is a prophylactic that requires beforehand testing.

Not testing only in the marketplace, but testing beforehand, almost akin to an environmental impact assessment. We wouldn't disturb the environment or an ecosystem before having some analysis of the impacts. And so I think that would be a perfect complement to testing, even though testing, as you indicated, remains critical and important.

Senator HIRONO. And I think that—doesn't the Supreme Court have a case that could set aside the ability of nonprofits and others to engage in testing?

Mr. HEWITT. If you were referring to the—

Senator HIRONO. I think there's a case.

Mr. HEWITT. The *Atkinson* hotels case.

Senator HIRONO. So, we have to worry about that. And I know that you notice some of the parameters that you would like us to consider for legis—regulatory legislation. So, I hope we can come up with something in this space, even if it's fast moving and complicated. Thank you, Madam Chair.

Chair KLOBUCHAR. Thank you. Senator Lee.

[Pause.]

Chair KLOBUCHAR. They're like an Olympic commentary. They're saying, "Well, he's preparing now. He's coming down to the floor."

Senator LEE. Thanks so much, Madam Chair. I really enjoyed your opening statements. Thank you for that.

Professor ALFORD, I want to start with you, if that's all right. In 2024, both the DOJ and the State attorneys general are going to have trials regarding Google's abuse of its monopoly power, specifically in the ad tech market. Can you discuss with us just a little bit about how legislation in the ad tech market might be part of the solution in addition to litigation?

Professor ALFORD. Sure. Yes. So, as you said, in 2024, we anticipate that the *Department of Justice* ad tech case, as well as the—we can anticipate, as I said, in 2024, the *DOJ* ad tech case, as well as the State AG ad tech case, led by Texas, will go to trial.

But, as we've seen already from the past few years, there's extraordinarily hurt—extraordinary hurdles associated with those two cases. Extreme delay, complete denial of any sort of wrongdoing whatsoever, the exercise of privilege abuse that Judge Donato recently called was a frontal assault on the administration of justice.

And so, we know that the—and even if there is success, the likelihood of a full structural remedy that would actually correct the market in the way that it should, is a best case scenario. So you're—the legislation—

Senator LEE. That's compounded by some of the dynamics that we're describing—

Professor ALFORD. Exactly.

Senator LEE [continuing]. The inherent difficulty in understanding what's happening within the algorithm.

Professor ALFORD. Exactly, exactly. So, the legislation that you proposed, S. 1073, the AMERICA Act, goes to the heart of the concerns in the DOJ litigation and in the State AG litigation, which is to recognize the conflicts of interest, to have one company or a set of large companies have a control over the buy side, control over the sell side, and control over the exchange in the middle, and basically use that information to advantage itself and to harm its own clients is just fundamentally problematic.

It's not the kind of thing that we see in other markets. And so, the bill that you've proposed is essentially attempting to get at that issue, and particularly for the very largest ones.

With respect to the middle tier companies, your legislation tries to do something, which is essentially provide more transparency obligations to act in the best interests of their clients rather than their own interests. So, it's a very salutatory development, and I hope that there's hearings and votes on that legislation.

Senator LEE. So, in other words, would it be fair to say that—well, existing authorities—enforcement and litigation under existing authorities may well be capable of addressing the problem in this particular environment with algorithms and what you can use them to do in the marketplace may take so long to get to the result that you want, that it may become obsolete, and therefore not ideally suitable to deliver the win for competition and therefore the consumer that you need.

Professor ALFORD. Yes. And also, I should add that, you know, the complaints are over hundreds of pages, and you can only try so many of the core issues in those cases. And so the legislation can, I think, get at more problems than simply what the litigation will be able to get to.

Senator LEE. Now, it can be a little bit challenging to digest the true scale of these digital markets and to comprehend the vast impact that they have on our society and our internet economy. Can you offer any insights in that regard, help us to understand that?

Professor ALFORD. Sure. So, you know, I've been working on the State AGs case against Google for years now, and there's a lot of different things one could highlight.

But essentially, you know, if you control the information and you control the inventory that is provided to the exchanges, you can do a lot of things through algorithms that no other competitor can do.

You can sequence when the bidding happens so that you get the first bids. You can peek at the information that is being offered in bid on other exchanges, and then you can adjust your pricing behavior so that you will win the bid simply by offering a penny less.

So basically, you'll starve the other exchanges from competition just by peaking insider trading—I guess you could call it, and then using that, you can offer it advantages that are only available if you go to their exchange, like real time bidding.

And so, you can do things like uniform pricing behavior where there might be that sellers want to go with another exchange, and they'll have different ceilings and different floors, but Google will impose uniform pricing behaviors so that's impossible to do that. So the whole range of different things that are happening with respect to the abuse of this monopoly power.

Senator LEE. Now, one could argue that the same things in an environment where there is robust competition, those same things could maximize consumer welfare by bringing, you know, bringing up price, bringing down price, and increased quality all at the same time. Because if it operates in an efficient marketplace, it's make—makes an efficient marketplace in which there is robust competition even more efficient.

Can you talk a little bit about how artificial intelligence itself might be made to thwart that? What are some of the competitive risks of Big Tech in, specifically, in the emerging AI space?

Professor ALFORD. So, with respect to artificial intelligence, it's extremely new. It's extremely emerging. But we know several things. One, the startup cost and the barriers to entry are extraordinarily high. Unbelievably high.

Senator LEE. Just because of the computing power?

Professor ALFORD. The sheer computing power. The information that you need to have inputs into the database, the training data, the cloud storage alone is just astronomical. And the potential for mistakes if you don't have sufficient data are enormous. The parlance, of course, is hallucination.

But if you actually, like, dig down to what is a hallucination, that's what happens when the training data is insufficient, and it hasn't been asked that question before in the information data and so it overfits, is the language that they use.

Senator LEE. Meaning it makes stuff up.

Professor ALFORD. It makes stuff up, exactly, but that's because of the insufficient data. So, you can well imagine that the data brokers, that those that control the data are going to have the advantage in, within the AI space and new entrants, new emerging players are not—are going to have extreme difficulty trying to have the sufficient amount of data to be able to compete.

So, the similar problems that you're seeing in Search where there's just not enough data for tail queries to be successful on Bing, that kind of thing could happen with respect to AI, as well.

Senator LEE. It'd be good if they could give us a warning when it's hallucinating, play a Pink Floyd song, or something like that. [Laughter.]

Senator LEE. I don't know. All right. My time's expired.

Chair KLOBUCHAR. Or use a watermark. Okay. All right. Thank you very much, Senator Lee.

Mr. Baer, when you led the DOJ Antitrust Division, you brought, as you pointed out, the division's first-ever prosecution of price fixing case involving algorithms. The challenge is presented by algorithmic pricing. I have only become more acute, as we've all, a number of us have pointed out. What challenges do enforcers face today when attempting to bring the cases against groups of competitors that use algorithmic price setting tools to increase prices?

Mr. BAER. The first problem, the biggest problem is simply detection. This case we brought, in 2015, involved two sellers of poster art on the Amazon Marketplace. They apparently concluded that there was too much price competition. They got together, the two companies in London, and wrote code that would basically—when anyone searched for poster art, these two would pop up in random order, but always at the same price.

That's hard to detect. How do we find it out there? I think it's fair to assume that one of the companies did an internal audit, found out it was involved in this scheme—

Chair KLOBUCHAR. I see, they reported—

Mr. BAER [continuing]. And came in and ratted themselves out. That doesn't happen all the time. In fact, it happens very little of the time. So, it is really—

Chair KLOBUCHAR. And you also don't always have the two people writing code in London. So, what are they doing now?

Mr. BAER. So, you know, that—the worry, as I talk about in my testimony, is that you may be able to get to the same result if everybody just writes code that is roughly comparable, and the machines who can gather data in nanoseconds can figure out that cutting price over the long run is a losing strategy. And so, the worry is, independent decisions by firms in the same market may result in massive spread of anticompetitive pricing. That's the worry.

Chair KLOBUCHAR. That's because they're able to, so they all—they don't really want to reduce prices. So they—even though that's what competition is about, the reason you reduce prices to get more customers. But they can figure out through the algorithms well, where they don't really need to increase the prices. Is that where it is? Like—so explain it to me.

Mr. BAER. Yes. The notion is that if the machines learn that if I discount, somebody else's pricing algorithm is going to price below me, and I'm going to quickly realize whatever gain I got from that

initial price reduction goes away and the Pareto optimal prices is going back to something that is less competitive. I mean, to me that's what antitrust is all about. Finding fact patterns where consumer interests diverge from company self-interest.

We've seen it in oligopolistic markets over time that firms independently figure out if we just track each other's pricing and don't compete, we're better off. With pricing algorithms, it's quite possible rather than having a concentrated two, three, four-firm market that the algorithms themselves, the machine learning will enable everybody to figure out price gutting isn't good for the bottom line even though it is good for consumers.

Chair KLOBUCHAR. Yes. So how can Congress ensure that courts properly evaluate cases involving the algorithmic price fixing where an agreement's difficult to prove?

Mr. BAER. So, I think the first instance, as I said in my testimony, I think the antitrust agencies need to develop the data that establishes this is going on.

You know, antitrust law evolves through common law and to point out situations that aren't reached by the current interpretation of what constitutes an agreement, what are the plus factors from which a court can infer a meeting of the minds, the knowing use of the same kind of pricing algorithm. If we can demonstrate that's going on and it has an impact, we can, as enforcers, encourage the courts.

But it may well be that's not going to be enough. And it may well be that there needs to be legislation. It's a subtle tweak to Section 1 of the Sherman Act, but that basically directs the courts to take into account the anticompetitive impact of common use of pricing algorithms in the same market.

Chair KLOBUCHAR. Yes, we tend to be able to handle subtle tweaks better than other things. So, thank you.

The FTC, Mr. Alford, recently sued Amazon for illegally monopolizing e-commerce related markets. Part of the allegation center on Amazon's use of price-scraping tools and algorithms that punish small businesses, relying on algorithms on Amazon—not algorithms—for setting lower prices off of Amazon. Can you explain how these anti-discounting pricing algorithms harm competition and increase prices?

Professor ALFORD. Yes. So, the Amazon complaint, I think, is incredibly well written and useful, and they talk about a variety of different behaviors. But with respect to the algorithmic behavior, I think there's two key things to note. One—and both of them is with respect to sellers and the way sellers behave on the Amazon platform and then off the Amazon platform.

With respect to on the Amazon platform, it monitors what third-party sellers are doing. And anytime a third-party seller on Amazon lowers the price, then Amazon will match that price exactly.

And the reason that they do that is because they want to make sure that third-party sellers don't get any sort of increase in market share. And then it basically dissuades any—there's no incentive to lower your prices—

Chair KLOBUCHAR. Or increase prices—

Professor ALFORD [continuing]. Because whatever price you offer, Amazon's going to go down there.

Chair KLOBUCHAR. They're going to beat you, and they're going to beat you in a big way when they do it.

Professor ALFORD. That's right.

Chair KLOBUCHAR. They have the information.

Professor ALFORD. That's the first thing that they do. That they basically disincentivize any sort of price competition to increase market share.

The second thing they do is what I said already in my opening remarks, and that is they eliminated, under pressure, the price parity clauses in the contracts, and yet they create a punishment mechanism for Amazon, where if you sell your product on a third-party website, including perhaps your own website, your own company website, at a price lower than what is available on Amazon, then they're going to punish you by preventing you from accessing the key feature that everyone uses to buy stuff on Amazon, which is the "Buy Now" or the "Add to Cart" feature.

You can't get on there if you offer a lower price on Target, or Walmart, or any other website online.

And the result of that, because of 98 percent of all Amazon sales use an "Add to Cart" and "Buy Now" feature, the sales of those third-party sellers tank. In my written remarks, I said that it's like Amazon in this respect is like the predators in the sci-fi movie, "A Quiet Place"—if we're going to use movie references—where they'd seek to destroy any Amazon seller that dares to utter the sound of price competition.

[Laughter.]

Chair KLOBUCHAR. Very good, very good. And, I mean, one of the extraordinary things about that complaint and the FTC, I thought that when they put it out there, it was pretty understandable, actually. One of the things that just stuck with me was that 50 percent of the small business revenue was going to them—

Professor ALFORD. Yes.

Chair KLOBUCHAR [continuing]. You know, because they have no choice and they have to advertise.

Mr. Hewitt, another issue related, algorithms can perpetuate past patterns of bias and discrimination, which you well illustrated in your testimony. This can result in fewer options, higher prices for historically underserved consumers. What commercial uses of algorithms concern you the most when it comes to perpetuating bias and discrimination against underserved consumers?

Mr. HEWITT. Thank you, Senator Klobuchar. I would say housing and auto insurance are two that really stand out—and housing in particular, the mortgage market. I mean, so many Americans are priced out these days, ostensibly because of housing stock availability and also interest rates.

But even when folks are trying to get a loan, we've seen research indicating that when algorithms determine what mortgage rates should be, that we see home buyers—prospective home buyers of color essentially blocked out and iced out. It creates this big distortion in the market. And so, it actually leads to this cascading sense of, "Well, I can't afford it." "They're not going to allow me to afford it." And, "Being a homeowner isn't even within reach for me."

With respect to auto insurance, there are companies that have tried to use geographic location as the means to determine what

types of rates you will—you will receive. And so, if you think about it, if you happen to be a Black person living in a majority Black neighborhood, you're going to get sometimes higher rates quoted for you than somebody who lives in a neighborhood just a mile away. It doesn't make market sense in our view.

And so, the whole notion of competition which is within this Committee's, you know, ambit, really gets turned upside down. Because how can you have real competition when you have some sub-segments of the consumer marketplace who don't even have real choices at all?

Chair KLOBUCHAR. Mm-hmm. Well said. All right. I've gone way over my time here.

So—do you want to let Senator Welch go, and then—okay. He's been so good sitting there. So, we'll have Senator Welch go next, and then I'm sure Senator Lee and I have questions for you, as well. Thank you. Well, go ahead.

Senator WELCH. Yes. I'll be brief. This is an incredible hearing. You know, people think the fix is in, but they don't really know how. And you're explaining how it is, and it's really pretty astonishing how small business folks are getting so incredibly ripped off.

So, I want to thank you for the clarity of your presentation, and the deep work behind that. And I want to thank Senator Klobuchar and Senator Lee. I mean, the Senate needs to be dealing with this, and you're the leaders on this. So, I express my gratitude for that.

You know, you've been talking—actually, you, Mr. Hewitt, and Mr. Baer, about housing. It is a brutal problem. Incredible in Vermont, nobody can live anywhere close to where they work. It's really tough—that affordability crisis is real, not just in housing. You mentioned auto insurance, but it's pretty much everything. You just got to take what you—you don't have any bargaining power at all.

And housing, do you remember that algorithm, it was called Rent Maximizer? That was before they realized maybe we shouldn't advertise what we're doing. And they changed—they changed the name, but not the game. And all these companies have been able to evade the antitrust laws, the significant part because the antitrust laws just didn't anticipate—and how could they—the world we're in with digital commerce.

So, Mr. Baer, I'll start with you. Just be specific, if you can, about how our antitrust laws cover any competitive behavior like this, and what do we have to do with respect to our antitrust laws and legal standards to address the reality of this anticompetitive behavior with a different tool? You know, “Bob isn't doing it,” as you mentioned, but it's happening with the algorithm.

Mr. BAER. Right. So, I think, first of all, some of this behavior is being reached by not just the public antitrust enforcers, but by private plaintiffs who are acting on behalf of hotel customers, on behalf of apartment renters. So, there is some movement. The challenge is when, as I indicated earlier, competitors are independently and knowingly using the same type of algorithm without writing it together, that produces the same results as if they had sat down in London—

Senator WELCH. So, what can we—

Mr. BAER [continuing]. Together, had a drink, and written the mass. So——

Senator WELCH. What can we do about it?

Mr. BAER [continuing]. That's the problem.

Senator WELCH. I mean, you've got, you know, one of the most conservative Senators in the Senate, you know, Senator Klobuchar, and you've got one of the most liberal, Mr. Lee, right here.

[Laughter.]

Mr. BAER. Yes.

Senator WELCH. Or did I get that wrong?

Mr. BAER. Well, maybe not on this one.

Senator WELCH. But they're both here because they share this common concern. So, what's your recommendation on one of the remedies we should pursue?

Mr. BAER. So, I think encouraging the FTC to consider use of Section 5, unfair methods of competition authority, to bridge the gap between overt collusion and this sort of indirect collusion is one thing. If the courts aren't going to embrace that, and we don't know that they will, I think there needs to be a legislative solution——

Senator WELCH. Let me go to Dr. West, because I only have a little time. Can you discuss some of the risks surrounding the data collection, and whether or not and why you think a user should have to give their express informed consent before an AI system harvests their data?

Dr. WEST. So, you know, data is a really key source of power for the firms that are engaged—talk button. Data is a key source of power for the firms that are using algorithmic pricing. It's what gives them these information asymmetries that let them, you know, exact as much out of consumers than they would otherwise. It's also what enables them to deny other competitors that lack that data advantage access to the market.

So, you know, given this, you know, there's a feedback loop in that it creates strong incentives for firms that are utilizing these tools not only to leverage the data that they have, but to continue to collect and retain as much data as possible. And that's why bright-line rules like data minimization are particularly key.

Senator WELCH. Thank you. Mr. Hewitt, can you discuss the impact of collecting mass user data, especially without receiving that informed consent that Dr. West is talking about? How does that affect lower income communities?

Mr. HEWITT. Sure. Well, the companies that rely heavily on algorithms, especially whether it be social media or others in the consumer space, more squarely, they think they're holding up a mirror to us, showing us who we are. When in fact, it's really more like a fun house mirror. It's distorted. It's giving a distorted picture, and it's essentially trying to tell us who we are.

And the driver of that story about who they think we are is based upon what Senator Klobuchar said in her opening remarks, "garbage in, garbage out" data that is based upon a history of redlining and discrimination.

It doesn't just so happen that our communities residentially are de facto segregated. It's because they were once digitally segregated. It's because of prohibited redlining practices and now we



have digital redlining. That's essentially—that's what's been happening.

And so, if all of our data is based upon explicit or structural discrimination, then we can't make that be the driver of all reality going forward.

Senator WELCH. Thank you very much. And by the way, my first job in law school was with the Lawyers' Committee for Civil Rights Under Law.

Mr. HEWITT. How about that?

Senator WELCH. Yes, it's something. Thank you.

Mr. HEWITT. Thank you for your service.

[Laughter.]

Chair KLOBUCHAR. All right, well thank you very much, Senator Welch. Senator Lee, you have some follow-ups.

Senator LEE. Thank you. Dr. Epstein, I'd like to go to you next. America's Digital Shield project has, I think, it's over 13,000 field agents. I see you're nodding your head, I'm in the ballpark, that allow the collection of data to recreate authentic online experiences.

And it's my understanding that it operates in a manner that's designed, maybe, kind of, to replicate or exceed the capabilities of the Nielsen research data system, with the latter system referring to TV viewers of course.

It's different when you're dealing with the internet because it's much broader, much more—it moves much more quickly. Can you explain a little bit how you analyze this data to reach some of the results that you're looking for and how you go about that?

Dr. EPSTEIN. Yes, but first I have to say for the record that the road to hell is paved with good intentions. And you folks on this Committee have very good intentions and you're wonderful people. But you don't understand—you're not really hearing what's being said to you. What's being said to you is, you can't regulate algorithms.

I've been a programmer since I was 13. I can tell you for sure, algorithms, especially nowadays, are completely opaque. And even if you tried to, they would outprogram you long before you got that final vote, long before you got a bill passed.

Senator LEE. Yes. I don't recall ever having said that we should regulate algorithms, nor do I think that's—

Dr. EPSTEIN. Well, you're talking about—

Senator LEE [continuing]. Physically possible.

Dr. EPSTEIN [continuing]. Appointing a special algorithm regulator.

Chair KLOBUCHAR. There was just one question, I think.

Dr. EPSTEIN. Australia tried regulating algorithms. Your concerns here are just not where they should be, in my opinion. Instead, you have to look at what you just asked about, which is you have to look at where the rubber meets the road. It doesn't matter who's programming what. What matters is what the consumer is actually getting on his or her computer.

And all of that is personalized. There's no way to know what they're getting unless you are looking over the shoulders of a very large number of real users who cannot be identified by the tech companies.

And we've been building that kind of technology since 2016, and America's Digital Shield is our attempt now to build a permanent, self-sustaining system that looks over the shoulders of tens of thousands of Americans in all 50 States, politically balanced, representative of each population in each State, and court-admissible. And that is what we have been doing.

And it's very, very difficult. That's a \$3 million website you were looking at. It's very difficult to find those voters, explain to them what we're doing, get them to agree to sign NDAs, very rigorous NDAs, and that's what we do.

Senator LEE. Okay. Can I ask a question about your Youth Content Project?

Dr. EPSTEIN. Yes.

Senator LEE. It's my understanding that it's shown that Google's exposing children to videos on YouTube that are inappropriate. In some cases, sexually explicit, or otherwise disturbing, harmful in one way or another. How has your research uncovered this under the UpNext feature? And how do you—how does YouTube use algorithms to select the UpNext content shown to children?

Dr. EPSTEIN. Well, this has already been mentioned by other people here, but YouTube selects content to increase watch time. And this is true even for 5-year-olds. They want more watch time because then the 5-year-old will run to mommy and say, "Mommy, buy that." So that's the key here. Watch time equals revenue. Period. Leaks from these companies, especially Facebook, have shown this unequivocally.

So, what we are doing now, we have, through our field agents, we've gotten—we've been able to connect to our system, the mobile devices of more than 2,600 children—children of some of our field agents who want to know what content those kids are seeing. And this content—if someone would turn the screen on, again, it's displaying right now in real time.

This content is shocking. I've had research staff who will not work with this content. They won't do it because it is so disturbing. This is going to our kids, and it's going to kids in such a way that parents don't even know what's going on.

[Large viewing screen is displayed.]

Dr. EPSTEIN. There is no way to understand anything that's happening on the internet unless you are looking over the shoulders of tens of thousands of real people. They have to be real people, real kids, real voters.

That's why we've been working so hard to build this system—and it works. And we have learned ways to analyze the data in real time that's streaming in for more than 10,000 computers, and we're going to get that number up to 40 or 50,000, if we can.

Senator LEE. And to be clear, that's content that's appearing on a platform designed for kids, marketed to kids, marketed to parents as for kids.

Dr. EPSTEIN. Not only are these images coming from real videos being watched by real kids, these are recommended——

Senator LEE. Right.

Dr. EPSTEIN [continuing]. These are recommended videos. We keep track——

Senator LEE. For kids——

Dr. EPSTEIN [continuing]. Of what's—

Senator LEE [continuing]. Recommended.

Dr. EPSTEIN [continuing]. Recommended and what they're—what people are actually watching.

Senator LEE. Now tell me, if you can, imagine a world in which Google did not have monopolistic market power. Just imagine that world for a minute—John Lennon's "Imagine" is playing in the back of your mind. How—how would Google's behavior change? How would the experience with Google and Google products change?

Dr. EPSTEIN. I'm not exactly sure what you're asking.

Senator LEE. So, any of the things that we're talking about. Would—would Google ever have been in a position where it was telling half the country which side of the political aisle it wanted them to gravitate toward? Would it be directing content to kids that it shouldn't be?

Dr. EPSTEIN. If we were monitoring on a large scale and in a scientifically validated manner, which is what we've been building here, okay, Google would pull out. They still could make billions of dollars, but they would pull out. They'd stop the manipulations of our elections. They'd stop the manipulation of pricing to the extent that they're doing it. They would stop because they could still make money, but we would be making them accountable.

What you're seeing on the screen right now are elections that Google has flipped. We have a long, long list of elections that Google has flipped—

[Large viewing screen is displayed.]

Dr. EPSTEIN [continuing]. Because we now know how to calculate precisely how many of the votes they're shifting in each election because we not only have the basic research, but we also now have evidence coming to the eyeballs of real voters. We have the evidence showing they're actually showing people this content.

Senator LEE. Thank you. Professor Alford, I want to ask a variation of the same question to you. What—what would Google look like, or how would it be different than it is today if it didn't have monopolistic control? If it didn't have market dominance that it does?

Professor ALFORD. Yes. Let me just respond to—

Senator LEE. Yes.

Professor ALFORD [continuing]. His comment, if I can, as well. He says the road to hell is paved with good intentions, but also the road to heaven is paved with good intentions, as well, I think.

And you cannot regulate algorithms, but you can identify where the incentives are, and you can address concerns about conflicts of interest, and you can create structural relief for the largest companies and impose duties of—the best-interest duties and things like that on the medium-sized companies.

So you can do things to address the incentives even if you can't regulate the algorithms directly. The answer to your question—

Senator LEE. It's not the algorithm that you're really after, it's—

Professor ALFORD. It's the incentives.

Senator LEE [continuing]. Wanting to regulate. Yes.

Professor ALFORD Exactly. But to answer your question, if there was competition, genuine competition in the marketplace, then companies would do the best that they can to increase their market share, and address all of their audiences in a way that was respectful of them. Right?

They would—they would engage in behavior that increased the chances of them maintaining the audience. Because if the audience is upset with you, they'll go somewhere else.

We know with other markets where there are price competition, or quality competition, or viewpoint competition that individuals migrate to those other alternatives. Right?

And so, I think the fact that there's not sufficient competition in these marketplaces means that they do what you said, which is they abuse their own clients. And they wouldn't do that if there was genuine competition.

Senator LEE. Thank you.

Chair KLOBUCHAR. Okay. Thank you very much, Senator Lee. I guess I'd start out with you, Dr. West, of, sort of, this area of what we can do, and no one is serious that we're going to lean, we're going to look over at people's algorithms and the like, and be in their homes.

To the opposite. We want to get more privacy regulation and control their rights on their data, and we also want to protect kids more. There's many upgrades we can make to those laws and—but right now we're focused on the competition piece of it.

And Dr. West, one idea that would be helpful, I think, to figure out what's going on, is to allow more transparency. We are talking about the opaqueness of this. How can increased transparency help protect consumers from anticompetitive conduct by algorithms? And of course, we had this bill, Senator Coons and I, and others about allowing researchers to know what's going on. Dr. West.

Dr. WEST. Absolutely. I think it's a great question. So, for one, given the domains in which algorithmic systems are being deployed, it's particularly important that consumers know when algorithmic systems have been used in making decisions that are shaping their lives, their access to resources, their life chances.

And that's a step toward addressing the significant information asymmetries that give dominant firms their power. But it's also clear that transparency won't be enough, because often these systems are used by those with, you know, greater power on those with comparatively less power. You know, think about in the workplace, in, you know, real estate, where you're applying for housing in a concentrated market.

There may not be an option to opt out or to seek remedy, and that's why complementing transparency mandates with strong enforcement of our existing laws and other bright-line measures is going to be especially important to protecting both consumers and competition.

Chair KLOBUCHAR. Okay. Very good. And would you like to add anything else about other issues that have been raised here?

Dr. WEST. I would just concur with Professor Alford that you can regulate companies, and we should regulate tech companies, in particular.

Chair KLOBUCHAR. Yes. As you know, we haven't done any—we've passed things out of this Committee, and Senator Lee and I passed the Venue bill, which allows State AGs to do more, and we've given some more resources to our enforcers.

But so far, getting these through the floor in both Houses has aluded us in terms of putting some guardrails in place, and I think that this—the time is passing here and we have to get this done.

So, I guess I turn to you, Mr. Hewitt. You heard about the discussion about what can be done. Could you talk a little bit about what Congress can do to get at some of the issues that we have raised that you and I talked about with discrimination?

Mr. HEWITT. Sure. Well, transparency, Senator Klobuchar, is certainly part of it. We also need something that frankly could trigger an incentive to do the right thing, and that is potential liability. That's where—

Chair KLOBUCHAR. I was—when Senator Lee was, sort of, he paused and he said, "What if Google didn't have," and then you, you said a monopoly, which is true and a very valid question. I thought you were going to say, "What if they didn't have immunity from any lawsuit?"

Mr. HEWITT. Well, it's—

Chair KLOBUCHAR. And that to me is something Senator Graham has been pushing for a long time because of the inability of the Congress to take any action on any of these things. And luckily, we have, again, given the tools or resources to the antitrust enforcers to do it.

But we really don't have any choice, then, because there is—unless we just want this to continue where fentanyl-laced pills are being sold on these sites—one-third of the people that get poisoned with fentanyl get them off the platforms, whether we want to just continue with some of the pornography, the revenge porn, all these things going on. There's just no liability, and they're raking in like a \$1 trillion dollars, so. Oh, that's how much their value is.

Mr. HEWITT. That's right.

Chair KLOBUCHAR. So, I just—at some point, they use some of that profit to get the stuff off their sites. It's just like—it's pretty much common sense when we regulate everything else. But Mr. Hewitt, I didn't mean to interrupt you. But thank you for raising the point. Continue.

Mr. HEWITT. Well, look, I will just—I know we're short on time. I will say there's a host of harms. As this Committee does its work, I'm also thinking about how this fits into the AI Insight Forum, where I saw you a few weeks ago, where we focused on the impact of AI on elections and democracy.

I think about the fact that platforms like YouTube are an information super highway for white supremacist content. The same content that inspired the shooter in Buffalo who went to a Black neighborhood just to kill Black people, that content was on YouTube in 2019. We sent a letter asking them to take it down from a particular user. But we can't whack every single mole.

And so, you're right that potential liability must be on the table for these companies, whether it be in terms of social media companies or other companies. And we're not talking about lawsuits flying left and right, we're talking about incentivizing proper conduct.

If anyone on this Committee or any of your staff used a toaster for breakfast this morning, that toaster is more regulated than AI is regulated today. That does not make any common sense, and that is a problem that Congress can address.

Chair KLOBUCHAR. Well said. Mr. Baer, many dominant tech companies use algorithms, as we know, to determine what consumers are going to see in response to a search query. This gives them, as we just talked about with Professor Alford, it gives them ability to preference their own products and bury those of their competitors.

That's one of the reasons that Senator Grassley and I and others on this Committee introduced the American Innovation and Choice Online Act, to set commonsense rules of the road. How can this type of self-preferencing by entrenched gatekeepers harm competition and deter innovation?

Mr. BAER. Well, if people are locked in, if companies, the platforms have market power, if they are essential to communicate with consumers, that gives them the power to exclude rivals, to preference their own products, to extract rent from people, to get placement on the website that disadvantages those who want to compete.

People have talked about the Amazon complaint by the FTC, which I agree is a very thoughtful, plain English description of some of these bad behaviors. But this notion that you can penalize people that price lower on sites other than Amazon, that tends to be a most-favored-nations thing where the rising tide inappropriately lifts all boats up to the same price.

Amazon, too, according to that complaint, can basically penalize and does penalize firms that have, find a less expensive way of delivering the product to a consumer not using Amazon's Prime delivery service.

As you noted earlier, that a company that is on Amazon, and you need to be Amazon because it's a dominant provider, they basically get a whole lot less of the price a consumer is paying for the product or service they're buying.

And if you can't offer it for less anywhere else, we have this situation that your legislation would address that would stop those dominant firms from profiting off their dominant position.

Chair KLOBUCHAR. Thank you. Here's an interesting one, Ms. West. So, we've always assumed that these price-fixing cartels are likely to form in highly concentrated industries. Right? Because they're the ones that they're—they tend to be able to say, okay, let's just fix this price, and then there aren't other people out there, so we're going to make a lot of money.

But algorithms actually can expand the number of industries in which price fixing can occur. How does the use of algorithms and artificial intelligence potentially expand the types of industries where price fixing can take place?

Dr. WEST. So, as you've noted, historically, we would look for cartel-like behavior in markets where there's either a small number of players, making it easy for them to coordinate with one another, or where all of the key firms are selling the same kinds of products. It would be too hard to coordinate behavior otherwise.

But what algorithmic systems do well is they enable firms to deal with complexity. So, it enables firms that would otherwise have difficulty colluding, to effectively coordinate, whether intentionally or not, using large amounts of data across differentiated products. And the effect that this has is to extend the potential for collusion into places where it otherwise would've been near to impossible to execute in practice.

Chair KLOBUCHAR. Dr. Alford, in your testimony, you note that algorithms can make price-fixing cartels more stable by minimizing the incentives to cheat. Can you talk about how algorithms can make price fixing cartels more sustainable?

Professor ALFORD. Yes. So, the algorithm price-fixing behavior that's possible is essentially where you defer to a central decision-maker about how pricing will happen.

And so, as Dr. West said, you could have literally thousands or even millions of individuals that could defer to that. And the stability then would be decided because there's deference to a central decision-maker that can make that, and then there's stabilization that can happen as a result of that. So that's one way.

The other way is what I mentioned earlier very briefly with the signaling features where—so, consumers or regulators may have a hard time identifying price signaling behavior that is happening, but because of algorithms, you can do very, very fast signaling to your competitors about pricing behavior. And only if you're really knowing what to look for will you even be able to see it.

And so, we see that in the airline industry where there's so-called flash information sharing where signaling can happen because of the instantaneous nature of it, and they can immediately signal and then send back the price so that it doesn't even reach the consumer necessarily, but it reaches the seller. That's another example of stabilization.

Chair KLOBUCHAR. Very good. Senator Lee, you have any other? Okay, good. This has been actually really helpful for all of us because—and I like some of the ideas that you've all had, the transparency, looking if there's some changes we need to make to the laws that would actually, could be very tailored to the price fixing focus.

We know with AI in general, Mr. Hewitt, that—and with the algorithms, that there can be all kinds of discrimination based on past information that just is putting you in a place. And it's been proven time and time again when people have done experiments with it that we cannot be. And so, I think we know in that grouping of changes we're going to make, I think there's a lot of possibility to be looking at this as well.

So as hard as this all seems, as my colleagues expressed, I actually see some potential for us to move on this on a bipartisan basis because of the fact that we're going to be doing a bunch of stuff on AI, and this kind of gives us the—because it's so closely linked. Not the same, but linked.

It kind of gives us some possibilities to move there or to do a separate thing as Senator Lee and I have done successfully in the past, some, a special thing, that's focusing on the on algorithms and what that means.

And I just think, just to stand by and think we're not going to do anything. My favorite example was your example, Mr. Hewitt, about the toaster. And, you know, we do major, major deals about dressers that are falling down, which is a legit thing that killed kids. Right?

But these things right now are killing so many kids a day, from them getting hooked on drugs or other things that they're getting off these platforms. And for us to just do nothing, it just would literally be a dereliction of duty.

So that's why I think we're just starting to see change. Certainly, the public is with us, at least a jury of our peers, of 12 people were with us on one day, and the cases are moving and all of that.

And my plea, as I do in almost every hearing, is that the companies who I know have people out there—they have their people, that they—many of them, that they listen, and that they think of how we can work on these things to actually put some guardrails in place.

Because otherwise, they're leaving us with no alternative but the legal system and lawsuits, and I think there is a better way to go here. Okay. Anything else you want to add?

Senator LEE. No. Thank you for being here. This is a great hearing. Learned a lot from you. Thanks.

Chair KLOBUCHAR. Okay. We are going to keep this record open for 1 week, and the hearing is adjourned. Thanks.

[Whereupon, at 4:45 p.m., the hearing was adjourned.]

[Additional material submitted for the record follows.]



**The New Invisible Hand?**  
**The Impact of Algorithms on Competition and Consumer Rights**

Before the Senate Judiciary Committee  
 Subcommittee on Competition Policy, Antitrust, and Consumer Rights

Roger P. Alford  
 Professor of Law, Notre Dame Law School  
 Former Deputy Assistant Attorney General, U.S. Department of Justice

December 13, 2023

Chairman Klobuchar, Ranking Member Lee, and Members of the Subcommittee, thank you for inviting me to testify today. I'm here today to discuss the impact of algorithms on competition, with a particular focus on current litigation against Big Tech. I look forward to discussing with you further.

There is a remarkable degree of bipartisan recognition that Big Tech poses a serious threat to competition. The Trump and Biden Administrations and almost every state attorney general have filed landmark antitrust litigation against Big Tech.<sup>1</sup> Both Senators Hawley and Klobuchar have written books expressing grave concern about Big Tech abuse of power.<sup>2</sup> Senators across the political spectrum have expressed this concern. For example, guess which Senator from which political party said the following: “[N]o corporate actors ha[ve] done more to undermine competition and free enterprise than Big Tech.”<sup>3</sup> Or this quote: “Nowhere is it more clear that we need presidential leadership to take actions to change laws and lead investigations than in Big Tech.”<sup>4</sup> Or this, “[t]he idea that Big Tech operates in a functioning free market can no longer be taken as a serious position.”<sup>5</sup> Or this, “[B]ig [T]ech companies have . . . bulldozed competition, used our private information for profit, and tilted the playing field against everyone else.”<sup>6</sup> Or this, “It is high time for Congress to free our digital economy from the stranglehold of Big Tech.”<sup>7</sup> The fact that it is difficult to guess correctly is telling. Republicans and Democrats disagree about many things, but one thing that unites many of them is the recognition of the anticompetitive harm posed by Big Tech.<sup>8</sup> Much of that concern relates to how Big Tech has harnessed algorithms to exert market power like never before in history.

<sup>1</sup> Roger P. Alford, *The Bipartisan Consensus on Big Tech*, 71 EMORY L.J. 893, 921-28 (2022), available at [https://scholarship.law.nd.edu/law\\_faculty\\_scholarship/1471/](https://scholarship.law.nd.edu/law_faculty_scholarship/1471/).

<sup>2</sup> Josh Hawley, *The Tyranny of Big Tech*, (2021); Amy Klobuchar, *Antitrust: Taking on Monopoly Power from the Gilded Age to the Digital Age* (2021).

<sup>3</sup> Hawley, *supra* note 2, at 118.

<sup>4</sup> Klobuchar, *supra* note 2, at 315.

<sup>5</sup> Mike Lee, *NetChoice, American Antitrust: Reforms to Create Further Innovation and Opportunity*, YOUTUBE (June 22, 2021) <https://www.youtube.com/watch?v=pToFY8BY5C4>.

<sup>6</sup> Elizabeth Warren (Team Warren), *Here's How We Can Break Up Big Tech*, MEDIUM (Mar. 8, 2019), <https://medium.com/@teamwarren/heres-how-we-can-break-up-big-tech-9ad9e0da324c>.

<sup>7</sup> The America Act: Lee Introduces Bill to Protect Digital Advertising Competition, (Mar. 30, 2023) (“Of the bill, Senator Vance said, ‘It is high time for Congress to free our digital economy from the stranglehold of Big Tech.’”).

<sup>8</sup> Alford, *supra* note 1, at 929-32.

### *I. Algorithms and Antitrust*

An algorithm is a sequence of rules performed in an exact order to carry out a certain task. Specifically, an algorithm is an unambiguous, precise, list of simple operations applied mechanically and systematically to a set of tokens or objects.<sup>9</sup> Algorithms automatically perform repetitive tasks involving data processing and complex calculations that could be much more costly to execute for human beings. Recent developments in artificial intelligence and machine learning have brought algorithms to a new level, allowing computers to solve complex problems, make predictions and take decisions more efficiently than humans.<sup>10</sup> This includes artificial intelligence and machine learning, which are algorithms programmed to iteratively learn, reason, self-correct, and create. Despite the obvious benefits of algorithms, the emergence of algorithms creates enormous risks for the abuse of monopoly power and as a facilitating factor in collusion between competitors.

The algorithms themselves recognize that they pose a risk to competition. When I typed in the query “[h]ow do algorithms harm competition?”, ChatGPT unabashedly confessed to me that “algorithms can harm competition in several ways” including by facilitating price fixing, advancing self-preferencing, suppressing the visibility of competitors, promoting information asymmetries, and creating search engine barriers to entry.<sup>11</sup> The ChatGPT results concluded with a warning to lawmakers that although “regulatory bodies . . . aim to address these issues by scrutinizing the use of algorithms . . . the fast-paced nature of technology often outpaces regulatory measures, necessitating ongoing efforts to adapt laws and regulations to protect fair competition in the digital age.”<sup>12</sup> I think this Committee should take that as a challenge.

### *II. Algorithms and Price Fixing*

Price fixing is an agreement, conspiracy, or combination among competitors to raise, fix, or otherwise maintain the price at which their goods or services are sold. Such agreements can be tacit or express.<sup>13</sup> Any agreement that restricts price competition violates the antitrust laws. According to the Department of Justice, examples of price fixing agreements include a commitment to hold prices firm, adopt a standard formula for computing prices, or adhere to a minimum fee or price schedule.<sup>14</sup>

Algorithms facilitate price fixing. When competitors adopt pricing algorithms, it can be a form of either tacit or express collusion in the marketplace, resulting in higher prices and less price

<sup>9</sup> THE MIT ENCYCLOPEDIA OF THE COGNITIVE SCIENCES 11 (Robert A. Wilson & Frank C. Keil eds., 1999).

<sup>10</sup> OECD, *Algorithms and Collusion: Competition Policy in the Digital Age*, 8-9 (2017) <https://www.oecd.org/daf/competition/Algorithms-and-collusion-competition-policy-in-the-digital-age.pdf>.

<sup>11</sup> ChatGPT Query “How Do Algorithms Harm Competition?”, available at <https://chat.openai.com/c/6f275def-80c8-4562-8f6c-49c0a669c9f>.

<sup>12</sup> *Id.*

<sup>13</sup> The “crucial question is whether the challenged anticompetitive conduct stems from independent decision or from an agreement, tacit or express.” *Bell Atlantic Corp. v. Twombly*, 550 U.S. 544, 553 (2007). Non-express agreements that may violate Section 1 include “uniform behavior among competitors, preceded by conversations implying that later uniformity might prove desirable or accompanied by other conduct that in context suggests that each competitor failed to make an independent decision.” *Brown v. Pro Football, Inc.*, 518 U.S. 231, 241 (1996); or “a course of conduct, or a price schedule, once suggested or outlined by a competitor in the presence of other competitors, [that] is followed by all—generally and customarily—and continuously for all practical purposes, even though there be slight variations,” *Esco Corp. v. United States*, 340 F.2d 1000, 1008 (9th Cir. 1965).

<sup>14</sup> *Price Fixing, Bid Rigging, and Market Allocation Schemes: What They Are and What to Look For*, DEPT. OF JUSTICE (January 5, 2016), available at <https://www.justice.gov/d9/pages/attachments/2016/01/05/211578.pdf>.

competition.<sup>15</sup> The Department of Justice has declared that “[a]lgorithmic price fixing must . . . be subject to the same condemnation as other price-fixing schemes. . . . [W]hether firms effectuate a price-fixing scheme through a software algorithm or through human-to-human interaction should be of no legal significance.”<sup>16</sup>

Accordingly, the DOJ has prosecuted retailers selling on Amazon Marketplace when they adopted specific pricing algorithms for the sale of merchandise with the goal of offering online shoppers the same price for the same product and coordinating changes to their respective prices.<sup>17</sup> It also has filed a statement of interest in support of litigation against Tennessee landlords that subscribed to an algorithm service called RealPage that has the effect of raising multifamily rental housing prices.

Such price fixing still requires concerted action, but evidence of such action can be found when competitors delegate decision making to a central hub, and that hub deprives the market of independent decision making.<sup>18</sup> According to the DOJ, “[j]ust as ‘surrendering freedom of action and agreeing to abide by the will of the [trade] association’ can be enough for concerted action, so can be relying on a joint algorithm that generates prices based on shared competitively sensitive data.”<sup>19</sup> Indeed, price fixing through the use of algorithms is easier and more effective than other types of cartel behavior, because the “software can enhance competitors’ ability to optimize cartel gains, monitor real-time deviations, and minimize incentives to cheat.”<sup>20</sup>

Another form of collusion is the use of algorithms to signal to competitors to coordinate pricing behavior. This is well known in the context of the airline industry with the Airline Tariff Publishing Company. As discussed in the recent JetBlue/Spirit merger trial, algorithmic signaling is the practice of “flashing” information to competitors, a process in which airlines alert each other to price changes by updating and then quickly cancelling them on the shared system.<sup>21</sup> The goal of such signaling is to surreptitiously communicate to other airlines to raise their prices.<sup>22</sup> Through the power of algorithms, “firms can instantaneously execute countless price variations that are immediately detected by rivals, allowing them to coordinate strategies without giving enough time for consumers to react upon the price changes.”<sup>23</sup>

If the Supreme Court has declared that cartels are the “supreme evil of antitrust,”<sup>24</sup> then algorithmic price fixing is a vehicle to facilitate and promote antitrust evil on a scale never seen before.

<sup>15</sup> Doha Mekki, Principal Deputy Assistant Attorney General, Dept. of Justice Antitrust Division, Remarks at GCR Live: Law Leaders Global 2023 (Feb. 2, 2023).

<sup>16</sup> Statement of Interest of the United States, *In re Realpage, Rental Software Antitrust Litigation (No. II)* (Nov. 15, 2023) (on file with Dept. of Justice).

<sup>17</sup> Press Release, Dept. of Justice, Online Retailer Pleads Guilty for Fixing Prices of Wall Posters (Aug. 11, 2016) (on file with author).

<sup>18</sup> *Am. Needle, Inc. v. NFL*, 560 U.S. 183, 195 (2010) (citations omitted).

<sup>19</sup> Memorandum from the Dept. of Justice to the U.S. District Court Middle District of Tennessee Nashville Division 14 (Nov. 15, 2023) (on file with author).

<sup>20</sup> *Id.* at 2.

<sup>21</sup> Leah Nylen, *JetBlue-Spirit Trial Revives DOJ Claim Over Air-Fare Collusion*, BLOOMBERG (Dec. 8, 2023, 6:00 AM), <https://news.bloomberglaw.com/antitrust/jetblue-spirit-trial-revives-doj-claim-over-air-fare-collusion>.

<sup>22</sup> OECD, *supra* note 10, at 29-32.

<sup>23</sup> Antonio Capobianco & Pedro Gonzaga, *Algorithm and Competition: Friends or Foes?* CPI ANTITRUST CHRONICLE 3 (Aug. 2017),

<https://www.competitionpolicyinternational.com/wp-content/uploads/2017/08/CPI-Capobianco-Gonzaga.pdf>.

<sup>24</sup> *Verizon Comm. Inc. v. Trinko*, 540 U.S. 398, 408 (2004).

### III. *Algorithms and Monopoly Abuse*

The use of algorithms also facilitates the abuse of monopoly power. I will provide just a few examples from recent government enforcement actions.

#### a. *Amazon Litigation*

In the Federal Trade Commission’s complaint against Amazon, there is evidence that Amazon uses algorithms to punish sellers that offer lower prices off Amazon. It does so in two ways. First, Amazon monitors when third party sellers on Amazon are lowering their prices and immediately copies those prices with its own branded products to prevent a rival from gaining market share. These third-party sellers quickly learn that there is no benefit to lowering prices to compete with Amazon-branded products, because Amazon will always match those prices.<sup>25</sup>

Second, Amazon uses algorithms as the policing mechanism to enforce price parity clauses. If the Amazon algorithm detects that a seller has offered a lower price on any other online store, it will disqualify that seller from utilizing the Buy Box feature (i.e., the feature that makes it possible for buyers to click “Add to Cart” or “Buy Now”). Over 98% of all Amazon sales are made using the “Add to Cart” and “Buy Now” buttons, so any seller that offers price discounts elsewhere will be severely punished and, in Amazon’s words, their sales “tank.”<sup>26</sup> Amazon algorithms are like the predators in the sci-fi movie *A Quiet Place*, destroying any Amazon seller that dares to utter the sound of price competition.

#### b. *Google Search Litigation*

With respect to the Google search litigation, a central pillar of the Department of Justice’s case is Google’s anticompetitive efforts to deny its competitors the opportunity to scale. Google wants consumers to reach the conclusion that their competitors suck—the use the common parlance one often hears—and it will spend billions to control upstream inputs to deny its competitors the opportunity to improve. How it does so is simple. Search algorithms require query and click data to train the algorithms to improve search quality results. Even with the most sophisticated machine learning algorithms, massive amounts of data are essential for quality search results. The evidence in the Google search case showed that there is a viability threshold of around twenty market share and if you dip below that the quality degrades so much that there will be a downward spiral.<sup>27</sup> To deny its competitors the data necessary for scale, Google pays over \$25 billion per year to be the default search engine, including \$18 billion to Apple.<sup>28</sup> The outcome is similar to a search version of the *Hunger Games*, with the central Capitol living in overabundance while all the outer districts are starved with the essentials necessary for survival.

<sup>25</sup> Federal Trade Commission v. Amazon, No. 2:23-cv-01495-JHC, at ¶¶ 325-337.

<sup>26</sup> Federal Trade Commission v. Amazon, No. 2:23-cv-01495-JHC, at ¶¶ 16, 85, 276-285.

<sup>27</sup> United States v. Google, Transcript of Bench Trial, at 2678-2679 (Sept. 26, 2023) (Testimony of Mikhail Parakhin, Microsoft CEO of Advertising & Web Services).

<sup>28</sup> The problems of scale remain with the emergence of artificial intelligence, leading Microsoft CEO Satya Nadella to testify in the Google trial that the vicious cycle of default reinforcement will only continue because data is what feeds the AI models. United States v. Google, Transcript of Bench Trial, (Oct. 2, 2023) (Testimony of Satya Nadella, Microsoft CEO).

### c. Google AdTech Litigation

Finally, there is the litigation against Google for using algorithms to rig auctions in the digital advertising market.<sup>29</sup> As outlined in both the Texas and DOJ complaints, Google's monopoly position in the publisher ad server market gives it control over which exchanges can bid on the vast majority of ad inventory. Because of Google's involvement and dominance on the buy-side, sell-side, and the exchanges in the middle, it has information advantages, and uses its algorithms to exploit those advantages for its own benefit and to the detriment of its own clients. Google secretly peeks at rival exchanges in order to inflate bids placed on its own exchange. It limits real-time bidding on publisher inventory to its own ad exchange, and impedes rival ad exchanges' ability to compete on the same terms as Google's ad exchange. And it manipulates auctions to insulate Google from competition, deprive rivals of scale, and halt the rise of rival technologies. For example, when an innovative alternative was introduced called Header Bidding that allowed publishers to secure more revenue through competitive bidding on multiple exchanges, Google used its algorithms in an attempt to destroy the emerging technology. Rather than managing this conflict of interest through firewalls or other internal controls, Google actively exploits those conflicts, extracting as much as four times the rate of other exchanges.<sup>30</sup> While the NYSE charges less than \$5 on a \$100,000 stock trade, Google charges over \$40,000 on a \$100,000 ad campaign. Google charges exorbitant sales commissions as high as Jordan Belfort's commissions in the *Wolf of Wall Street*, and like the villain in that movie, it trades on inside information, and uses deceptive sales tactics on unsuspecting clients to enrich itself.

### IV. Bipartisan Legislation to Address Big Tech Algorithmic Abuse

At this time last year there was immense enthusiasm about potential bipartisan legislation to address Big Tech's abuse of its monopoly power. Many members of this Committee were sponsors of those legislative measures. But as we all know, Big Tech lobbyists spent over \$275 million opposing those bills, and they never made it to the floor for a vote.<sup>31</sup>

Only one antitrust reform made it all the way to the finish line, and that was the law that allowed state attorneys general to be treated the same as the United States, giving them the freedom to remain in the forum of their choosing when they file antitrust lawsuits.<sup>32</sup> I'm happy to report that because of your efforts in passing that law, the *Texas v. Google* case returned to its original venue after languishing in New York for two years. Last month I was in Plano, Texas for a hearing before Judge Jordan of the Eastern District of Texas and I will be there again tomorrow morning

<sup>29</sup> Daniel S. Bitton and Stephen Lewis, *Clearing Up Misconceptions About Google's Ad Tech Business*, COMPETITION POLICY INT'L (May 5, 2020) <https://www.competitionpolicyinternational.com/clearing-up-misconceptions-about-googles-ad-tech-business/>; Dina Srinivasan, *Why Google Dominates Advertising Markets*, 24 STAN. TECH. L. REV. 55 (2020).

<sup>30</sup> *Texas v. Google*, Third Amended Complaint (Jan. 14, 2022) at ¶¶ 64 *et. seq.*; *United States v. Google*, Complaint, at ¶¶ 126 *et. seq.* (Jan. 24, 2023).

<sup>31</sup> David Dayen, *How Chuck Schumer Deep-Sixed the Tech Antitrust Bills*, THE AMERICAN PROSPECT, (Jan. 26, 2023), <https://prospect.org/power/2023-01-26-chuck-schumer-tech-antitrust-bills/>; Rebecca Klar and Karl Evers-Hillstrom, *How Big Tech Fought Antitrust Reform—and Won*, THE HILL, (Dec. 23, 2022 6:00 AM), available at <https://thehill.com/policy/technology/3785894-how-big-tech-fought-antitrust-reform-and-won/>; Eric Cortellessa, *Schumer Kills Bills Big Tech Feared Most, But Boosts Budgets of Agencies Targeting Them*, TIME, (Dec. 22, 2022 3:24 PM), <https://time.com/6243256/schumer-kills-antitrust-big-tech-bills/>; Mike Tanglis, *Lobby. Donate. Hire. Repeat: How Big Tech is Using the Inside Game to Slow Down Antitrust Reform*, PUBLIC CITIZEN, (Dec. 16, 2022), available at <https://www.citizen.org/wp-content/uploads/Lobby-Donate-Hire-Repeat.pdf>.

<sup>32</sup> See generally Roger P. Alford, *Antitrust Accountability Delayed: State Antitrust Enforcement and Multidistrict Litigation*, 26 SMU SCL AND TECH. L. REV. 7 (2023); available at <https://scholar.smu.edu/scitech/vol26/iss1/3/>.



for a second hearing. The choice to bring the case against Google before a rocket docket in Texas was wise and I commend you for helping us to exercise that choice.

In part because of Congress' failure to act to address antitrust reform, state legislatures are picking up the mantle and passing state laws to regulate the abuse Big Tech monopoly power. For example, in 2021 Texas passed a law that prohibits dominant social media companies from engaging in viewpoint discrimination.<sup>33</sup> Similar to non-discrimination laws in the cable industry,<sup>34</sup> this platform neutrality law requires that social media platforms treat users equally regardless of viewpoint. Its purpose is to prevent the platforms from using their market power to slant public debate. The law does not prohibit platforms from removing objectionable material, such as content that is unlawful, including obscene, lewd, harassment, or violent.<sup>35</sup> Rather, it requires platform rules to be applied in an even-handed way, recognizing that algorithms should not be used to discriminate at scale.<sup>36</sup> The Fifth Circuit upheld the law and it is now under review by the Supreme Court.<sup>37</sup> If the law is upheld, it could prevent social media platforms such as Facebook, YouTube and Twitter from continuing their practice of viewpoint discrimination.<sup>38</sup>

Let me close by encouraging the Committee to approve a narrow and targeted piece of legislation that would address Google and other platforms abuse of market power in digital advertising market.<sup>39</sup> As I have testified before at this Committee, conservatives and liberals should support the AMERICA Act.<sup>40</sup> It has broad bipartisan support.<sup>41</sup> It is narrow and targeted, particularly in comparison to other antitrust legislation proposed in the last congressional session. The legislation attempts to future proof the online digital advertising industry by imposing reasonable guard rails on the behavior of all medium and large online advertising brokers. And it does so by borrowing concepts relating to conflicts of interest and transparency that have been applied in other contexts so that government enforcers and courts can rely upon the standards established in those other industries to establish standards for this industry.

Thank you.

<sup>33</sup> HB 20, TEX. BUS. & COM. CODE § 120.002(b), 87th Leg., 1<sup>st</sup> Special Sess. (Tx. 2021).

<sup>34</sup> *Turner Broadcasting System, Inc. v. FCC*, 512 U.S. 622, 656 (1994) ("[w]hen an individual subscribes to cable, the physical connection between the television set and the cable network gives the cable operator bottleneck, or gatekeeper, control over most (if not all) of the television programming that is channeled into the subscriber's home. Hence, simply by virtue of its ownership of the essential pathway for cable speech, a cable operator can prevent its subscribers from obtaining access to programming it chooses to exclude.").

<sup>35</sup> HB 20, TEX. BUS. & COM. CODE § 120.002(b), 87th Leg., 1<sup>st</sup> Special Sess. (Tx. 2021); see also Adam Candeub & Eugene Volokh, *Interpreting 47 U.S.C. § 230(c)(2)*, 1 J. FREE SPEECH L. 175 (2021), available at <https://www.journaloffreespeechlaw.org/candeubvolokh.pdf>.

<sup>36</sup> Dhnanjay Mittal (Dhananjay Mittal), *Algorithmic Bias: Reinforcing Prejudice on Social Media*, MEDIUM (Nov. 2, 2023), <https://medium.com/@dhananjaymittal/algorithmic-bias-reinforcing-prejudice-on-social-media-46de22eeef5dc>.

<sup>37</sup> *NetChoice, LLC v. Paxton*, 49 F.4th 439 (5<sup>th</sup> Cir. 2022), cert. granted 2023 WL 6319650 (2023).

<sup>38</sup> Mike Lee, *NetChoice, American Antitrust: Reforms to Create Further Innovation and Opportunity*, YOUTUBE (June 22, 2021) <https://www.youtube.com/watch?v=pToFy8BY5C4>; Emma Roth, *Twitter's Research Shows that its Algorithm Favors Conservative Views*, THE VERGE, (Oct. 21, 2021 6:00 PM), <https://www.theverge.com/2021/10/22/22740703/twitter-algorithm-right-wing-amplification-study>; Paul Barrett, *The Twitter Bias Hearings Point to Favoritism, But Not for Liberals*, THE HILL, (Feb. 10, 2023 12:30 PM), available at <https://thehill.com/opinion/technology/3852594-the-twitter-bias-hearings-point-to-favoritism-but-not-for-liberals/>.

<sup>39</sup> Roger Alford, Prof. of Law, Univ. of Notre Dame, *Competition in the Digital Advertising Ecosystem*, Address Before the Senate Judiciary Comm. (May 3, 2023), available at <https://www.judiciary.senate.gov/imo/media/doc/2023-05-03%20-%20Testimony%20-%20Alford.pdf>; Roger Alford, Prof. of Law, Univ. of Notre Dame, *Antitrust and Harm to Innovation*, Address Before the Senate Judiciary Comm. (Dec. 15, 2021), <https://www.judiciary.senate.gov/imo/media/doc/Alford%20Testimony1.pdf>.

<sup>40</sup> S. 1073, 118<sup>th</sup> Cong. (2022).

<sup>41</sup> S. 1073, 118<sup>th</sup> Cong. (2022) (Co-sponsors include Sen. Klobuchar, Amy (D-MN), Sen. Cruz, Ted (R-TX), Sen. Blumenthal, Richard (D-CT), Sen. Rubio, Marco (R-FL), Sen. Warren, Elizabeth (D-MA), Sen. Schmitt, Eric (R-MO), Sen. Hawley, Josh (R-MO), Sen. Kennedy, John (R-LA), Sen. Graham, Lindsey (R-SC), Sen. Vance, J. D. (R-OH)).

**The New Invisible Hand?  
The Impact of Algorithms on Competition and Consumer Rights**

Before the Senate Judiciary Committee  
Subcommittee on Competition Policy, Antitrust, and Consumer Rights

Roger P. Alford  
Professor of Law, Notre Dame Law School  
Former Deputy Assistant Attorney General, U.S. Department of Justice

February 2, 2024

In response to a letter dated December 20, 2023 from Senator Richard Durbin (D-IL) following my Senate Testimony<sup>1</sup> at a hearing held on December 13, 2023 entitled “*The New Invisible Hand? The Impact of Algorithms on Competition and Consumer Rights*,”<sup>2</sup> I am writing to provide answers in response to questions for the record from Committee members of the Senate Judiciary Committee.

**Question from Senator Thom Tillis**

1. The AMERICA Act would prohibit large digital advertising companies from owning more than one part of the digital ad ecosystem. In your opinion, should this take effect today [or] do you see any unintended consequences.

**Answer from Professor Roger Alford**

In my opinion the AMERICA Act should take effect as soon as possible to address the urgent problem of Google’s abuse of monopoly power in the digital online advertising.<sup>3</sup> As I have testified before,<sup>4</sup> according to the Department of Justice, “website publishers in the United States sell more than five trillion digital display advertisements on the open web each year—or more than thirteen billion advertisements every day. To put these numbers in perspective, the daily volume of digital display advertisements grossly outnumbers (by several multiples) the average number of stocks traded each day on the New York Stock Exchange.”<sup>5</sup> We live in an age of attention markets, with attention brokers earning billions in revenue from trading in the scarce commodity of our time. While in the 1970s, the average American saw between 500 and 1600 ads per day, today we encounter an estimated 6,000 and 10,000 ads per day.<sup>6</sup>

<sup>1</sup> *The New Invisible Hand? The Impact of Algorithms on Competition and Consumer Rights: Hearing Before the Subcomm. on Competition Policy, Antitrust, and Consumer Rights of the S. Comm. on the Judiciary*, 118<sup>th</sup> Cong. (2023) (statement of Roger P. Alford, Professor of Law, Notre Dame Law School).

<sup>2</sup> *Id.*

<sup>3</sup> AMERICA Act, S. 1073, 118<sup>th</sup> Cong. (2023).

<sup>4</sup> *Competition in the Digital Advertising Ecosystem: Hearing Before the Subcomm. on Competition Policy, Antitrust, and Consumer Rights of the S. Comm. on the Judiciary*, 118<sup>th</sup> Cong. (2023) (statement of Roger P. Alford, Professor of Law, Notre Dame Law School).

<sup>5</sup> Complaint at ¶ 2, *United States et al. v. Google LLC*, 1:23-CV-00108 (E.D. Va. Jan. 24, 2023) [hereinafter DOJ Complaint].

<sup>6</sup> Emilia Kirk, *The Attention Economy: Standing Out Among the Noise*, FORBES (Mar. 23, 2022, 7:15am), <https://www.forbes.com/sites/forbesbusinessdevelopmentcouncil/2022/03/23/the-attention-economy-standing-out-among-the->

The volumes of ads are not the only aspect of display advertising that are enormous. The margins are also staggering. While the NYSE makes less than 1 percent (or less than \$5.00) on a \$100,000 stock trade, Google intermediaries make approximately forty percent (or \$40,000) on a \$100,000 ad campaign. With such enormous volumes and margins, it is not surprising that Google has a market cap of approximately \$1.85 trillion, and revenue of approximately \$280 billion per year, which amounts to \$767 million per day, or \$32 million per hour.

Online display advertising is almost a completely unregulated market, with neither litigation nor legislation curbing the opportunities for the abuse of market power. Unlike the financial markets, which are subject to significant regulatory oversight and litigation risk, the online display advertising markets have no laws that impose best interest duties on market actors or curb perverse practices such as insider trading or front running. Nearly identical practices that in financial markets would result in severe fines, and even criminal sanctions, are completely unregulated in the online display market.

The AMERICA Act prohibits entities with significant digital advertising revenue from owning and operating entities across the ad tech stack. In essence, large digital advertising companies with over \$20 billion in ad tech revenue must make a choice regarding which segment of the ad tech stack they would like to operate. They can either be a buyer or seller of digital advertising space, they can own a digital advertising exchange, they can own a sell-side brokerage, or they can own a buy-side brokerage. This is surest way to avoid conflicts of interest, promote transparency, and restore competition in the digital ad tech markets.

In the digital ad tech market, there are several advantages to structural separation of the ad tech markets. First, structural separation of dominant market actors with the power and incentive to foreclose competition recognizes the limits of regulatory behavioral obligations that are difficult to devise, implement, monitor, and enforce. Second, structural separation of dominant market actors eliminates or minimizes the conflicts of interest that are endemic in the ad tech market. Third, structural separation eliminates or reduces the risk of dominant market actors' cross-subsidizing and steering from less or non-competitive segments to competitive segments of the ad tech stack. Fourth, structural separation improves transparency and information flows across the ad tech stack, enhancing consumer choice, new entry, and the competitive process. Fifth, structural separation, unlike behavioral commitments, eliminates or reduces dominant market actors' incentives to restrict competition. Sixth, regulatory structural separation of dominant market actors may be faster, more effective, less expensive, and more pro-competitive than a similar remedy pursued through antitrust litigation, particularly when combined with regulatory behavioral obligations on other competitors.

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[noise/7sh-4201368e7fda](#); Mark Melvin, *How Brands Can Use Relevant Moments and Technology to Engage with Consumers*, ADVERTISING WEEK (Nov. 16, 2021), <https://advertisingweek.com/how-brands-can-use-relevant-moments-and-technology-to-engage-with-consumers/>; *History: 1970s*, ADAGE (Sept. 15, 2003), <https://adage.com/article/adage-encyclopedia/history-1970s/98703>.



**Question from Senator Thom Tillis**

2. Development of AI will only continue to grow and as a result more and more sophisticated AI tools will become available and the use of AI tool more prevalent. What can Congress do now to better to plan for the impact on competition, without stifling AI innovation?

**Answer from Professor Roger Alford**

The emergence of artificial intelligence offers significant opportunities for innovation, but also presents genuine risks. As discussed at the hearing, Congress can leverage current enforcement mechanisms at its disposal to address competition concerns regarding the development of artificial intelligence. Existing antitrust laws provide a starting point to ensure that mergers in these emerging markets are not anticompetitive, that companies do not abuse their monopoly power in these and adjacent markets to harm consumers, and that Big Tech companies do not cooperate in a manner that rises to the level of unlawful collusion.

In particular, Big Tech companies have natural advantages with respect to AI because of their strength with the essential inputs of data, talent, and storage. AI is only as good as the data it is trained on, and the data information limitations create insurmountable barriers to entry for many companies. Big Tech companies have data advantages that new entrants cannot rival, and they can utilize existing proprietary data collection tools and technologies for acquiring data.<sup>7</sup> Big Tech companies also have existing labor expertise that will be critical for AI development, and many new entrants will find that the scarcity of engineers and other professionals will make it difficult to effectively compete. Enforcement against illegal no-poach agreements and anticompetitive non-compete clauses will be an important element in the success of new entrants.<sup>8</sup> Finally, cloud storage and computational resources are necessary for the successful training and deployment of AI products and incumbents in those markets have significant advantages as compared to new entrants.<sup>9</sup> Congress should encourage government enforcement agencies to closely monitor emerging AI technologies to ensure that they promote competition and do not violate antitrust laws.

The Biden Administration has issued an Executive Order calling for the passage of a bipartisan data privacy law to protect consumers against the risk of extracting, identifying, and exploiting personal data.<sup>10</sup> Senators have introduced privacy legislation in the previous and current Congresses,<sup>11</sup> but given the lobbying power of Big Tech thus far those bills have failed. As we all know, Big Tech lobbyists spent over \$275 million opposing privacy and antitrust bills in the last Congress, and as a result these bills never made it to the floor for a vote.<sup>12</sup> Notwithstanding these

<sup>7</sup> *Generative AI Raises Competition Concerns*, FEDERAL TRADE COMMISSION TECHNOLOGY BLOG (June 29, 2023), <https://www.ftc.gov/policy/advocacy-research/tech-at-ftc/2023/06/generative-ai-raises-competition-concerns>.

<sup>8</sup> *Id.*

<sup>9</sup> *Id.*

<sup>10</sup> Exec. Order No. 14110, 88 Fed. Reg. 75191 (Oct. 30, 2023); *The New Invisible Hand? The Impact of Algorithms on Competition and Consumer Rights: Hearing Before the Subcomm. on Competition Policy, Antitrust, and Consumer Rights of the S. Comm. on the Judiciary*, 118<sup>th</sup> Cong. (2023) (statement of Dr. Sarah West, Managing Director, AI Now Institute).

<sup>11</sup> Social Media Privacy Protection and Consumer Rights Act of 2021, S. 1667, 117<sup>th</sup> Cong. (2021); UPHOLD Privacy Act 2023, S.631, 118<sup>th</sup> Cong. (2023).

<sup>12</sup> David Dayen, *How Chuck Schumer Deep-Sixed the Tech Antitrust Bills*, THE AMERICAN PROSPECT (Jan. 26, 2023), <https://prospect.org/power/2023-01-26-chuck-schumer-tech-antitrust-bills/>; Rebecca Klar & Karl Evers-Hillstrom, *How Big Tech Fought Antitrust Reform—and Won*, THE HILL (Dec. 23, 2022 6:00 AM), <https://thehill.com/policy/technology/3785824-how-big-tech-fought-antitrust-reform-and-won/>; Eric Cortellessa, *Schumer Kills Bills Big Tech Feared Most, But Boosts Budgets of Agencies Targeting Them*, TIME (Dec. 22,

hurdles, Congress should actively explore legislative measures that address privacy and competition concerns in emerging AI technology markets.

#### Question from Senator Thom Tillis

3. Can algorithms be manipulated by bad actors to censor free speech, specifically during an election cycle? And if so, how?

#### Answer from Professor Roger Alford

Yes of course. The concerns regarding algorithmic manipulation by bad actors to censor free speech are well-founded. Both international and domestic actors harness the power of algorithms to censor free speech, including censorship during an election cycle.

For example, people routinely use social media to obtain news and information. Social media companies historically have used “ex-post moderation” to address content that breaches platform rules or laws.<sup>13</sup> Ex-post moderation, however, cannot keep pace with large amounts of data and reporting, and often cannot distinguish between harmful content and permissive speech. As a result, many companies now rely on algorithms to help moderate content prophylactically through “ex-ante moderation.”<sup>14</sup> In the context of government actors working in cooperation with private companies to censor speech we might call digital prior restraints.<sup>15</sup>

Election interference is pervasive on social media platforms. According to Mark Zuckerberg, Facebook blocks millions of fake accounts every day, and often those accounts are designed to influence elections.<sup>16</sup> Social media platforms also censor misinformation shared on real accounts and may do so by flagging, blocking, or prohibiting virality.<sup>17</sup> Social media platforms decide, or delegate to their chosen agents, precisely what constitutes misinformation. In many instances there will be broad consensus on what constitutes misinformation, but in other instances the type of information worthy of censorship will be contested and controversial.<sup>18</sup> The use of algorithmic censorship obscures the inherently fallible nature of the automated decisions, allowing platforms to hide behind the veil of complexity regarding what content is appropriate for moderation.<sup>19</sup> In practice, social media platforms use algorithms to become the arbiters of what is permissible speech.

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2022 3:24 PM), <https://time.com/6243256/schumer-kills-antitrust-big-tech-bills/>; Mike Tanglis, *Lobby, Donate, Hire, Repeat: How Big Tech is Using the Inside Game to Slow Down Antitrust Reform*, PUBLIC CITIZEN (Dec. 16, 2022), <https://www.citizen.org/wp-content/uploads/Lobby-Donate-Hire-Repeat.pdf>.

<sup>13</sup> See generally Jennifer Cobbe, *Algorithmic Censorship by Social Platforms: Power and Resistance*, 43 PHIL. & TECHNOLOGY 739 (2021), accessible at <https://link.springer.com/article/10.1007/s13347-020-00429-0>.

<sup>14</sup> *Id.* at 741.

<sup>15</sup> Hannah Bloch-Wehba, *Global Platform Governance: Private Power in the Shadow of the State*, 71 SMU L. REV. 27, 39 (2019); Jack M. Balkin, *Old-School/New-School Speech Regulation*, 127 HARV. L. REV. 2296, 2298–99 (2014).

<sup>16</sup> Mark Zuckerberg, *Preparing for Elections*, FACEBOOK (Mar. 14, 2021), <https://www.facebook.com/notes/737729700291613/>.

<sup>17</sup> *Id.*

<sup>18</sup> Ryan Tracy, *Facebook Bowled to White House Pressure, Removed Covid Posts*, WALL ST. J. (Jul. 28, 2023, 5:30 AM), <https://www.wsj.com/articles/facebook-bowed-to-white-house-pressure-removed-covid-posts-2df436b7>.

<sup>19</sup> See generally Robert Gorwa, Reuben Binns & Christian Katzenbach, *Algorithmic Content Moderation: Technical and Political Challenges in the Automation of Platform Governance*, 7 B. D. & SOC. 7 (2020).

Platform censorship is often performed in coordination with, or under pressure from, government actors. In particular, government actors may leverage their power and influence over social media platforms to influence what content is amplified or censored. In the United States, the Twitter Files saga suggest that government actors sought to influence Twitter's content moderation behavior and that such moderation was slanted and unbalanced. This is because, in the words of Matt Taibbi writing in December 2022, "Twitter was and is overwhelmingly staffed by people of one political orientation, there were more channels, more ways to complain, open to the left ... than the right."<sup>20</sup> Even more worrisome, authoritarian regimes in China, Russia, and elsewhere influence social media platforms to censor their citizens and silence political dissent.<sup>21</sup>

The concern regarding user manipulation is not simply about censorship. It also is about commercialization and amplification. Big Tech companies have economic incentives to target and amplify certain kinds of speech that increases screen time and ad revenue.<sup>22</sup> As Senator Mike Lee has stated, while Big Tech companies claim that they are not targeting teenagers, their algorithms do that work for them, which explains why they collect data on teenagers even while they claim they're not targeting those ads in that way.<sup>23</sup> At a recent Senate Judiciary Committee Hearing addressing *Big Tech and the Online Child Sexual Exploitation Crisis*, Senator Amy Klobuchar noted that "[f]or too long, we have been seeing social media companies turn a blind eye when kids have joined these platforms in record numbers. They have used algorithms to push harmful content because that content got popular."<sup>24</sup> The corollary to the censorship concern is the concern that Big Tech platforms commercialize all speech and amplify harmful speech to increase revenue.

#### Question from Senator Thom Tillis

4. Groups with different viewpoints have weighed in on algorithms. Some suggest that more transparency is needed, while others want more privacy. Can you provide your perspective on whether more or less transparency is needed when it comes to algorithms?

#### Answer from Professor Roger Alford

The transparency/privacy debate regarding algorithms is fact dependent. At least in some respects more transparency is beneficial.

<sup>20</sup> Matt Taibbi (@mtaibbi), TWITTER, (Dec. 2, 2022, 7:02 PM), available at <https://twitter.com/mtaibbi/status/159882996264390656>.

<sup>21</sup> Dasha Litvinova, *The cyber gulag: How Russia tracks, censors and controls its citizens*, AP NEWS (May 23, 2023 8:20 AM), <https://apnews.com/article/russia-crackdown-surveillance-censorship-war-ukraine-internet-dab3663774feb666d6d0025bcd082bba>; Anton Troianovski & Valeriya Saffronova, *Russia Takes Censorship to New Extremes, Stifling War Coverage*, NEW YORK TIMES (Mar. 4, 2022), <https://www.nytimes.com/2022/03/04/world/europe/russia-censorship-media-crackdown.html>; *Russia: Growing Internet Isolation, Control, Censorship*, HUMAN RIGHTS WATCH (Jun. 18, 2020 3:10 PM), <https://www.hrw.org/news/2020/06/18/russia-growing-internet-isolation-control-censorship>; Yaqiu Wang, *China's Social Media Interference Shows Urgent Need for Rules*, HUMAN RIGHTS WATCH (Aug. 14, 2023 12:52 AM), <https://www.hrw.org/news/2023/08/14/chinas-social-media-interference-shows-urgent-need-rules>; Beina Xu & Eleanor Albert, *Media Censorship in China*, COUNCIL ON FOREIGN RELATIONS (Feb. 17, 2017 7:00 AM), <https://www.cfr.org/backgrounder/media-censorship-china>.

<sup>22</sup> SHOSHANA ZUBOFF, *THE AGE OF SURVEILLANCE CAPITALISM: THE FIGHT FOR A HUMAN FUTURE AT THE NEW FRONTIER OF POWER* 93 (2019) ("Google has discovered a way to translate its nonmarket interactions with users into surplus raw material for the fabrication of products aimed at genuine market transactions with its real customers: advertisers").

<sup>23</sup> Bryan Schott, *Lee Asks Whistleblower Whether Facebook Targets Teenagers*, THE SALT LAKE TRIBUNE (Oct. 5, 2021 5:58 PM), <https://www.sltrib.com/news/politics/2021/10/05/lee-asks-whether-facebook/>.

<sup>24</sup> *Big Tech and the Online Child Sexual Exploitation Crisis: Hearing Before the S. Comm. on the Judiciary*, 118<sup>th</sup> Cong. (2024) (opening remarks of Sen. Amy Klobuchar, Member, S. Comm. on the Judiciary).

For example, more transparency is needed with respect to Big Tech's use of algorithms to harm competition. For example, the AMERICA Act would require Big Tech companies acting as buy-side and sell-side brokerages in online advertising markets to supply to their customers sufficient information to confirm that they are complying with their best interest and best execution duties.<sup>25</sup> Such obligations are consistent with transparency obligations in the financial markets.

There also should be more transparency with respect to algorithms as they relate to work attribution and intellectual property violations. When AI algorithms scrape data from the internet, including material behind paywalls or copyrighted works in order to train AI platforms or create new content, this process typically does not reveal, credit, or compensate the copyright holder. For example, the New York Times filed a lawsuit against Microsoft and OpenAI in December 2023 alleging that millions of articles published by the New York Times were used to train automated chatbots that now compete with the news outlet as a source or reliable information.<sup>26</sup> The lawsuit alleges that the defendants should be held responsible for "billions of dollars in statutory and actual damages" related to the "unlawful copying and use of The Times's uniquely valuable works."<sup>27</sup>

#### **Question from Senator Thom Tillis**

5. Do you believe that large companies and platforms can use algorithms to stifle innovation or small businesses?

#### **Answer from Professor Roger Alford**

Yes. Big Tech companies routinely use algorithms to stifle innovation and harm small businesses. As discussed in my written testimony, Big Tech companies frequently use algorithms to facilitate the abuse of monopoly power. For example, as outlined in the Federal Trade Commission complaint against Amazon, Amazon uses algorithms to punish third-party sellers that offer lower prices off Amazon. It also uses algorithms as a policing mechanism to enforce against third-party sellers' price parity clauses.<sup>28</sup> Similarly, as outlined in the state and federal government complaints against Google, Google pays over \$25 billion per year to be the default search engine on mobile devices in order to deny search engine competitors the data necessary for scale. As a result, Google is able to stifle innovation, maintain its monopoly position in search, and charge monopoly prices to large and small advertisers. Finally, as outlined in both the Texas and DOJ complaints, Google's monopoly position in the publisher ad server market gives it control over which exchanges can bid on the vast majority of ad inventory. Because of Google's involvement and dominance on the buy-side, sell-side, and the exchanges in the middle, it has information advantages, and uses its algorithms to exploit those advantages for its own benefit and to the detriment of its own clients.<sup>29</sup>

<sup>25</sup> AMERICA Act, S. 1073, 118th Cong. (2023).

<sup>26</sup> Michael Grynbaum & Ryan Mac, *The Times Sues OpenAI and Microsoft Over A.I. Use of Copyrighted Work*, NY TIMES (Dec. 27, 2023), <https://www.nytimes.com/2023/12/27/business/media/new-york-times-open-ai-microsoft-lawsuit.html>.

<sup>27</sup> Complaint at ¶ 9, *The New York Times Company v. Microsoft Corp., et al.*, 1:23-CV-11195 (S.D.N.Y. Dec. 27, 2023).

<sup>28</sup> Alford, *supra* note 1.

<sup>29</sup> *Id.*

**Question from Senator Thom Tillis**

6. What do you believe is the role of government in regulating algorithms? What, if any, unintended consequences would there be if Congress gets involved?

**Answer from Professor Roger Alford**

The role of government in regulating algorithms is to focus on the end rather than the means. Algorithms are powerful tools in the hands of technology companies that can be used for good or for ill. To the extent algorithms are used to engage in harmful or illegal conduct, the government should be part of a shared and concerted effort to combat such misconduct. Depending on the circumstances, this might come in the form of new *ex ante* regulation or in the form of vigorous enforcement action. The intended and unintended consequences that flow from such action depends on the nature of that action.

In the context of the discussion of algorithms presented at the hearing, we focused on government enforcement actions against Big Tech companies that use algorithms to engage in anticompetitive conduct. Federal and state government enforcement actions against Big Tech companies are welcome and necessary efforts to address allegations of unlawful antitrust violations. But such actions are only part of the solution.

We also focused at the hearing on proposed legislation to address Big Tech's misuse of algorithms to harm competition. As outlined above, the AMERICA Act is an example of proposed legislation that would complement current enforcement actions and facilitate a more competitive market of digital online advertising. As I have testified before, conservatives should support such Big Tech legislation.<sup>30</sup> These digital markets are subject to powerful network effects and naturally prone to monopolization. And these markets impact not only competition but also other fundamental concerns such as the collection of personal data and the free flow of information and discourse. Legislation such as the AMERICA Act attempts to future proof the online digital advertising industry by imposing reasonable guard rails on the algorithmic behavior of all medium and large online advertising brokers.<sup>31</sup>

Despite the immense enthusiasm about potential bipartisan legislation to address Big Tech's abuse of its monopoly power,<sup>32</sup> Big Tech lobbyists have spent hundreds of millions of dollars opposing those bills, and thus far legislative efforts have proven unsuccessful. A notable unintended consequence of Congress' recent efforts is to expose Big Tech's intense anxiety about any legislative efforts to promote effective competition and curb Big Tech's abuse of monopoly power.

<sup>30</sup> Roger P. Alford, *Competition in the Digital Advertising Ecosystem*, Hearing Before the Subcomm. on Competition Policy, Antitrust, and Consumer Rights of the S. Comm. on the Judiciary, 118<sup>th</sup> Cong. (2023) (statement of Roger P. Alford, Professor of Law, Notre Dame Law School).

<sup>31</sup> *Id.*

<sup>32</sup> See generally Roger P. Alford, *The Bipartisan Consensus on Big Tech*, 71 EMORY L.J. 893 (2022).

**Written Testimony of Bill Baer**  
**United States Senate**  
**Committee on the Judiciary**  
**Subcommittee on Competition Policy, Antitrust, and Consumer Rights**  
**Hearing on “The New Invisible Hand? The Impact of Algorithms on Competition and**  
**Consumer Rights”**  
**Wednesday, December 13<sup>th</sup>, 2023 3:00 P.M.**

Chair Klobuchar, Ranking Member Lee, and distinguished members of the Subcommittee, thank you for the opportunity to appear this afternoon and address one of the many challenges we face in harnessing the power and maximizing the potential of artificial intelligence.

The growing use of pricing algorithms presents one such challenge. I am no expert in AI. But from the vantage point of this long-time antitrust enforcer, now just an antitrust worrier, there is good reason for concern that misuse of this tool is growing and puts consumers at risk of paying supracompetitive prices for all sorts of goods and services.<sup>1</sup>

As your October hearing on the rental housing market explored, the potential misuse of pricing algorithms comes in many different forms. My testimony focuses on three collusive uses of AI pricing to harm competition and consumers: (1) head-to-head agreements between competitors to use the same pricing tools to fix prices; (2) hub and spoke agreements where competing firms use the same third party’s pricing algorithm to achieve anticompetitive outcomes; and (3) situations where widespread use of pricing algorithms by competitors may facilitate tacit collusion and cause significant consumer harms.

Enforcers and private plaintiffs already are challenging some of these behaviors. For example, when I headed the DOJ’s Antitrust Division during President Obama’s second term, we uncovered and successfully prosecuted criminally a scheme involving two companies selling poster art on the Amazon Marketplace.<sup>2</sup> These companies apparently grew tired of competing on price in the U.S. online market. So, they met and agreed to adopt the same pricing algorithm for the sale of certain posters. That meant Amazon shoppers always saw identical prices for the same product. The firms coordinated future pricing changes as well. This was old-fashioned price

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<sup>1</sup> Zach Brown and Alexander MacKay summarize the concerns and evidence associated with this risk: Zach Brown and Alexander MacKay, “Are online prices higher because of pricing algorithms?” *Brookings*, July 7, 2022

<https://www.brookings.edu/articles/are-online-prices-higher-because-of-pricing-algorithms/>; former FTC Acting Chair Maureen Ohlhausen also spoke thoughtfully on these issues back in 2017: Maureen K. Ohlhausen, “Should We Fear The Things That Go Beep In the Night? Some Initial Thoughts on the Intersection of Antitrust Law and Algorithmic Pricing,” US Federal Trade Commission, May 23, 2017

[https://www.ftc.gov/system/files/documents/public\\_statements/1220893/ohlhausen\\_-\\_concurrences\\_5-23-17.pdf](https://www.ftc.gov/system/files/documents/public_statements/1220893/ohlhausen_-_concurrences_5-23-17.pdf).  
<sup>2</sup> U.S. Department of Justice Office of Public Affairs, “E-Commerce Exec and Online Retailer Charged with Price Fixing Wall Posters,” December 4, 2015 <https://www.justice.gov/opa/pr/e-commerce-exec-and-online-retailer-charged-price-fixing-wall-posters>.

fixing brought to the internet through an agreement on code rather than price. It is per se unlawful and subject to criminal penalties.

The second area of concern with the use of pricing algorithms seems more subtle and harder to detect, but it carries the same risk of consumer harm: Companies avoiding price competition by using the same third-party vendor to collect data on supply and demand and “recommend” pricing or output behaviors that facilitate price coordination. Antitrust jurisprudence describes this behavior as a hub and spoke conspiracy, where competitors use a third party to secure the desired anticompetitive outcome. Again, this is not new. In the 1990’s, the DOJ uncovered and charged airlines in the U.S. with using the Airline Tariff Publishing Company—a jointly owned online booking system which collected and published electronic fare information—to (1) exchange proposals and negotiate fare changes; (2) trade fare changes in certain markets in exchange for fare changes in other markets; and (3) exchange mutual assurances concerning the level, scope, and timing of fare changes.<sup>3</sup> As DOJ explained in a 2017 submission to OECD:

*In 1994 the DOJ settled accusations that six airlines used a jointly owned computerized online booking system, the Airline Tariff Publishing Company (ATP), to communicate and set collusive airline fares. Although ATP provided a means for the airlines to disseminate fare information to the public, it also provided a forum for the airlines to engage in essentially private dialogues on fares. Certain features of the system enabled the airlines to reach overt price-fixing agreements, and “facilitate[d] pervasive coordination of airline fares short of price fixing.”<sup>4</sup>*

Your hearing on October 24th shined light on how these schemes can operate in a 21<sup>st</sup> Century artificial intelligence world: Competitors in the rental housing business across the U.S. allegedly using third party vendors—like RealPage and Yardi—to collect competitively sensitive pricing information from competing property management committees, feed that data through sophisticated algorithms, and recommend unit-by-unit prices so landlords can charge higher rents.<sup>5</sup>

<sup>3</sup> United States v. Airline Tariff Publishing Company, Civ. Action No. 92-2854 (SSH) (D.D.C. filed Dec. 12, 1992) <https://www.justice.gov/d9/atr/case-documents/attachments/1992/12/21/4796.pdf>.

<sup>4</sup> OECD Directorate for Financial and Enterprise Affairs Competition Committee, “Algorithms and Collusion – Note by the United States,” May 26, 2017 <https://www.justice.gov/d9/atr/case-document/file/979231/download>.

<sup>5</sup> Sen. Klobuchar (M.N.), Quote from: U.S. Senate, Committee on the Judiciary, Subcommittee on Competition Policy, Antitrust, and Consumer Rights, *Examining Competition and Consumer Rights in Housing Markets*, October 24, 2023 <https://www.judiciary.senate.gov/committee-activity/hearings/examining-competition-and-consumer-rights-in-housing-markets>; Class action lawsuits across the country have alleged that RealPage’s YieldStar algorithm facilitates collusion by landlords, and in April the U.S. Judicial Panel on Multidistrict Litigation consolidated 21 of these actions under the Middle District of Tennessee: Transfer Order, In Re: RealPage Inc., Rental Software Antitrust Litigation (No. II), MDL No. 3071, April 10, 2023 <https://fingfx.thomsonreuters.com/gfx/legal/docs/xmvikjlzxp/RealPage%20JPM%20transfer%202023-04-10.pdf>; In November, D.C. Attorney General Brian Schwab filed a similar lawsuit against RealPage and 14 landlords: Complaint, District of Columbia v. RealPage, Inc. et al. <https://oag.dc.gov/sites/default/files/2023->



Collusion through use of a common vendor that supplies algorithms to suppress competition is not limited to the rental housing market. Other recent private antitrust challenges involve hotel operators in Las Vegas and Atlantic City using the same third party vendor, a company called Cendyn Group, whose subsidiary, Rainmaker, offered a “platform of pricing algorithm products” that allegedly used pricing and occupancy data provided by leading hotels to suggest profit maximizing strategies that increased margins and limited the consumer’s ability to bargain hunt online.<sup>6</sup>

These AI-facilitated hub and spoke conspiracies extend further up the food chain, too. Literally. Just this Fall, the Justice Department and six state attorneys general, including from Utah and Minnesota, charged Agri Stats, Inc. with operating an information exchange that obtained sensitive price and output information from the nation’s largest meat processors, analyzed the data, and then provided detailed data to turkey, chicken, and pork producers that allowed these competitors to reduce output and increase price, with confidence that their competitors, who had access to the same information, would do the same.<sup>7</sup> According to the complaint, the scheme was working:

*Executives at some of the country’s largest meat processors testified that they could not recall any examples in which their companies used Agri Stats information to lower their sales prices to gain market share. An executive at Smithfield, a pork processor, summarized Agri Stats’ consulting advice in four words: “Just raise your price.”<sup>8</sup>*

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[11/DC%20OAG%20RealPage%20Complaint%20-%20Filed.pdf](#); My talented antitrust colleague Professor Maurice Stucke, in his testimony before this subcommittee on October 24, 2023, describes the concerning behaviors of landlords who use algorithmic price-setting software and the difficulties involved in detecting and challenging those behaviors: Maurice Stucke, “Testimony on Examining Competition and Consumer Rights in Housing Markets before the Senate Committee on the Judiciary, Subcommittee on Competition Policy, Antitrust, and Consumer Rights,” October 24, 2023 <https://www.judiciary.senate.gov/imo/media/doc/2023-10-24-%20testimony-%20stucke.pdf>.  
<sup>6</sup> Order, Richard Gibson, et al. v. MGM Resorts International, et al., Case No. 2:23-cv-00140-MMD-DJA, October 24, 2023 [https://findfx.thomsonreuters.com/gfx/legaldocs/mypmgvmykpr/Vegas%20hotels%202023-10-24%20Order%20dckt%20141\\_0.pdf](https://findfx.thomsonreuters.com/gfx/legaldocs/mypmgvmykpr/Vegas%20hotels%202023-10-24%20Order%20dckt%20141_0.pdf); Class Action Complaint, Heather Altman and Eliza Wiatroski v. Caesars Entertainment, Inc., Case No. 2:23-cv-02536, May 9, 2023 <https://findfx.thomsonreuters.com/gfx/legaldocs/inwvyzenrvw/Altman%20v%20Caesars%20et%20al%20-%20NJ%20-%2020230509.pdf>; Firms with market power may be able to force their competitors to raise price as well. A recent Wall Street Journal report on the FTC’s recent Amazon lawsuit discloses allegations that the company used a secret algorithm codenamed “Project Nessie” to discipline market pricing: “The algorithm helped Amazon improve its profit on items across shopping categories, and because of the power the company has in e-commerce, led competitors to raise their prices and charge customers more, according to people familiar with the allegations in the complaint.” Dana Mattioli, “Amazon Used Secret ‘Project Nessie’ Algorithm to Raise Prices,” *The Wall Street Journal*, October 3, 2023 <https://www.wsj.com/business/retail/amazon-used-secret-project-nessie-algorithm-to-raise-prices-6c593706>.

<sup>7</sup> Second Amended Complaint, US, et al. v. Agri Stats, Inc., No. 0:23-cv-03009-JRT-JFD <https://justice.gov/d9/2023-11/418025.pdf>.

<sup>8</sup> *Ibid*, p. 2 par 4.



These third-party hubs use AI technology to track pricing and output in real time and suggest pricing and supply behaviors that, as noted above, facilitate competitor coordination with resulting anticompetitive outcomes. Again, the basic behavior is not new. But the use of pricing algorithms seems to make coordination easier and quicker. And since the third-party vendor's technology closely tracks pricing behaviors, firms that seek to undercut cartel prices are easily detected and ratted out. Experience teaches that cartels tend to last longer when it is easier to detect and punish cheaters.

The good news is that, as I noted earlier, these hub and spoke conspiracies have traditionally been held to violate the antitrust laws.<sup>9</sup> That is true in the U.S., as DOJ noted in its recent filing in the Real Page Rental Software Litigation, and in many other jurisdictions.<sup>10</sup> The bad news is that algorithmic collusion using third parties seems to be on the increase; detection is not easy; and AI makes it easier to succeed.

But my big worry is whether our current antitrust jurisprudence can handle fact patterns where pricing algorithms “learn” how to collude with little or no human involvement. To prove an unlawful agreement under Section 1 of the Sherman Act, plaintiffs need to show a meeting of the minds between rivals, a conscious commitment to a common scheme. As DOJ argues in its recent Statement of Interest in the RealPage Software Antitrust Litigation, joint use of common algorithms to fix price “must be subject to the same condemnation as other price-fixing schemes...

*It makes no difference that prices are fixed through joint use of an algorithm instead of by a person, just as sharing information through an algorithmic service should be treated the same as sharing information through email, fax machine, or face-to-face conversation. Put another way, whether firms effectuate a price-fixing scheme through a software algorithm or through human-to-human interaction should be of no legal significance. Automating an anticompetitive scheme does not make it less anticompetitive.*<sup>11</sup>

<sup>9</sup> In the late 1990's I led an FTC team that successfully charged Toys “R” Us with using its market power to secure agreements from toy manufacturers to withhold popular toys from its discounting rivals: Toys “R” Us, Inc. v. Federal Trade Commission, United States Court of Appeals for the Seventh Circuit, 221 F.3d 928 (2000) <https://casetext.com/case/toys-r-us-inc-v-ftc>.

<sup>10</sup> Memorandum of Law In Support of the Statement of Interest of the United States, In re: RealPage, Rental Software Antitrust Litigation (No. II), Case No. 3:23-MD-3071, November 15, 2023 [https://fingfx.thomsonreuters.com/gfx/legaldocs/bvvrwqozve/DOJ%20RealPage%202023-11-15%20Memorandum%20dck%20628\\_0.pdf](https://fingfx.thomsonreuters.com/gfx/legaldocs/bvvrwqozve/DOJ%20RealPage%202023-11-15%20Memorandum%20dck%20628_0.pdf); OECD, *Algorithmic Competition*, *OECD Competition Policy Roundtable Background Note*, 2023 <https://www.oecd.org/daf/competition/algorithmic-competition-2023.pdf>; Antonio Capobianco, “The Impact of Algorithms on Competition and Competition Law,” *Promarket*, May 23, 2023 <https://www.promarket.org/2023/05/23/the-impact-of-algorithms-on-competition-and-competition-law/>.

<sup>11</sup> Statement of Interest of the United States, In re: RealPage, Rental Software Antitrust Litigation (No. II), Case No. 3:23-MD-3071, November 15, 2023 <https://www.justice.gov/d9/2023-11/418053.pdf>

DOJ has it right. But, at the same time, the courts have long held that proof of conscious parallelism, sometimes called tacit collusion, is not enough. As Professor Stucke noted in his recent testimony, the Supreme Court made this point succinctly in its 1993 Brooke Group decision:

*Tacit collusion, sometimes called oligopolistic price coordination or conscious parallelism, describes the process, not in itself unlawful, by which firms in a concentrated market might in effect share monopoly power, setting their prices at a profit-maximizing, supracompetitive level by recognizing their shared economic interests and their interdependence with respect to price and output decisions.*<sup>12</sup>

To show an unlawful agreement under Section 1, courts require evidence of some sort of meeting of the minds. These evidentiary “plus factors” allow the court to conclude that something more than unilateral action was afoot.

*Plus factors are economic actions and outcomes, above and beyond parallel conduct by oligopolistic firms, that are largely inconsistent with unilateral conduct but largely consistent with explicitly coordinated action.*<sup>13</sup>

But what if competitors individually develop pricing algorithms that set profit maximization as the goal and machine learning leads to pricing outcomes that result in widespread oligopolistic pricing in markets where price competition previously had been the norm?

The analogy that comes to mind is the 1983 movie *War Games*. There, a young computer nerd played by Matthew Broderick unwittingly ends up hacking into the supercomputer controlling the US military’s nuclear arsenal and activates a game called Global Thermonuclear War. He thinks it’s just a game, but the computer (the WOPR) treats it as the real thing and takes actions that trigger escalating responses from the then-Soviet Union. We are on the brink of thermonuclear war until Broderick directs the computer to play Tic Tac Toe. In seconds the WOPR runs every series of possible moves, “learns” that the game is unwinnable and stops the nuclear escalation.

The algorithmic pricing scenario I worry about is where companies individually write code that simply instructs the machine to maximize profits; it gathers publicly available pricing information about its competitors; and “learns” in nanoseconds that price competition does not get you there, stops discounting, and stabilizes prices—even in markets where the number of firms previously would have made oligopolistic pricing—tacit collusion—unsustainable. In short, do the machines learning on their own that competing on price is the road leading to

<sup>12</sup> See Stucke testimony, *supra* fn. 5, citing: *Brooke Group Ltd. v. Brown & Williamson Tobacco Corp.*, 509 U.S. 209, 227 (1993) <https://supreme.justia.com/cases/federal/us/509/209/>.

<sup>13</sup> William E. Kovacic, Robert C. Marshall, Leslie M. Marx & Halbert L. White, Plus Factors and Agreement in Antitrust Law, 110 MICH. L. REV. 393 (2011) <https://repository.law.umich.edu/mlr/vol110/iss3/1/>.

mutually assured destruction? And, can the industry-wide implementation of pricing algorithms that predictably lead to such a result—even without direct communication between competitors—constitute an illegal agreement under Section 1? If it does not, we are in a world of hurt.

I know both the Justice Department and the Federal Trade Commission worry about these scenarios. And I commend their efforts to expand their talent pool to include AI specialists—like my co-panelist Sarah Myers West—who can help the enforcers keep pace with these breath-taking changes in how competition is affected by the widespread use of pricing algorithms.

What more needs to be done? Some thoughts:

- In merger investigations the enforcers need to determine whether my competition “doomsday scenario” is a real-world concern. That can be done, in part, by using Second Requests to examine the pricing algorithms employed by the merging parties to see how they react to each other’s pricing decisions and putting companies on notice in the revised Merger Guidelines that this will be a focus;
- Independent of merger investigations, the Federal Trade Commission should employ its investigatory powers under Section 6(b) of the FTC Act to do a deep dive into selected industries to better understand the prevalence and real-world impact of pricing by algorithm.
- The enforcers should use those results to persuade the courts that an illegal agreement under Section 1 can be inferred where widespread adoption of pricing algorithms by competing firms results in or is likely to result in anticompetitive outcomes;
- At the same time, the FTC should consider using its “unfair methods of competition” authority under Section 5 empowers it to challenge use of AI that results in anticompetitive outcomes—even if the evidence does not establish an agreement in violation of Section 1;
- The enforcers should redouble their efforts to remind companies that they are responsible for monitoring the pricing behavior of their machines—just as they are responsible for the actions of their employees that lead to anticompetitive outcomes.
- Finally, Congress should consider legislation that addresses the growing risks to competition posed by misuse of algorithmic pricing – either as part of broader efforts to set guardrails for the use of AI, or antitrust-specific legislation that holds competitors responsible for the use of pricing algorithms that they know or should have known results in tacit collusion and reduced competition.

As noted at the outset, I recognize the many positives AI brings to the table. But I also see the risks to competition and consumers from misuse of algorithmic pricing. The risks are real. They cannot be taken lightly.

Responses to Written Questions from Subcommittee on Competition Policy, Antitrust, and Consumer Rights  
 Submitted by: Bill Baer, Visiting Fellow, Governance Studies, Center for Technology Innovation, The Brookings Institution  
 Tuesday, January 2, 2024

Senator Thom Tillis

1. *The AMERICA Act would prohibit large digital advertising companies from owning more than one part of the digital ad ecosystem. In your opinion, should this take effect today do you see any unintended consequences?*

I do not foresee unintended consequences. The bill addresses a legitimate concern that certain tech platforms are dominant and reinforce their market power by requiring use of their proprietary advertising technology by sellers and advertisers. I note that there are pending antitrust enforcement challenges by certain state attorneys general and by the U.S. Department of Justice seeking to address these concerns as they relate to Google.

2. *Development of AI will only continue to grow and as a result more and more sophisticated AI tools will become available and the use of AI tools more prevalent. What can Congress do now to better plan for the impact of competition, without stifling AI innovation?*

As I discuss in my written testimony, Congress should consider legislation that addresses the growing anticompetitive risks posed by the misuse of price-setting algorithms—either as part of broader legislation establishing guardrails for AI or by enacting antitrust-specific legislation that holds competitors responsible for the use of pricing algorithms that they know or should know will result in tacit collusion. I hope the courts will come to recognize that proof of knowing use of pricing algorithms by competitors to suppress price competition constitutes an anticompetitive agreement in violation of Section 1 of the Sherman Act. If not, action by Congress to update the Sherman Act may be essential.

3. *Can algorithms be manipulated by bad actors to censor free speech, specifically during an election cycle? And if so, how?*

My expertise – and therefore my testimony – focuses on antitrust and competition. But I appreciate that the increased use of AI tools does have implications for elections, particularly regarding the spread of disinformation. My colleagues at the Brookings Institution, Darrell West and Elaine Kamarck, have discussed some of the risks that the proliferation of AI tools poses to our electoral process.<sup>1</sup> A recent report from the Center on Technology Policy at UNC Chapel Hill identified a variety of risks that generative AI poses for political advertisements specifically, such as facilitating an increase in the scale, believability, and personalization of deceptive content, as well as bias and discrimination in political ads.<sup>2</sup>

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<sup>1</sup> Darrell M. West and Elaine Kamarck, “How AI Will Affect the 2024 Elections,” TechTank, The Brookings Institution, November 6, 2023 <https://www.brookings.edu/articles/ai-will-affect-the-2024-elections-the-techtank-podcast/>.

<sup>2</sup> Scott Babwah Brennan and Matt Perault, The new political ad machine: Policy frameworks for political ads in an age of AI, Center on Technology Policy at the University of North Carolina at Chapel Hill, November 2023 <https://techpolicy.unc.edu/wp-content/uploads/2023/11/GAI-and-political-ads.pdf>.

4. *Groups with different viewpoints have weighed in on algorithms. Some suggest that more transparency is needed, while others want more privacy. Can you provide your perspective on whether more or less transparency is needed when it comes to algorithms?*

While questions regarding AI regulation are often reduced to a simple trade-off between protections for privacy and transparency, the focus should be on its misuse. Last October, my former Brookings colleague Alex Engler and his coauthor Sylvia Brown published a report on automated valuation models (AVMs)—another example of AI tools used in the housing market—in which they suggested that transparency requirements could help combat algorithmic discrimination in AVMs.<sup>3</sup>

5. *Do you believe that large companies and platforms can use algorithms to stifle innovation or small businesses?*

I agree there is a risk that AI tools can be used by large companies to suppress competition and injure smaller companies. For example, last June, the FTC raised concerns that incumbents in the generative AI market that control “key inputs or adjacent markets” could entrench their dominance of the market using unlawful bundling, tying, or exclusive dealing practices.<sup>4</sup> In September, the FTC sued Amazon for illegally maintaining monopoly power through practices such as biasing Amazon’s search results to preference their own products and removing the “Buy Box” for products sold by competitors offering discounts on other websites.<sup>5</sup>

6. *What do you believe is the role of government in regulating algorithms? What, if any, unintended consequences would there be if Congress gets involved?*

I do not claim the expertise to offer a comprehensive solution to the challenge of regulating artificial intelligence. But I certainly believe it appropriate – indeed necessary – for the government to prevent the misuse of AI tools to facilitate anticompetitive outcomes. As I discuss in my written testimony, courts should read Section 1 of the Sherman Act to prevent such misuse; the FTC’s “unfair methods of competition” authority under Section 5 of the FTC Act empowers it to challenge the use of AI that results in anticompetitive outcomes; and the FTC should also use its investigatory powers under Section 6(b) to examine the prevalence and real-world impact of algorithmic pricing in different industries. Congress also has a responsibility to ensure that our antitrust laws are up-to-date and able to prevent the use of AI tools to facilitate collusion.

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<sup>3</sup> Sylvia Brown and Alex C. Engler, *Governing the Ascendancy of Automated Valuation Models: Regulating AI in Residential Property Valuation*, The Brookings Institution, October 12, 2023 [https://www.brookings.edu/wp-content/uploads/2023/10/BR-AVM\\_report\\_Finalx2.pdf](https://www.brookings.edu/wp-content/uploads/2023/10/BR-AVM_report_Finalx2.pdf).

<sup>4</sup> Staff in the Bureau of Competition & Office of Technology, “Generative AI Raises Competition Concerns,” FTC – Technology Blog, June 29, 2023 <https://www.ftc.gov/policy/advocacy-research/tech-at-ftc/2023/06/generative-ai-raises-competition-concerns>.

<sup>5</sup> FTC, “FTC Sues Amazon for Illegally Maintaining Monopoly Power,” September 26, 2023 <https://www.ftc.gov/news-events/news/press-releases/2023/09/ftc-sues-amazon-illegally-maintaining-monopoly-power>; Karen Weise, “Here Are the 2 Tactics Amazon Used to Undermine Competition, the F.T.C. Says,” *The New York Times*, September 26, 2023 <https://www.nytimes.com/2023/09/26/technology/amazon-ftc-lawsuit-antitrust.html>.



# **America's Digital Shield:**

## **A New Online Monitoring System Will Make Google and Other Tech Companies Accountable to the Public**

Testimony by

Robert Epstein, Ph.D. ([re@aibr.org](mailto:re@aibr.org))

Senior Research Psychologist  
American Institute for Behavioral Research and Technology

Before the United States Senate Judiciary Subcommittee on Competition Policy,  
Antitrust, and Consumer Rights

Wednesday, December 13, 2023, 3:00 p.m.

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## **America's Digital Shield: A New Online Monitoring System Will Make Google and Other Tech Companies Accountable to the Public**

Testimony by

Robert Epstein, Ph.D. ([re@aibrt.org](mailto:re@aibrt.org))  
Senior Research Psychologist  
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Before the United States Senate Judiciary Subcommittee on Competition Policy,  
Antitrust, and Consumer Rights

Wednesday, December 13, 2023, 3:00 p.m.

I'm here to tell you about an existential threat to our country that is so well hidden you might know nothing about it. It's a threat posed by Big Tech monopolies, eerily predicted by President Eisenhower in 1961 (<https://is.gd/ct5Gcb>).

In 2016, Google alone shifted more than 2.6 million votes to Hillary Clinton using subliminal techniques I had been studying and quantifying since 2013 (<https://TamingBigTech.com>; Epstein, 2018d).

Four days later, a leaked video showed Google's leaders – devastated by Trump's win – telling their employees that they would not allow Trump to win the Presidency again (<https://is.gd/ab4D8Z>). They would *guarantee* his defeat using their “great strength and resources and reach.” They made good on this promise in 2020, and in 2022, as I explained recently in *The Epoch Times*, they stopped the Red Wave cold (Epstein, 2022c; <https://HowGoogleStoppedTheRedWave.com>).

I lean left, but I don't think a private monopoly – one with no accountability to the public – should be able to pick our nation's leaders. Who knows how these secretive companies will lean *next* year, after all?

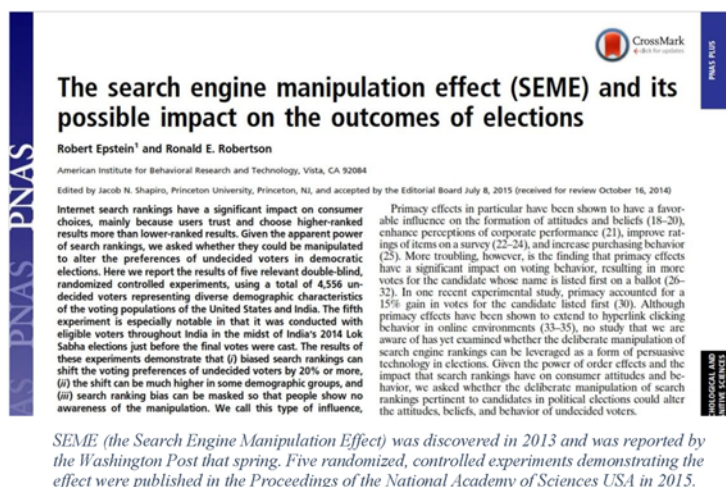
After that all-hands meeting, Google perfected at least a dozen new methods of subliminal control that I have now been studying for more than a decade (Epstein, 2018i, all see References and Appendices below.)

To shift votes, we know from leaked emails (<https://is.gd/x9BtFn>) that Google relies on what they call “ephemeral experiences” – fleeting content such as search

results, search suggestions, and up-next videos on YouTube – content that impacts undecided voters and then disappears, leaving no paper trail.

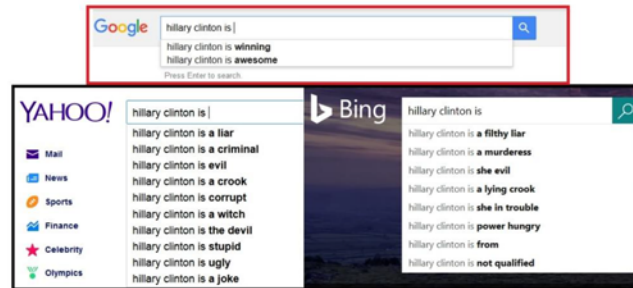
Since 2016, my dedicated team has been building increasingly more sophisticated monitoring systems that *preserve and analyze ephemeral content* (Epstein, 2018d; Epstein et al., 2021a; Epstein et al., 2022b; Epstein & Peirson, 2023). This is Google's worst nightmare, because it means we are surveilling *them*, just as they surveil us and our children 24 hours a day. In other words, *we are giving you, our nation's leaders, the ammunition you need to hold Google accountable*.

Our research, which we publish in prestigious peer-reviewed journals (see Appendices), allows us to measure the power Big Tech has to shift votes, while our monitoring systems let us see whether these manipulations are being used.



In one case so far, when we shared our data with Senators Lee, Johnson, and Cruz, they sent a strong letter to the CEO of Google (<https://LetterToGoogleCEO.com>), which ceased its election manipulations that very day. It turned off the political bias in its search engine and stopped sending partisan "Go-Vote" reminders on its home page; through our monitoring, we detected these changes the moment they were made (Epstein et al., 2021a).

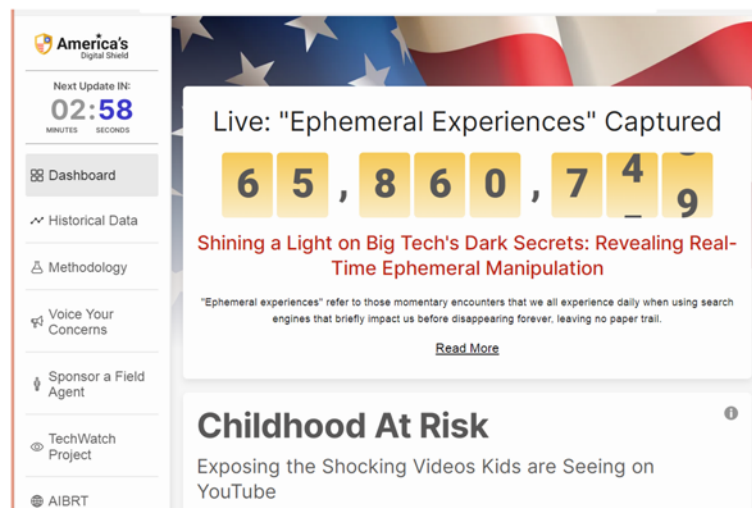
We preserve ephemeral content through the computers of a representative sample of real voters. One *must* monitor through the computers of real people because Big Tech sends out *personalized content*. To see what they're sending people, you must look over the shoulders of *real people*, just as the Nielsen company does with television viewers.



*One of the simplest ways to support a candidate is to suppress negative search terms for that candidate. These screenshots from the summer of 2016 show Google was suppressing negative search suggestions for Hillary Clinton.*

We started small in 2016 but have since deployed bigger systems with each election. In 2022, we preserved more than *2.5 million ephemeral experiences* through the computers of a politically-balanced group of 2,742 voters in 10 swing states.

We are now building the world's first *nationwide Digital Shield*, and we just released a public dashboard – [AmericasDigitalShield.com](https://AmericasDigitalShield.com) – that shows our cumulative findings in real time. We are collecting and displaying data 24 hours a day through the computers of a politically-balanced group of more than *13,000 voters in all 50 states*, and so far we have *court-admissible data in 15 states*.



*A partial view of a real-time display of data being streamed from the computers of a politically-balanced group of more than 13,000 registered voters in all 50 states. See: <https://AmericasDigitalShield.com>.*

We have so far preserved and analyzed more than *66 million ephemeral experiences* on multiple platforms. This \$3 million system is expanding every day, and we recently started preserving content being sent to more than 2,600 children and teens.

The extreme political bias we are seeing in content being sent to voters, along with the highly sexualized and violent content being sent to America's kids, confirm my worst fears: The "technological elite," as Eisenhower called them, are now in control of our democracy, and they are systematically indoctrinating our children.

If we can secure funding to complete our system so we have court-admissible data in all 50 states, the tech companies will almost certainly back down in 2024. Even if they don't, we will have incontrovertible evidence of election rigging on a massive scale.

If *no* monitoring system is in place, Google alone will be able to shift between *6.4 and 25.5 million votes* in the 2024 Presidential election, leaving no paper trail and making a mockery of the free-and-fair election.

Thank you, members of the Committee, for your attention, and for protecting our great nation from threats both foreign and, I hope, *domestic*.

**Questions from Senator Tillis**  
**for Dr. Robert Epstein ([re@aibrt.org](mailto:re@aibrt.org))**  
**Witness for the Senate Committee on the Judiciary**  
**Subcommittee on Competition Policy, Antitrust,**  
**and Consumer Rights Hearing on “The New**  
**Invisible Hand? The Impact of Algorithms on**  
**Competition and Consumer Rights”, Hearing of**  
**December 13, 2023**

1. The AMERICA Act would prohibit large digital advertising companies from owning more than one part of the digital ad ecosystem. In your opinion, should this take effect today do you see any unintended consequences?

Although I believe this Act should take effect today, and although I don't immediately see any unintended consequences, I state for the record that this Act falsely creates the impression that Congress is bringing Big Tech companies under control. In fact, this Act addresses none of the three big threats that Google and, to a lesser extent, other tech companies, pose to our democracy, our minds, and our children: (1) The massive and unrestricted surveillance that

underlies the unethical business model these companies use. (2) The ability to determine what content Americans and, indeed, billions of people worldwide, can or cannot see online – in other words, the censorship problem. (3) The unrestricted ability that Google and, to a lesser extent, other tech companies, have to shift millions of votes in our elections without people knowing and without leaving a paper trail for authorities to trace. Leaks from the company and a massive amount of online data my research team has been collecting since 2016 show without doubt that Google has been using these techniques to manipulate our elections, effectively determining the outcome of any election in which the win margin is 4 percent or less, which includes the 2020 Presidential election and many of the 2022 midterm elections. My research on new forms of influence that the internet has made possible is published in peer reviewed scientific journals and adheres to the highest standards of academic integrity. For further information, please see the written version of my

Congressional testimony of December 13, 2023 (480 pages), accessible at <https://is.gd/ouJAFD>.

2. Development of AI will only continue to grow and as a result more and more sophisticated AI tools will become available and the use of AI tool more prevalent. What can Congress do now to better to plan for the impact on competition, without stifling AI innovation?

Having studied AI since its origins in the 1960s (see Epstein et al., 2008, *Parsing the Turing Test: Methodological and philosophical issues in the quest for the thinking computer*. Dordrecht, The Netherlands: Springer), it troubles me to inform you that I believe that Congress lacks the ability to protect the American public from a wide variety of problems that rapidly evolving AI technology will create in coming years.

3. Can algorithms be manipulated by bad actors to censor free speech, specifically during an election cycle? And if so, how?



Yes, algorithms can be manipulated and *are* being manipulated by bad actors to censor free speech, often with the intent of determining the outcome of elections in the U.S. and elsewhere around the world. My research team has, since 2013, been discovering, naming, studying and quantifying how algorithms can be used to alter opinions and votes on a massive scale without people knowing and without leaving paper trails for authorities to trace. In the 2024 Presidential election, Google alone can use such techniques to shift between 6.4 and 25.5 million votes. Specific techniques include, among others, the Search Engine Manipulation Effect (SEME, <https://SearchEngineManipulationEffect.com>), the Search Suggestion Effect (SSE, <https://SearchSuggestionEffect.com>), the Digital Personalization Effect (DPE, <https://DigitalPersonalizationEffect.com>), the Targeted Messaging Effect (TME, <https://TargetedMessagingEffect.com>), the YouTube Manipulation Effect (YME, <http://YouTubeManipulationEffect.com>), the

Opinion Matching Effect (OME, <https://OpinionMatchingEffect.com>), the Multiple Exposure Effect (MEE, <https://MultipleExposureEffect.com>), and the Answer Bot Effect (ABE, <https://AnswerBotEffect.com>). In the days leading up to an election, Google can rapidly and effectively shift the voting preferences of undecided voters by demoting or removing content from search results; by removing content from search suggestions; by altering content in answer boxes; by displaying partisan up-next recommendations on YouTube (owned by Google); and by displaying on its home page partisan register-to-vote reminders, partisan mail-in-your-ballot reminders, and partisan go-vote reminders. Data my team has captured with increasingly more sophisticated monitoring systems since 2016 confirm that Google is in fact using all of these techniques to alter opinions and votes in regional, state, and nationwide elections in the U.S. For further information, please see the written version of my Congressional testimony of December 13,

2023 (480 pages), accessible at <https://is.gd/ouJAFD>.

4. Groups with different viewpoints have weighed in on algorithms. Some suggest that more transparency is needed, while others want more privacy. Can you provide your perspective on whether more or less transparency is needed when it comes to algorithms?

When it comes to algorithms, “transparency” is a misleading term. Algorithms – especially advanced machine-learning algorithms used by Big Tech companies – are inherently opaque. By that I mean that no one understands how they work – not even the programmers who wrote them. (Note: I have been writing algorithms since I was a teenager.) Australia’s 2019 effort to “regulate algorithms” was a complete failure (see Reuters story here: <https://is.gd/ptz5Ql>). The only meaningful way to make algorithms transparent is not to try to examine (or “regulate”) the algorithm, but to monitor, preserve, and analyze the *content* the algorithm is producing. That is what my team

and I have done by building increasingly more sophisticated automated monitoring systems. For further information, see <https://AmericasDigitalShield.com>, or see my oral testimony of December 13, 2023, at <https://2023EpsteinTestimony.com>.

5. Do you believe that large companies and platforms can use algorithms to stifle innovation or small businesses?

Large companies use their monopolistic power to stifle innovation and competition. Please don't let the current fascination with the word "algorithm" lead you astray on this issue. For at least a few more years, algorithms will continue to be composed and controlled by people. People are the problem, not the algorithms they write.

6. What do you believe is the role of government in regulating algorithms? What, if any, unintended consequences would there be if Congress gets involved?

As I stated during the hearing of December 13, 2023, it would be meaningless for Congress to “regulate algorithms.” Because algorithms are inherently opaque, authorities would have no way of confirming compliance – the problem the EU has had with its data protection laws. Moreover, laws and regulations move slowly, whereas algorithmic technology moves with lightning speed. Programmers can easily program around any law or regulation without you having the slightest idea they’ve done so. By manipulating elections and making prudent campaign donations, tech companies can also constrain the kinds of laws and regulations that are enacted. With respect, Senator Tillis, your questions exemplify the power that Big Tech companies currently wield. Instead of asking questions about how we can (a) end the surveillance, (b) stop the censorship, and (c) stop the manipulation of our elections and the indoctrination of our children by Big Tech companies, you are asking about “regulating algorithms,” which suggests you know little or nothing about what algorithms actually are.

Based on my work with various AG offices around the country since 2015, I have come to believe that the tech companies are responsible for shifting our governing authorities away from consumer protection issues – again, the three big threats: surveillance, censorship, and manipulation – toward antitrust issues that address none of these threats. You are doing exactly what the tech companies want you to do. I note, for the record, that, according to OpenSecrets.org, you accepted \$19,000 in campaign donations from Google during the most recent election cycle. Google is among your top 50 donors.



**STATEMENT OF DAMON T. HEWITT  
PRESIDENT AND EXECUTIVE DIRECTOR  
LAWYERS' COMMITTEE FOR CIVIL RIGHTS UNDER LAW**

**U.S. SENATE COMMITTEE ON THE JUDICIARY  
SUBCOMMITTEE ON  
COMPETITION POLICY, ANTITRUST, AND CONSUMER RIGHTS**

**HEARING ON  
“THE NEW INVISIBLE HAND? THE IMPACT OF ALGORITHMS ON  
COMPETITION AND CONSUMER RIGHTS”**

**DECEMBER 13, 2023**

## I. Introduction

Chair Klobuchar, Ranking Member Lee, and Members of the Subcommittee, thank you for the opportunity to testify today about the impact of algorithms on consumer and civil rights. My name is Damon T. Hewitt, and I am the President and Executive Director of the Lawyers' Committee for Civil Rights Under Law ("Lawyers' Committee").

The Lawyers' Committee is a nonpartisan, nonprofit organization, formed in 1963 at the request of President John F. Kennedy to mobilize the nation's leading lawyers as agents for change in the Civil Rights Movement. Today, we use legal advocacy to achieve racial justice, fighting inside and outside the courts to ensure that Black people and other people of color have voice, opportunity, and power to make the promises of our democracy real. The Lawyers' Committee works at the intersection of racial justice, privacy, and technology to address predatory data practices, discriminatory algorithms, and other online harms that disproportionately affect people of color.

Equal opportunity and civil rights are intertwined with technological advancement. In the consumer context, algorithms are used to make decisions about all aspects of peoples' lives, determining who can rent a house, who can get a loan, who can get a deal, and consequentially—who cannot. One of the greatest civil rights challenges of our generation is to ensure that our new data-driven economy does not replicate or amplify existing discrimination. To ensure that technology serves all of us. But achieving the full measure of freedom in a data-driven economy also requires freedom from discrimination, which is increasingly amplified online through algorithmic bias, digital redlining, and pervasive surveillance.

Although algorithmic systems are widely used, they pose a high risk of discrimination, disproportionately harming Black communities and other communities of color. Because these algorithmic technologies are typically built using societal data that reflects generations of discriminatory practices such as redlining and segregation, they often replicate and reinforce past patterns of discrimination. The tools of the future lock us into the mistakes of the past.

Commercial surveillance and algorithmic decision-making reinforce a separate and unequal society, and correspondingly an unequal market. Each click, habit, and individual characteristic is collected and cataloged to discern not just preferences, but sensitive data about individuals' race, religion, gender, and other traits—or proxies for them. Algorithmic systems use this information to determine what products consumers see, what price or interest rate they are quoted, and what eligibility they qualify for.



Algorithmic collusion and discrimination present a stark market barrier between the promise of what is, and what could be. The harms of algorithmic discrimination are already denying millions of Americans equal opportunity in our economy. Instead of aiding consumers, AI tools too often create distortions in the marketplace, reflecting exclusion rather than fairness for consumers and creating closed doors in the virtual world that have discriminatory effects in real life. Left unchecked, these harmful impacts will continue to grow as AI becomes engrained in every aspect of our lives.

Just as the struggles of the civil rights movement culminated in milestone civil rights laws, so too does this struggle need to culminate in new protections. The time has come for Congress to enact legislation ensuring the algorithmic systems are safe, effective, and fair. Legislation needs to center civil rights, establish baseline protections for consumers and their privacy, and empower effective oversight.

*First*, AI regulation should protect Americans' civil rights. Legislation should establish anti-discrimination protections to close gaps in existing law created by novel online and algorithmic contexts. It should also require pre- and post-deployment testing requirements to evaluate algorithmic systems for discrimination and bias. All too often, consumers—especially Black and Brown consumers—end up as unwilling test subjects for unsafe algorithms and consumer technologies. Algorithmic harm needs to be identified, prevented, and mitigated as a fundamental part of the development process.

*Second*, AI legislation should establish baseline consumer protections. These should include a duty of care to require that products are safe and effective, data privacy to protect consumers' personal information, and transparency and explainability requirements so that consumers know when, how, and why, AI is being used. Consumers should be empowered to make fully informed decisions about how they interact with algorithmic systems and companies should take adequate steps to make sure that their products work as intended.

*Third*, AI regulation should establish robust oversight and enforcement. Congress should empower a federal regulator with adequate authority and resources and provide a private right of action to remedy algorithmic harms. Black people and other people of color historically have not been able to rely upon the government to protect their interests, so individuals need to be able to vindicate their own rights.

Almost sixty years ago, we decided as a nation that our polity is stronger when everyone has a fair chance. Congress passed the Civil Rights Act of 1964 to prohibit segregation in interstate commerce, alongside other legislation to address discrimination in employment, housing, and other critical aspects of Americans' lived experiences in the marketplace. Today, the mass generation and collection of personal data through the internet and the use of algorithmic technologies to determine

economic opportunities create new challenges to the prevention and elimination of discrimination. It is time to build upon our civil rights infrastructure to ensure that everyone has equal opportunity in the new digital marketplace and fair access to the information, goods, and services it enables.

## II. Segregation and Redlining Produced Inequities that Persist Today and Affect the Data Flowing In and Out of Algorithmic Systems

It should be no surprise that when you draw data from a society with a bedrock history of systemic inequity, the data will be steered by that history. Generations of institutionalized oppression of Black Americans—through slavery, segregation, redlining, and disenfranchisement—is an inescapable part of American history whose present-day effects are embedded in the foundation of our society.

Contemporary commercial surveillance practices that undergird modern algorithmic tools originated in this separate-but-equal segregation, which denied equal opportunity to millions of Black people. The analog version of a discriminatory algorithm was redlining, which deprived Black people of intergenerational wealth and health. This one historic algorithmic system—using racial geography as part of a formula for determining government subsidies for homeownership, built on top of segregated housing—has caused a *century* of devastating downstream effects with no end in sight.

The consequences of residential and educational segregation are still with us.<sup>1</sup> Disparities in employment and credit opportunities, and resulting disparities in intergenerational wealth generation, are still endemic.<sup>2</sup> Access to healthcare and clean environments is unequal.<sup>3</sup> The ongoing consequences of segregation are legion:

<sup>1</sup> See, e.g., Patrick Sharkey, *Stuck in Place: Urban Neighborhoods and the End of Progress Toward Racial Equality* 9–10, 91–116 (Univ. of Chicago Press 2013); Roslyn Arlin Mickelson, *Exploring the School-Housing Nexus: A Synthesis of Social Science Evidence*, in *Finding Common Ground: Coordinating Housing and Education Policy to Promote Integration* 5 & n.1 (Philip Tegeler ed., Poverty & Race Resch. Action Council & Nat'l Coal. on Sch. Diversity 2011), <http://www.prrac.org/pdf/HousingEducationReport-October2011.pdf>.

<sup>2</sup> See, e.g., Michael A. Stoll, *Job Sprawl and the Spatial Mismatch between Blacks and Jobs*, Brookings Inst. Metro. Pol'y Program 7 (Feb. 2005), <https://www.brookings.edu/research/job-sprawl-and-the-spatial-mismatch-between-blacks-and-jobs/>; Rashawn Ray et al, *Homeownership, Racial Segregation, and Policy Solutions to Racial Wealth Equity*, Brookings (Sept. 1, 2021), <https://www.brookings.edu/articles/homeownership-racial-segregation-and-policies-for-racial-wealth-equity/>.

<sup>3</sup> See, e.g., Sherman A. James, *John Henryism and the Health of African-Americans*, 18 *Culture, Med., & Psych.* 163–82 (1994), <https://doi.org/10.1007/BF01379448>; Ctr. for Fam. Resch., *Skin-deep Resilience Research Digest*, Univ. of Ga., <https://cfr.uga.edu/for-researchers/research-digests/skin-deep-resilience/>; Helen H. Kang, *Pursuing Environmental Justice: Obstacles and Opportunities – Lessons from the Field*, 31 *Wash. U. J. L. & Pol'y* 121, 126–67 (2009); U.S. ENV'T. PROT. AGENCY, *Environmental Equity: Reducing Risk for All Communities* 15 (1992), [https://www.epa.gov/sites/default/files/2015-02/documents/reducing\\_risk\\_com\\_vol1.pdf](https://www.epa.gov/sites/default/files/2015-02/documents/reducing_risk_com_vol1.pdf).

“investment in construction; urban blight; real estate sales; household loans; small business lending; public school quality; access to transportation; access to banking; access to fresh food; life expectancy; asthma rates; lead paint exposure rates; diabetes rates; heart disease rates; and the list goes on.”<sup>4</sup>

The effects of discrimination are literally shortening the lives and health-spans of Black Americans, manifesting as disproportionate incidences of inflammatory diseases.<sup>5</sup> As the Supreme Court has held, destroying the badges and incidents of slavery “at the very least” necessitates “the freedom to buy whatever a white man can buy, the right to live wherever a white man can live.”<sup>6</sup>

These effects now manifest in data about Black communities and other communities of color—data that will be collected by technology companies, fed into algorithms, and used to make decisions affecting the lives of the people in those communities. Too often this data is used to deny equal opportunities and freedoms.

### III. Inheriting the Mistakes of the Past: How Algorithmic Systems Disproportionately Harm and Discriminate Against Black Communities and Other Communities of Color

In a society scaffolded on top of the consequences of institutionalized oppression, algorithmic systems often reproduce discrimination. At the root of algorithmic bias is the reckless, if not knowing or intentional, application of machine learning techniques to massive troves of data drawn from a society blighted by systemic inequity—and the lazy presumption that what came before is what will be. The through-lines for the data are often race, gender, and other immutable traits. When an algorithm executes its mission of creating efficiency by finding hidden correlations, it will often mistake the long-term consequences of discrimination and inequality for an individual’s preferences and traits.<sup>7</sup> These mistaken shortcuts fail to account for the fact that while a person may be in part a product of their

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<sup>4</sup> *Leaders of a Beautiful Struggle v. Baltimore Police Dep’t*, 2 F.4th 330, 349 (4th Cir. 2021) (en banc) (Gregory, C.J., concurring).

<sup>5</sup> See, e.g., Sherman A. James, *John Henryism and the Health of African-Americans*, 18 *Culture, Med., & Psych.* 163–82 (1994), <https://doi.org/10.1007/BF01379448>; CTR. FOR FAM. RSCH., *Skin-deep Resilience Research Digest*, Univ. of Ga., <https://cfr.uga.edu/for-researchers/research-digests/skin-deep-resilience/>.

<sup>6</sup> *Jones v. Alfred H. Mayer Co.*, 392 U.S. 409, 443 (1968) (cleaned up).

<sup>7</sup> See generally WHITE HOUSE OFF. OF SCI. & TECH. POL’Y, *Blueprint for an AI Bill of Rights* 24–25 (2022) [hereinafter *Blueprint*], <https://www.whitehouse.gov/wp-content/uploads/2022/10/Blueprint-for-an-AI-Bill-of-Rights.pdf>; Jane Chung, *Racism In, Racism Out: A Primer on Algorithmic Racism*, PUBLIC CITIZEN (2022), <https://www.citizen.org/article/algorithmic-racism/>; Yeshimabeit Milner & Amy Traub, *Data Capitalism and Algorithmic Racism*, Data for Black Lives and Demos (2021), [https://www.demos.org/sites/default/files/2021-05/Demos\\_%20D4BL\\_Data\\_Capitalism\\_Algorithmic\\_Racism.pdf](https://www.demos.org/sites/default/files/2021-05/Demos_%20D4BL_Data_Capitalism_Algorithmic_Racism.pdf).

circumstances, that does not mean they necessarily *are* or *should be* limited by those circumstances. Expediency is no excuse for segregation.

The bottom line is that if existing civil rights laws and agency resources were sufficient to address algorithmic discrimination, then the problem would not be pervasive in the first place. As a result of gaps in federal law, individuals currently have limited recourse against discriminatory algorithms and AI models used in commercial settings that reinforce the structural racism and systemic bias that pervade our society. Technology companies can misuse personal data, intentionally or unintentionally, to harm marginalized communities through deception, discrimination, exploitation, and perpetuation of redlining. Absent updated and robust anti-discrimination protections, online businesses may be able to deny service on the basis of race or ethnicity, provide subpar products based on gender or sexual orientation, charge higher rates based on religion, or ignore the accessibility needs of persons with disabilities.

“Just as neighborhoods can serve as a proxy for racial and ethnic identity, there are new worries that big data technologies could be used to ‘digitally redline’ unwanted groups, either as customers, employees, tenants, or recipients of credit.”<sup>8</sup> This dynamic is deeply contrary to cornerstone principles and promises of equal access and a level playing field for everyone. Without strong privacy and online civil rights protections, discrimination will continue to infect the digital marketplace. Not surprisingly, extensive documentation demonstrates that consumers of color continue to receive worse treatment and experience unequal access to goods and services due to discriminatory algorithms and exploitative data practices. These harms are widespread across sectors, including housing, employment, credit, insurance, healthcare, education, retail, and public accommodations (see Appendix I).

In advertising, for example, Facebook (now known as Meta) allowed discrimination in the targeting and delivery of advertising for housing, credit services, and job openings based on race, sex, and age. The company was eventually forced to change its advertising targeting system as part of a legal settlement,<sup>9</sup> but was still charged with engaging in race discrimination by the Department of Housing and Urban Development.<sup>10</sup> In fact, Meta *literally* engaged in redlining—it allowed

<sup>8</sup> EXEC. OFF. OF THE PRESIDENT, *Big Data: Seizing Opportunities, Preserving Values* 53 (2014), [https://obamawhitehouse.archives.gov/sites/default/files/docs/big\\_data\\_privacy\\_report\\_may\\_1\\_2014.pdf](https://obamawhitehouse.archives.gov/sites/default/files/docs/big_data_privacy_report_may_1_2014.pdf); see also FEDERAL TRADE COMMISSION (F.T.C.), *Big Data: A Tool for Inclusion or Exclusion?* (Jan. 2016), <https://www.ftc.gov/system/files/documents/reports/big-data-tool-inclusion-or-exclusion-understanding-issues/160106big-data-rpt.pdf>.

<sup>9</sup> Barbara Ortutay, *Facebook to overhaul ad targeting to prevent discrimination*, ASSOCIATED PRESS, March 19, 2019, <https://www.apnews.com/38c0dbd8acb14e3fbc7911ea18fafd58>.

<sup>10</sup> Tracy Jan & Elizabeth Dwoskin, *HUD is reviewing Twitter's and Google's ad practices as part of housing discrimination probe*, WASH. POST (Mar. 28, 2019),

advertisers to select which zip codes to include or exclude from receiving an ad, and draw a red line on a map showing the excluded neighborhoods.<sup>11</sup> Academic research suggests that Meta also used ad delivery algorithms that reproduce discrimination even when the advertiser did not intend to discriminate, including again in the housing, credit services, and employment contexts.<sup>12</sup> Similar practices have been the target of investigations, including at Twitter and Google.<sup>13</sup>

Retail websites have been found to charge different prices based on the demographics of the user.<sup>14</sup> For example, an online shopper's distance from a physical store, as well as distance from the store's competitors, has been used in algorithms setting online prices, resulting in price discrimination. Because of historical redlining and segregation, and the lack of retail options in many low-income neighborhoods, this resulted in low-income communities of color paying higher prices than wealthier, whiter neighborhoods when they shop online.

In housing, algorithmic tools that are used to identify prospective home loan applicants or tenants can cement and reflect centuries of discrimination. For instance, a review of over two million mortgage applications found that Black applicants were 80 percent more likely to be rejected by mortgage approval algorithms when compared with similar white applicants.<sup>15</sup> In fact, Black applicants with less debt than white applicants are still more likely to be rejected for a mortgage. Similarly, in 2023, reporters discovered that the algorithmic scoring system used by

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<https://www.washingtonpost.com/business/2019/03/28/hud-charges-facebook-with-housing-discrimination/>.

<sup>11</sup> "[Facebook] has provided a toggle button that enables advertisers to exclude men or women from seeing an ad, a search-box to exclude people who do not speak a specific language from seeing an ad, and a map tool to exclude people who live in a specified area from seeing an ad by drawing a red line around that area." Charge of Discrimination, *U.S. Dept. of Hous. and Urban Dev. v. Facebook, Inc.*, FHEO No. 01-18-0323-8 at 4 (Mar. 28, 2019).

[https://www.hud.gov/sites/dfiles/Main/documents/HUD\\_v\\_Facebook.pdf](https://www.hud.gov/sites/dfiles/Main/documents/HUD_v_Facebook.pdf); Brief of Amicus Curiae Lawyers' Committee for Civil Rights Under Law in Support of Plaintiff's Opposition to Facebook's Demurrer to First Amended Complaint, *Liapes v. Facebook*, No. 30-CIV-01712, at 10 (Calif. Super. Ct. 2021), <https://lawverscommittee.org/wp-content/uploads/2021/03/Leave-and-Amicus-Combined.pdf>.

<sup>12</sup> Louise Matsakis, *Facebook's Ad System Might be Hard-Coded for Discrimination*, WIRED, Apr. 6, 2019, <https://www.wired.com/story/facebooks-ad-system-discrimination/>.

<sup>13</sup> *Id.*

<sup>14</sup> Jennifer Valentino-DeVries et al, *Websites Vary Prices, Deals Based on Users' Information*, WALL ST. J., Dec. 24, 2012,

<https://www.wsj.com/articles/SB10001424127887323777204578189391813881534>; Alex P. Miller & Kartik Hosanagar, *How Targeted Ads and Dynamic Pricing Can Perpetuate Bias*, HARV. BUS. REVIEW (Nov. 8, 2019), <https://hbr.org/2019/11/how-targeted-ads-and-dynamic-pricing-can-perpetuate-bias>.

<sup>15</sup> Emmanuel Martinez & Lauren Kirchner, *The Secret Bias Hidden in Mortgage-Approval Algorithms*, THE MARKUP (Aug. 25, 2021), <https://themarkup.org/denied/2021/08/25/the-secret-bias-hidden-in-mortgage-approval-algorithms>.



the Los Angeles Homeless Services Authority discriminated against Black and Latino people, giving white applicants higher priority in the agency's housing system.<sup>16</sup>

Discrimination in the insurance market is also common. Scoring algorithms used by auto insurers judge applicants "less on driving habits and increasingly on socioeconomic factors,"<sup>17</sup> resulting in higher rates and fewer options for residents of majority Black neighborhoods.<sup>18</sup> These disparities are so significant that, in some instances, insurers charge rates more than 30 percent higher in Black and Brown neighborhoods, regardless of neighborhood affluence.<sup>19</sup> In another case, Allstate attempted to use a personalized pricing algorithm in Prince George's County, Maryland, which the state rejected as discriminatory. The algorithm would have charged consumers more if they were unlikely to switch to another car insurance company,<sup>20</sup> contributing to discriminatory higher premiums routinely paid by consumers of color who often lack competitive options for insurance. Despite these concerns, the Allstate personalized pricing algorithm was still implemented in other states.<sup>21</sup>

Similarly, algorithmic tools used in consumer financial markets often determine who can access a loan or credit based on a consumer's identity.<sup>22</sup> In 2020, at a time of historically low interest rates and an opportunity to lock in the ability to build long-term home equity, Wells Fargo's algorithms racially discriminated in mortgage refinancing, rejecting over half of Black applicants, while approving over

<sup>16</sup> Colin Lecher & Maddy Venner, *Black and Latino Homeless People Rank Lower on L.A.'s Housing Priority List*, L.A. TIMES (Feb. 28, 2023), <https://www.latimes.com/california/story/2023-02-28/black-latino-homeless-people-housing-priority-list-los-angeles>.

<sup>17</sup> CONSUMER REPS., *The Truth About Car Insurance* (July 30, 2015),

<https://www.consumerreports.org/cro/car-insurance/auto-insurance-special-report/index.htm>.

<sup>18</sup> See Douglass Heller, *Auto Insurance: A National Issue of Economic Justice*, CONSUMER FED'N OF AM. (Jan. 2019), <https://consumerfed.org/wp-content/uploads/2020/01/Summary-of-Auto-Insurance-Research.pdf>; Kaveh Waddell, *Why Your Education and Job Could Mean You're Paying Too Much for Car Insurance*, CONSUMER REPS. (Jan. 28, 2021), <https://www.consumerreports.org/car-insurance/why-your-education-and-job-could-mean-youre-paying-too-much-for-car-insurance-a3116553820/>.

<sup>19</sup> Julia Angwin et al., *Minority Neighborhoods Pay Higher Car Insurance Premiums Than White Areas With the Same Risk*, PROPUBLICA (Apr. 5, 2017), <https://www.propublica.org/article/minority-neighborhoods-higher-car-insurance-premiums-white-areas-same-risk>.

<sup>20</sup> Maddy Varner & Aaron Sankin, *Suckers List: How Allstate's Secret Auto Insurance Algorithm Squeezes Big Spenders*, THE MARKUP (Feb. 25, 2020), <https://themarkup.org/allstates-algorithm/2020/02/25/car-insurance-suckers-list>.

<sup>21</sup> See Aaron Sankin, *Michigan Regulators Question Allstate's Car Insurance Pricing*, THE MARKUP (Feb. 9, 2021), <https://themarkup.org/allstates-algorithm/2021/02/09/michigan-regulators-question-allstates-car-insurance-pricing>; Aaron Sankin, *Newly Public Documents Allege Allstate Overcharged Loyal California Customers \$1 billion*, THE MARKUP (Feb. 1, 2022), <https://themarkup.org/allstates-algorithm/2022/02/01/newly-public-documents-allege-allstate-overcharged-loyal-california-customers-1-billion>.

<sup>22</sup> See Bertrand K. Hassani, *Societal Bias reinforcement through machine learning: a credit scoring perspective*, 1 AI & Ethics 239 (2020), <https://link.springer.com/article/10.1007/s43681-020-00026-z>.

70 percent of white applicants.<sup>23</sup> Even when consumers of color are able to access financial services, they are often charged higher rates as a result of “algorithmic strategic pricing.” One study found that the use of such tools resulted in Black and Latino borrowers paying higher interest rates on home purchase and refinance loans when compared to similar white borrowers. The difference alone costs Black and Latino customers \$250 to \$500 million every year.<sup>24</sup>

These harms occur primarily in three ways. First, a company holding personal data uses them to directly discriminate against people of color or other marginalized groups; second, a company holding personal data makes them available to other actors who use them to discriminate; or third, a company designs its data processing practices in a manner that negligently, recklessly, or knowingly causes discriminatory or otherwise harmful results—*e.g.*, algorithmic bias or promotion of disinformation. But the bottom line is that if these companies and data brokers were not collecting, aggregating, and using vast quantities of personal data in privacy-invasive ways in the first place, many of these harms would not happen or would be far more difficult to execute.<sup>25</sup>

The common denominator in these examples is the sloppy or abusive use of personal data and algorithmic tools. By prohibiting algorithmic discrimination, mandating data minimization and other privacy protections, and requiring companies to test and prove that their algorithms are safe and effective, many harms can be prevented or mitigated.

#### IV. Consumers Cannot Reasonably Avoid the Harms from Opaque, Discriminatory Algorithms; The Act of Avoidance is Itself Harmful.

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<sup>23</sup> Shawn Donnan et al., *Wells Fargo Rejected Half Its Black Applicants in Mortgage Refinancing Boom*, BLOOMBERG (Mar. 11, 2022), <https://www.bloomberg.com/graphics/2022-wells-fargo-black-home-loan-refinancing>; see also Emily Flitter, *A Black homeowner is suing Wells Fargo, claiming discrimination*, N.Y. TIMES (Mar. 21, 2022), <https://www.nytimes.com/2022/03/21/business/wells-fargo-mortgages-discrimination-suit.html>.

<sup>24</sup> Laura Counts, *Minority homebuyers face widespread statistical lending discrimination, study finds*, UNIV. OF CALIF. BERKELEY HAAS SCH. OF BUS. (Nov. 13, 2018), <https://newsroom.haas.berkeley.edu/minority-homebuyers-face-widespread-statistical-lending-discrimination-study-finds/>.

<sup>25</sup> See Valerie Schneider, *Locked Out by Big Data: How Big Data, Algorithms and Machine Learning May Undermine Housing Justice*, 52.1 Colum. Hum. Rts. L. Rev. 251, 254 (2020), [https://blogs.law.columbia.edu/hrlr/files/2020/11/251\\_Schneider.pdf](https://blogs.law.columbia.edu/hrlr/files/2020/11/251_Schneider.pdf); James A. Allen, *The Color of Algorithms: An Analysis and Proposed Research Agenda for Deterring Algorithmic Redlining*, 46 Fordham Urb. L.J. 219, 229 (2019); Mathias Risse, *Human Rights and Artificial Intelligence: An Urgently Needed Agenda*, 41 Hum. Rts. Q. 1, 11 (2019); EXEC. OFF. OF THE PRESIDENT, *Big Data: A Report on Algorithmic Systems, Opportunity, and Civil Rights* 1, 5 (2016), [https://obamawhitehouse.archives.gov/sites/default/files/microsites/ostp/2016\\_0504\\_data\\_discrimination.pdf](https://obamawhitehouse.archives.gov/sites/default/files/microsites/ostp/2016_0504_data_discrimination.pdf).

Consumers are unable to avoid the risk of substantial injury posed by algorithmic systems because their operations are opaque to consumers. Although algorithmic discrimination is widespread, many consumers who are harmed are often unaware that they have been impacted by an algorithm in the first place. Even when consumers are aware that they may have been affected by an algorithm, there is often little transparency about how an algorithm made a decision about a given opportunity or service. Low-income consumers, in particular, may lack the resources or opportunities to fight or avoid exploitative practices or products. It is unrealistic and unfair to expect consumers to avoid algorithmic systems when they do not know they have been subjected to it or how the decision affected them.

Due to the “black box” nature of many algorithmic systems, consumers cannot reasonably avoid the harms of discrimination. As FTC leaders have noted in recent enforcement actions, business practices that cause substantial injury to consumers on the basis of immutable characteristics such as race are not reasonably avoidable and are not outweighed by countervailing benefits.<sup>26</sup> The FTC’s actions to combat discrimination with consumer protection law are well-grounded in decades of civil rights case law. Unfair and deceptive practices statutes have a long history in the struggle for civil rights. For example, such a provision in the Interstate Commerce Act was used to desegregate bus terminals and railroads, including the Supreme Court’s landmark 1960 decision in *Boynton v. Virginia* that catalyzed the Freedom Rides.<sup>27</sup>

Discrimination in this context is not a product feature touted on a box and weighed in the aisle of a marketplace. In the context of algorithmic systems, consumers typically have no way of knowing what factors a firm uses to make decisions about the opportunities, products, or services offered to the consumer and no way to discern which firms are discriminating and which are not. Moreover, there often are intermediary firms, service providers, or other third parties in between the consumer and the opportunity—such as advertising networks or assessment tools for prospective employees—and those intermediaries may engage in discrimination.

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<sup>26</sup> See *F.T.C., Joint Statement of Chair Lina M. Khan, Commissioner Rebecca Kelly Slaughter, and Commissioner Alvaro M. Bedoya In the Matter of Passport Auto. Grp.*, F.T.C. File No. 202 3199, at 3 (Oct. 18, 2022) (*auto sales*), [https://www.ftc.gov/system/files/ftc\\_gov/pdf/joint-statement-of-chair-lina-m.-khan-commissioner-rebecca-kelly-slaughter-and-commissioner-alvaro-m.-bedoya-in-the-matter-of-passport-auto-group.pdf](https://www.ftc.gov/system/files/ftc_gov/pdf/joint-statement-of-chair-lina-m.-khan-commissioner-rebecca-kelly-slaughter-and-commissioner-alvaro-m.-bedoya-in-the-matter-of-passport-auto-group.pdf). In the past, the F.T.C. has also addressed deceptive advertisements related to housing discrimination. See *In re E.G. Reinsch, Inc.*, 75 F.T.C. 210 (1969); *In re First Buckingham Cmty., Inc.*, 73 F.T.C. 938 (1968).

<sup>27</sup> See *Boynton*, 364 U.S. 454 (1960) (bus terminal segregation); *Henderson v. United States*, 339 U.S. 816 (1950) (dining car segregation); *Mitchell v. United States*, 313 U.S. 80 (1941) (railcar segregation); *Keys v. Carolina Coach Co.*, 64 M.C.C. 769 (Interstate Commerce Commission 1955) (bus segregation). See also *Orloff v. F.C.C.*, 352 F.3d 415, 420 (D.C. Cir. 2003) (Communications Act of 1934 prohibits race and income discrimination as unjust and unreasonable practices).



But even if a consumer knows that an algorithm discriminates against them, they may be unable to avoid using it. For example, someone seeking housing, employment, insurance, or credit may have no choice but to submit to an automated decision-making tool even if they know it is unfair.<sup>28</sup> Or due to market concentration, a consumer may have little or no access to online services without subjecting themselves to discrimination. The FTC recently analyzed the data practices of the six largest internet service providers and found that many “allo[w] advertisers to target consumers by their race, ethnicity, sexual orientation, economic status, political affiliations, or religious beliefs.”<sup>29</sup>

When a firm imposes a greater burden on some people to access opportunities because of their protected characteristics, the additional time, money, effort, or humiliation to overcome that hurdle is an injury.<sup>30</sup> The “imposition of a barrier” creates “the inability to compete on equal footing.”<sup>31</sup> Thus, even if alternative services are available—and they are equal—it is inherently unjust and unfair to require consumers to avoid the harm. An individual cannot reasonably avoid discrimination because the very act of avoidance itself is a form of segregation that causes a substantial injury.

This is why the Biden-Harris Administration has already taken a series of actions to mitigate the risks of AI, including by outlining key principles for advancing civil rights and equity in the Blueprint for an AI Bill of Rights,<sup>32</sup> Executive Order 14091 (“Further Advancing Racial Equity and Support for Underserved Communities Through the Federal Government”),<sup>33</sup> Executive Order 14110 (“Safe, Secure, and Trustworthy Development and Use of Artificial Intelligence”),<sup>34</sup> and the Office of Management and Budget’s proposed memorandum on agency use of AI.<sup>35</sup> Together, these actions direct agencies across the federal government to use their existing authorities to prevent and remedy algorithmic discrimination. While these measures are crucial for protecting consumers from the harms of discriminatory algorithms, it is now time for Congress to take the next step and enact legislation.

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<sup>28</sup> See *supra* § III.

<sup>29</sup> F.T.C., *A Look At What ISPs Know About You: Examining the Privacy Practices of Six Major Internet Service Providers* iii (Oct. 21, 2021), [https://www.ftc.gov/system/files/documents/reports/look-what-isps-know-about-you-examining-privacy-practices-six-major-internet-service-providers/p195402\\_isp\\_6b\\_staff\\_report.pdf](https://www.ftc.gov/system/files/documents/reports/look-what-isps-know-about-you-examining-privacy-practices-six-major-internet-service-providers/p195402_isp_6b_staff_report.pdf).

<sup>30</sup> See, e.g., *Heckler*, 465 U.S. at 740.

<sup>31</sup> *Ne. Fla. Chapter of Ass’n Gen. Contractors of Am. v. City of Jacksonville, Fla.*, 508 U.S. 656, 666 (1993).

<sup>32</sup> *Blueprint*.

<sup>33</sup> Exec. Order No. 14091, 88 Fed. Reg. 10825 (Feb. 16, 2023).

<sup>34</sup> Exec. Order No. 14110, 88 Fed. Reg. 75191 (Oct. 30, 2023).

<sup>35</sup> OFF. OF MGMT. & BUDGET, EXEC. OFF. OF THE PRESIDENT, Proposed Memorandum, Advancing Governance, Innovation, and Risk Management for Agency Use of Artificial Intelligence (Nov. 1, 2023), <https://ai.gov/wp-content/uploads/2023/11/AI-in-Government-Memo-Public-Comment.pdf>.

## V. Solutions

The persistence and proliferation of such discriminatory conduct highlights the need for further action. To address these harms, Congress should enact legislation regulating the use of algorithmic technologies that prioritizes civil rights and consumer protections. It should include the following six core principles for ensuring that algorithmic systems and related data practices are safe, effective, and fair.

*First*, AI regulation must seriously address algorithmic bias and discrimination through bright line rules and effective examination of the technology deployed. Legislation should include specific anti-discrimination provisions to prohibit algorithmic discrimination, including disparate impact. These should include narrow but reasonable exceptions for self-testing to prevent or mitigate bias and for diversifying a consumer pool through outreach to underserved communities. The anti-discrimination provision from the bipartisan American Data Privacy and Protection Act, which passed out of the U.S. House Energy & Commerce Committee last year on a 53-2 vote, is a good model.<sup>36</sup>

*Second*, AI should be evaluated and assessed, both *before* and *after* deployment, for discrimination, bias, and other harms. Legislation should require developers and deployers to engage an independent auditor to evaluate the algorithm's design, how it makes or contributes to decisions about significant life opportunities, how the algorithm might produce harm and how that harm can be mitigated. Deployers should then annually assess the algorithm as it is used, detailing any changes in its use or any harms it produces, including measuring disparate impacts. Developers should review these assessments to determine if the algorithm needs modifications, and the evaluations, assessments, and reviews should be publicly shared and reported to a federal regulator. Sunlight is the best disinfectant.<sup>37</sup> Reviewing algorithms in both the design and deployment phases proactively detects and prevents harm and promotes responsible innovation.

*Third*, Developers and deployers of AI should have a duty of care requiring that the products they offer are safe and effective and be liable if they aren't. An algorithm is safe if it is evaluated by a pre-deployment assessment, reasonable steps are taken to prevent it from causing harm, and its use is not unfair or deceptive. An algorithm is effective if it functions as expected, intended, and publicly advertised. Legislation should also prohibit a developer or deployer from engaging in deceptive marketing, off-label uses, and abnormally dangerous activities. Establishing a duty

<sup>36</sup> See American Data Privacy and Protection Act ("ADPPA"), H.R. 8152, 117th Cong. § 207(a) (2022), <https://www.congress.gov/bills/117/congress/house-bill/8152/text/rh>.

<sup>37</sup> See Louis D. Brandeis, *What Publicity Can Do*, Harper's Weekly (Dec. 20, 1913) ("Publicity is justly commended as a remedy for social and industrial diseases. Sunlight is said to be the best of disinfectants; electric light the most efficient policeman.").

of care ensures that companies must take adequate steps to protect consumers and make sure that their products work as intended.

*Fourth*, AI regulation should include transparency and explainability requirements so that consumers know when, how, and why a company is using AI and how it affects them. Companies must provide individuals with easy-to-understand notices about whether and how an algorithmic system affects their rights. A regulator should be empowered to write rules for when and how a company needs to provide individualized explanations and rights to appeal decisions informed by AI. Companies also need to publish annual reports about their impact assessments and data practices. Without public transparency, individuals cannot make informed decisions about how they interact with algorithmic systems and are unable to seek redress when harm occurs.

*Fifth*, there should be data protection requirements, so that AI is not trained on the data of people who have not consented to it and to safeguard consumer's privacy. Training and testing AI to make it fair and unbiased requires not just a lot of personal data, but a lot of highly sensitive personal data, like race and sex information. For consumers to be willing to share that information, they need to be able to trust that it will not be misused for secondary purposes and that will be kept secure. Developers and deployers should be required to collect and use only as much personal data as is reasonably necessary and proportionate to provide the services that consumers expect, and to safeguard that data. Developers should have an additional requirement to get affirmative express consent to use personal data to train algorithms. Individuals also should be able to access, correct, and delete their personal data. These data protection requirements are necessary to enable individuals to safely share their sensitive personal information without fear.

*Sixth*, legislation should establish robust oversight and multiple levels of enforcement. This must include a private right of action. Individuals need to be able to vindicate their own rights in court because, historically, Black people and other people of color could not rely on government agencies to defend their rights. There should also be enforcement by state attorneys general and a federal agency. The federal agency needs regulatory authority as well to effectively regulate and mandate compliance with technical aspects of AI regulation, like auditing and transparency. Purveyors of algorithmic systems infringing people's rights should not be immune from liability.

## VI. Conclusion

While the threats of AI are often described as matters of futuristic science fiction, algorithmic tools are already harming Black people and other communities of color every day. As Vice President Kamala Harris recently warned about growing concern that AI could pose an existential threat to humanity, "There are additional

threats that also demand our action—threats that are currently causing harm and which, to many people, also feel existential.”<sup>38</sup> Congress must act because otherwise communities of color will keep bearing these burdens. By implementing bright-line rules and guardrails on the development and deployment of algorithmic systems, Congress can unlock this technology’s potential to expand opportunities and level the playing field. We appreciate this Committee’s attention to this important issue and look forward to working with the Committee to advance civil rights and consumer protections for AI.

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<sup>38</sup> SPEECHES AND REMARKS, WHITE HOUSE, *Remarks by Vice President Harris on the Future of Artificial Intelligence | London, United Kingdom* (Nov. 1, 2023), <https://www.whitehouse.gov/briefing-room/speeches-remarks/2023/11/01/remarks-by-vice-president-harris-on-the-future-of-artificial-intelligence-london-united-kingdom/>.

**Questions from Senator Thom Tillis for  
Damon Hewitt,  
President & Executive Director of the  
Lawyers' Committee for Civil Rights Under Law**

**Witness for the U.S. Senate Committee on the  
Judiciary Subcommittee on Competition Policy,  
Antitrust, and Consumer Rights  
Hearing on  
*“The New Invisible Hand? The Impact of Algorithms  
on Competition and Consumer Rights”***

**December 13, 2023 at 3pm**

1. The AMERICA Act would prohibit large digital advertising companies from owning more than one part of the digital ad ecosystem. In your opinion, should this take effect today do you see any unintended consequences?

The Lawyers' Committee for Civil Rights Under Law has not taken a position on the AMERICA Act and cannot comment on the specifics of that piece of legislation. We do know that the current digital ad ecosystem fuels both intentional and unintentional discrimination against Black people and other people of color. The ability to target individuals based on real or assumed characteristics, including race, sex, and age, has proven to be deleterious for the equal opportunity of all online.

This problem is prevalent among large platforms. Meta (previously known as Facebook), X (previously known as Twitter), and Google all have been investigated for, settled lawsuits over, or had academic research show that their use of ad delivery algorithms or practices reproduce discrimination even when the advertiser did not intend to discriminate.<sup>1</sup>

For example, Meta recently settled a housing discrimination lawsuit brought by the Department of Justice and Department of Housing and Urban Development, which alleged that Facebook's advertising targeting and delivery mechanisms discriminated on the basis of race and other protected characteristics—including literal redlining.<sup>2</sup> Meta agreed to create a new system to reduce disparities in the delivery of housing ads as part of the settlement.<sup>3</sup> Meta has also been sued by civil rights advocates for similar conduct and causes of action.<sup>4</sup>

This settlement came after years of reports and research showing that Meta's advertising system both allows discriminatory targeting and algorithmically delivers ads in a discriminatory fashion—issues that have persisted despite promises to

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<sup>1</sup> Louise Matsakis, *Facebook's Ad System Might be Hard-Coded for Discrimination*, WIRED, Apr. 6, 2019, <https://www.wired.com/story/facebook-ad-system-discrimination/>.

<sup>2</sup> See U.S. Dep't of Just., *Justice Department Secures Groundbreaking Settlement Agreement with Meta Platforms, Formerly Known as Facebook, to Resolve Allegations of Discriminatory Advertising* (June 21, 2022), <https://www.justice.gov/opa/pr/justice-department-secures-groundbreaking-settlement-agreement-meta-platforms-formerly-known>; Charge of Discrimination at 4, *U.S. Dep't of Hous. & Urban Dev. v. Facebook, Inc.*, FHEO No. 01-18-0323-8 (Mar. 28, 2019); see also Brief of *Amicus Curiae* Lawyers' Committee for Civil Rights Under Law in Support of Plaintiff's Opposition to Facebook's Demurrer to First Amended Complaint at 10, *Liapes v. Facebook, Inc.*, Case No. 30-CIV-01712 (Cal. Super. Ct. Mar. 5, 2021), <https://lawyerscommittee.org/wp-content/uploads/2021/03/Leave-and-Amicus-Combined.pdf>.

<sup>3</sup> See Salvador Rodriguez, *Facebook Starts Effort to Boost Equity in Housing Ads*, WALL ST. J. (Jan. 9, 2023), <https://www.wsj.com/articles/facebook-starts-effort-to-improve-equity-in-housing-ads-11673294404>.

<sup>4</sup> See Galen Sherwin & Esha Bhandari, *Facebook Settles Civil Rights Cases by Making Sweeping Changes to Its Online Ad Platform*, ACLU (Mar. 19, 2019), <https://www.aclu.org/news/womens-rights/facebook-settles-civil-rights-cases-making-sweeping>.



address the problem.<sup>5</sup> Meta's own civil rights auditors called out the risk of algorithmic bias in its advertising system.<sup>6</sup>

Google and Twitter have both been investigated by HUD for similarly discriminating in housing advertisements in violation of the Fair Housing Act.<sup>7</sup> This problem is not limited to the housing sector. Meta's targeted advertising systems also discriminate in employment. Employment ads online can discriminate in both their targeting and in their algorithmic delivery.<sup>8</sup>

The Lawyers' Committee has consistently advocated for data privacy protections and bright-line rules against discrimination online so that individuals are protected from predatory uses of their personal information to deny them opportunities or craft

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<sup>5</sup> **Discriminatory Targeting:** Angie Waller, *Facebook Says It's Dropped "Sensitive" Ad Targeting Categories*, THE MARKUP (Jan. 25, 2022), <https://themarkup.org/newsletter/citizen-browser/facebook-says-its-dropped-sensitive-ad-targeting-categories>; Jinyan Zang, *Solving the Problem of Racially Discriminatory Advertising on Facebook*, BROOKINGS (Oct. 19, 2021), <https://www.brookings.edu/research/solving-the-problem-of-racially-discriminatory-advertising-on-facebook/>; Jon Keegan, *Facebook Got Rid of Racial Ad Categories. Or Did It?*, THE MARKUP (July 9, 2021), <https://themarkup.org/citizen-browser/2021/07/09/facebook-got-rid-of-racial-ad-categories-or-did-it>; Jeremy B. Merrill, *Does Facebook Still Sell Discriminatory Ads?*, THE MARKUP (Aug. 25, 2020), <https://themarkup.org/the-breakdown/2020/08/25/does-facebook-still-sell-discriminatory-ads>; Barbara Ortutay, *Facebook to Overhaul Ad Targeting to Prevent Discrimination*, ASSOCIATED PRESS (Mar. 19, 2019), <https://www.apnews.com/38c0dbd8acb14e3fbc7911ea18fafd58>; Julia Angwin & Terry Parris Jr., *Facebook Lets Advertisers Exclude Users by Race*, PROPUBLICA (Oct. 28, 2016), <https://www.propublica.org/article/facebook-lets-advertisers-exclude-users-by-race>.

**Discriminatory Delivery:** Levi Kaplan et al., *Measurement and Analysis of Implied Identity in Ad Delivery Optimization*, In *Proc. 22nd ACM Internet Measurement Conf., Ass'n for Computing Mach.* (Oct. 2022), <https://dl.acm.org/doi/pdf/10.1145/3517745.3561450>; Muhammad Ali et al., *Discrimination Through Optimization: How Facebook's Ad Delivery Can Lead to Skewed Outcomes*, 3 *Proc. ACM on Human-Computer Interaction*, No. 199 (Nov. 2019), <https://dl.acm.org/doi/10.1145/3359301>; Ava Kofman & Ariana Tobin, *Facebook Ads Can Still Discriminate Against Women and Older Workers, Despite a Civil Rights Settlement*, PROPUBLICA (Dec. 13, 2019), <https://www.propublica.org/article/facebook-ads-can-still-discriminate-against-women-and-older-workers-despite-a-civil-rights-settlement>; Louise Matsakis, *Facebook's Ad System Might be Hard-Coded for Discrimination*, WIRED (Apr. 6, 2019), <https://www.wired.com/story/facebooks-ad-system-discrimination/>.

<sup>6</sup> Laura W. Murphy & Megan Cacace, *Facebook's Civil Rights Audit – Final Report*, Facebook 72–82 (July 8, 2020), <https://about.fb.com/wp-content/uploads/2020/07/Civil-Rights-Audit-Final-Report.pdf>.

<sup>7</sup> Tracy Jan & Elizabeth Dwoskin, *HUD is Reviewing Twitter's and Google's Ad Practices as Part of Housing Discrimination Probe*, WASH. POST (Mar. 28, 2019), <https://www.washingtonpost.com/business/2019/03/28/hud-charges-facebook-with-housing-discrimination/>.

<sup>8</sup> See, e.g., Rory Cellan-Jones, *Facebook Accused of Allowing Sexist Job Advertising*, BBC (Sept. 9, 2021), <https://www.bbc.com/news/technology-58487026>; Jeff Horwitz, *Facebook Algorithm Shows Gender Bias in Job Ads, Study Finds*, WALL ST. J. (Apr. 9, 2021), <https://www.wsj.com/articles/facebook-shows-men-and-women-different-job-ads-study-finds-11617969600>; Nicolas Kayser-Bril, *Automated Discrimination: Facebook Uses Gross Stereotypes to Optimize Ad Delivery*, ALGORITHM WATCH (Oct. 18, 2020), <https://algorithmwatch.org/en/automated-discrimination-facebook-google/>.

online experiences based on stereotypes. Large or small, all online advertisers have a responsibility to ensure that their ad servicing is non-discriminatory.

2. Development of AI will only continue to grow and as a result more and more sophisticated AI tools will become available and the use of AI tool more prevalent. What can Congress do now to better to plan for the impact on competition, without stifling AI innovation?

The Lawyers' Committee has written a model bill, the "Online Civil Rights Act," calling on Congress to protect civil rights *and* promote responsible development and use of artificial intelligence (AI).<sup>9</sup> We urge Congress to introduce and pass this legislation and adopt the concepts and tenets of the Act in equivalent legislation to regulate AI.

The "Online Civil Rights Act" model legislation addresses the discriminatory outcomes, bias, and harm arising from algorithmic systems, including AI products and large language models, in six key ways. First, it includes a specific anti-discrimination provision to prohibit algorithmic discrimination. Second, it requires that algorithmic tools are evaluated and assessed, *before* and *after* deployment, for discrimination and bias. We believe that such assessments will foster innovation, provide model best practices and build expertise in developing and deploying AI in a way that respects individual rights. Third, the "Online Civil Rights Act" requires developers and deployers of AI to have a *duty of care* requiring that the products they offer are safe and effective. Fourth, the legislation includes transparency and explainability requirements so that consumers know when, how, and why AI is being used. Fifth, the bill includes data protection requirements, so that AI developers and deployers are required to collect and use only as much personal data as is reasonably necessary to provide the services that consumers expect, and to safeguard that data. Finally, the Online Civil Rights Act establishes robust oversight and a private right of action, which allows individuals to assert their rights in court, and oversight from states and federal agencies.

The "Online Civil Rights Act" seeks to both mitigate and prevent current, ongoing harms while also providing a broad, tech-neutral regulatory and governance regime to sufficiently address generative AI and further technological development in this space. Congress should look to it as a model for legislating in a way that protects innovation while strengthening equal access to the marketplace.

3. Can algorithms be manipulated by bad actors to censor free speech, specifically during an election cycle? And if so, how?

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<sup>9</sup> More information available at <https://www.lawyerscommittee.org/online-civil-rights-act/>.



The Lawyers' Committee convenes Election Protection, the nation's largest nonpartisan voter protection program that includes a voter hotline, where we hear directly from voters about the problems they are experiencing. Bad actors can and do use algorithms to affect our elections, but we have not seen algorithms deployed to censor free speech. Rather, election denial and false claims about the legitimacy of our elections are often used as grist to justify the suppression of voters of color, to obviate their objections to attacks on their rights. We have experienced copious encounters with the damage to our democracy that such claims have caused, and of other ways that algorithms have been deployed to fuel attacks on our democracy.

Several examples of real harms to our elections that are exacerbated by algorithmic technologies include the following:

Those seeking to engage in voter suppression can use datasets of personal information combined with robocalls, robotexts, and other mass communications tools to microtarget and spread voter intimidation at a scale and low cost previously unimagined. These techniques are enhanced and made more accessible through the proliferation of algorithmic tools. In one prominent example from the 2020 election, two men sent over 80,000 robocalls targeted to Black voters, seeking to deter them from voting by mail.<sup>10</sup> They spent only \$1,000 on the robocalls.<sup>11</sup> The court ruled this conduct violated the Voting Rights Act and the Ku Klux Klan Act of 1871.<sup>12</sup> The court stated in that case:

Today, almost 150 years later, the forces and conflicts that animated Congress's adoption of the Ku Klux Klan Act as well as subsequent voting rights legislation, are playing out again before this Court, though with a difference. In the current version of events, the means Defendants use to intimidate voters, though born of fear and similarly powered by hate, are not guns, torches, burning crosses, and other dire methods perpetrated under the cover of white hoods. Rather, Defendants carry out electoral terror using telephones, computers, and modern technology adapted to serve the same deleterious ends. Because of the vastly greater population they can reach instantly with false and dreadful information, contemporary means of voter intimidation may be more detrimental to free elections than the approaches taken

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<sup>10</sup> See *Nat'l Coal. on Black Civic Participation v. Wohl*, 498 F. Supp. 3d 457 (S.D.N.Y. 2020).

<sup>11</sup> Memorandum of Law in Support of Plaintiffs' Joint Motion for Summary Judgment as to Liability on All Claims at 1, *Nat'l Coal. on Black Civic Participation v. Wohl*, Case No. 20-cv-8668 (July 29, 2022), ECF No. 213.

<sup>12</sup> *Nat'l Coal. on Black Civic Participation v. Wohl*, No. 20-cv-8668, \_\_\_ F. Supp. 3d \_\_\_, 2023 WL 2403012 (S.D.N.Y. Mar. 8, 2023) (granting affirmative summary judgment).

for that purpose in past eras, and hence call for swift and effective judicial relief.<sup>13</sup>

The court also found the Defendants' message itself invoked the specter of surveillance, made effective through the use of algorithmic technology, to intimidate voters, noting that "[v]oter privacy is . . . vital to election integrity."<sup>14</sup>

A right-wing social media influencer was convicted of conspiring with other Twitter users to spread deceptive images and tweets to supporters of Hillary Clinton during the 2016 election cycle. The images and tweets falsely suggested that voters could cast their votes via text message or social media. The convicted influencer, who was ranked as the 107th-most important influencer for the 2016 presidential election by MIT Media Lab, specifically discussed the importance of limiting "black turnout" and targeting suppressive messaging towards "Black social spaces."<sup>15</sup> One of the images posted as part of the disinformation campaign was falsely framed as a Clinton campaign ad depicting a Black woman with an "African Americans for Hillary" sign and encouraging voters to "Avoid the Line" and "Vote from Home."<sup>16</sup>

The Russian government used social media platforms to attempt to interfere in the 2016 U.S. election, including specifically targeting content to Black Americans intended to undermine confidence in the election and dissuade them from voting.<sup>17</sup> The campaign also used racially divisive issues in targeted ads.<sup>18</sup> Foreign adversaries used conventional advertising and targeting tools on social media,<sup>19</sup> showing the

<sup>13</sup> *Nat'l Coal. on Black Civic Participation*, 498 F. Supp. 3d at 464.

<sup>14</sup> *Nat'l Coal. on Black Civic Participation*, 2023 WL 2403012, at \*22.

<sup>15</sup> Associated Press, *Far-right Influencer Convicted in Voter Suppression Scheme*, POLITICO (Mar. 31, 2023), <https://www.politico.com/news/2023/03/31/far-right-influencer-convicted-in-voter-suppression-scheme-00090042>; Colin Moynihan, *Trump Supporter Convicted in 2016 Scheme to Suppress Votes for Clinton*, N.Y. TIMES (Mar. 31, 2023), <https://www.nytimes.com/2023/03/31/nyregion/douglass-mackey-trial-twitter-misinformation.html>.

<sup>16</sup> Press Release, U.S. Att'y's Off. for the E. Dist. of N.Y., *Social Media Influencer Douglass Mackey Convicted of Election Interference in 2016 Presidential Race* (Mar. 31, 2023), <https://www.justice.gov/usao-edny/pr/social-media-influencer-douglass-mackey-convicted-election-interference-2016>.

<sup>17</sup> See S. Rep. No. 116-290 (2020), <https://www.intelligence.senate.gov/publications/report-select-committee-intelligence-united-states-senate-russian-active-measures>; Scott Detrow, *What Did Cambridge Analytica Do During The 2016 Election?*, NPR (Mar. 20, 2018), <https://www.npr.org/2018/03/20/595338116/what-did-cambridgeanalytica-do-during-the-2016-election>; see also Gregory Eady et al., *Exposure to the Russian Internet Research Agency Foreign Influence Campaign on Twitter in the 2016 US Election and Its Relationship to Attitudes and Voting Behavior*, 14 NATURE COMM'NS, at 1, 9 (Jan. 9, 2023), <https://www.nature.com/articles/s41467-022-35576-9> ("In a word, Russia's foreign influence campaign on social media may have had its largest effects by convincing Americans that its campaign was successful").

<sup>18</sup> See Renee DiResta et al., *The Tactics & Tropes of the Internet Research Agency*, New Knowledge & S. Select Comm. on Intel. (Oct. 2019), <https://digitalcommons.unl.edu/senatedocs/2/>.

<sup>19</sup> See Press Release, FTC, *FTC Imposes \$5 Billion Penalty and Sweeping New Privacy Restrictions on Facebook* (July 24, 2019), <https://www.ftc.gov/news-events/news/press-releases/2019/07/ftc-imposes-5-billion-penalty-sweeping-new-privacy-restrictions-facebook>.

dangerous ways in which off-the-shelf targeted advertising tools can be abused.<sup>20</sup> Researchers and reporters have documented Facebook groups selling accounts already approved to run political ads, allowing bad actors to circumvent Facebook's identity verification process.<sup>21</sup>

Social media also plays a key role in disinformation campaigns that spread conspiracy theories and seek to undermine election integrity.<sup>22</sup> The structure of the platforms, their profiling of users, and the use of recommendation engines to maximize user engagement at all costs can create a perfect storm for the spread of disinformation and disenfranchisement.<sup>23</sup> Misinformation is often more likely to be engaged with and shared than factual information, and platforms with greater pathways for virality are more likely to amplify misinformation.<sup>24</sup> “[T]o tackle thorny issues like misinformation, [Facebook employees] often had to demonstrate that their proposed solutions wouldn’t anger powerful partisans or come at the expense of Facebook’s growth.”<sup>25</sup>

YouTube was more likely to recommend videos involving election fraud conspiracy theories to users known to be skeptical about election validity, amplifying fringe disinformation.<sup>26</sup> Its AI content moderation system struggled with combatting disinformation in the short-form YouTube Shorts and in Spanish language videos.<sup>27</sup>

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<sup>20</sup> See Craig Silverman, *Google Allowed a Sanctioned Russian Ad Company to Harvest User Data for Months*, PROPUBLICA (July 1, 2022), <https://www.propublica.org/article/google-russia-rutarget-sberbank-sanctions-ukraine>.

<sup>21</sup> See Sarah Emerson & Emily Baker-White, *Facebook Has a Thriving Black Market of Fraudulent Ad Accounts, Passports and Driver's Licenses*, FORBES (Nov. 14, 2022), <https://www.forbes.com/sites/sarahemerson/2022/11/11/facebook-fraud-passports-political-ads/?sh=432e30d6927f>.

<sup>22</sup> See ELECTION INTEGRITY P'SHIP, *The Long Fuse: Misinformation and the 2020 Election* (2021), <https://www.eipartnership.net/report>.

<sup>23</sup> See Karen Hao, *How Facebook Got Addicted to Spreading Misinformation*, MIT TECH. REV. (Mar. 11, 2021), <https://www.technologyreview.com/2021/03/11/1020600/facebook-responsible-ai-misinformation/>; Jeff Horwitz, *Facebook's Former Elections Boss Now Questions Social Media's Impact on Politics*, WALL ST. J. (Jan. 8, 2022), <https://www.wsj.com/articles/facebook-former-elections-boss-now-questions-social-medias-impact-on-politics-11641648561>.

<sup>24</sup> Steven Lee Myers, *How Social Media Amplifies Misinformation More than Information*, N.Y. TIMES (Oct. 13, 2022), <https://www.nytimes.com/2022/10/13/technology/misinformation-integrity-institute-report.html>.

<sup>25</sup> Kevin Roose et al., *Facebook Struggles to Balance Civility and Growth*, N.Y. TIMES (Jan. 7, 2021), <https://www.nytimes.com/2020/11/24/technology/facebook-election-misinformation.html>.

<sup>26</sup> David Ingram, *YouTube Pushed Trump Supporters Toward Voter Fraud Videos, Study Finds*, NBC NEWS (Sept. 1, 2022), <https://www.nbcnews.com/tech/misinformation/youtube-pushed-trump-supporters-voter-fraud-videos-study-finds-rcna45708>.

<sup>27</sup> See Nico Grant, *YouTube May Have Misinformation Blind Spots, Researchers Say*, N.Y. TIMES (Nov. 5, 2022), <https://www.nytimes.com/2022/11/05/technology/youtube-misinformation.html>.

The proliferation of disinformation on social media was a major contributor to false narratives and conspiracy theories attacking the outcome of the 2020 election,<sup>28</sup> culminating in the violent attack on the U.S. Capitol on January 6, 2021.<sup>29</sup> In a leaked draft report, the congressional January 6 Select Committee described how platforms ranging from Facebook, Twitter, and YouTube to Parler, Gab, and 4Chan, failed to stop disinformation, violent rhetoric, and tactical organization by users leading up to the insurrection.<sup>30</sup> Following the attack, the major platforms have lost interest in self-regulating to combat election disinformation on their services, even when their staff sound the alarm internally.<sup>31</sup>

In the leadup to the 2022 midterm elections, Truth Social, founded by former President Donald Trump, became “a key organizing platform for election deniers,” including one group that used the platform to promote “stakeouts” of ballot drop boxes.<sup>32</sup> This voter intimidation tactic was also discussed on Twitter, Telegram, Gab, and Craigslist.<sup>33</sup>

Targeted advertising plays a key role in election disinformation and voter suppression. The ability to microtarget ads allows political actors to send suppressive messages to specific niches of the electorate without detection or transparency. In 2022, researchers ran an experiment submitting ads with blatantly false information

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<sup>28</sup> See Craig Silverman et al., *Facebook Groups Topped 10,000 Daily Attacks on Election Before Jan. 6, Analysis Shows*, WASH. POST (Jan. 4, 2022),

<https://www.washingtonpost.com/technology/2022/01/04/facebook-election-misinformation-capitol-riot/>.

<sup>29</sup> See generally Ryan Goodman & Justin Hendrix, *January 6 Clearinghouse*, JUST SEC. (Dec. 1, 2023), <https://www.justsecurity.org/77022/january-6-clearinghouse/>.

<sup>30</sup> See Cat Zakrzewski et al., *What the Jan. 6 Probe Found Out About Social Media, But Didn't Report*, WASH. POST (Jan. 17, 2023), <https://www.washingtonpost.com/technology/2023/01/17/jan6-committee-report-social-media/>.

<sup>31</sup> See Steven Lee Myers & Nico Grant, *Combating Disinformation Wanes at Social Media Giants*, N.Y. TIMES (Feb. 14, 2023), <https://www.nytimes.com/2023/02/14/technology/disinformation-moderation-social-media.html>; Sheera Frankel & Cecilia Kang, *As Midterms Loom, Elections Are No Longer Top Priority for Meta C.E.O.*, N.Y. TIMES (June 23, 2022), <https://www.nytimes.com/2022/06/23/technology/mark-zuckerberg-meta-midterm-elections.html>; Ryan Mac & Sheera Frankel, *Internal Alarm, Public Shrugs: Facebook's Employees Dissect Its Election Role*, N.Y. TIMES (Oct. 22, 2021), <https://www.nytimes.com/2021/10/22/technology/facebook-election-misinformation.html>.

<sup>32</sup> Stuart A. Thompson & Matthew Goldstein, *Truth Social's Influence Grows Despite Its Business Problems*, N.Y. TIMES (Nov. 7, 2022), <https://www.nytimes.com/2022/11/01/technology/truth-social-conservative-social-app.html>.

<sup>33</sup> See Tiffany Hsu & Stuart A. Thompson, *Hunting for Voter Fraud, Conspiracy Theorists Organize 'Stakeouts'*, N.Y. TIMES (Aug. 10, 2022), <https://www.nytimes.com/2022/08/10/technology/voter-drop-box-conspiracy-theory.html>; see also Sheera Frankel, *On Social Media, Hunting for Voter Fraud Becomes a Game*, N.Y. TIMES (Nov. 4, 2022), <https://www.nytimes.com/2022/11/04/technology/voter-fraud-social-media-games.html>.

about voting to platforms, finding that TikTok approved 90% of the ads.<sup>34</sup> In 2016, the Trump campaign's data team put 3.5 million Black voters into a category for people they sought to deter from voting and used that categorization for Facebook ad targeting.<sup>35</sup> The number of Black voters in the “[d]eterrence” category was disproportionate to their share of the electorate in the swing states being targeted. The campaign targeted Black voters with negative ads designed to suppress turnout. The full extent of the campaign is unknown because there was no transparency as to what ads were sent to whom.<sup>36</sup>

Disinformation on social media in non-English languages, particularly Spanish, was rampant in the 2020 and 2022 election cycles and continues to be a major problem.<sup>37</sup> For example, Facebook ads targeting Hispanic populations inaccurately described prominent American politicians as “communist” and compared them to socialist presidents in South America.<sup>38</sup>

Ahead of the 2022 midterm elections, disinformation about election fraud, anti-discrimination policies, and reproductive rights saturated WeChat, a social media platform used by an estimated 60% of the Chinese American community.<sup>39</sup>

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<sup>34</sup> Jennifer Korn, *Facebook and TikTok Are Approving Ads with 'Blatant' Misinformation About Voting in Midterms, Researchers Say*, CNN (Oct. 21, 2022), <https://www.cnn.com/2022/10/21/tech/facebook-tiktok-misinfo-ads/index.html>.

<sup>35</sup> Channel 4 News Investigations Team, *Revealed: Trump Campaign Strategy to Deter Millions of Black Americans from Voting in 2016*, CHANNEL 4 NEWS (Sept. 28, 2020), <https://www.channel4.com/news/revealed-trump-campaign-strategy-to-deter-millions-of-black-americans-from-voting-in-2016>.

<sup>36</sup> *Id.*

<sup>37</sup> See Tiffany Hsu, *Misinformation Swirls in Non-English Languages Ahead of Midterms*, N.Y. TIMES (Oct. 12, 2022), <https://www.nytimes.com/2022/10/12/business/media/midterms-foreign-language-misinformation.html>; Kari Paul, *Facebook Must Tackle 'Spanish Language Disinformation Crisis'*, *Lawmakers Say*, THE GUARDIAN (Mar. 16, 2021), <https://www.theguardian.com/technology/2021/mar/16/facebook-spanish-language-disinformation-congress>.

CBS NEWS MIAMI, *Researchers Find WhatsApp Disinformation Campaigns Targeting Hispanic Voters in South Florida* (Nov. 1, 2020), <https://www.cbsnews.com/miami/news/researchers-find-whatsapp-disinformation-campaigns-targeting-hispanic-voters/>; Sabrina Rodriguez & Marc Caputo, *This is F—ing Crazy: Florida Latinos Swamped by Wild Conspiracy Theories*, POLITICO (Sept. 14, 2020), <https://www.politico.com/news/2020/09/14/florida-latino-disinformation-413923>.

<sup>38</sup> See Amanda Seitz & Will Weissert, *Inside the 'Big Wave' of Misinformation Targeted at Latinos*, ASSOCIATED PRESS (Dec. 1, 2021), <https://apnews.com/article/latinos-misinformation-election-334d779a4ec41aa0ee99ea80636f9595>.

<sup>39</sup> Kimmy Yam, *Right-Wing Disinformation Ramps Up on WeChat Ahead of Midterms, Report Finds*, NBC NEWS (Oct. 3, 2022), <https://www.nbcnews.com/news/asian-america/right-wing-disinformation-ramps-wechat-ahead-midterms-report-finds-rcna50539>.



Users searching Google in 2020 for terms such as “register to vote,” “vote by mail,” and “where is my polling place” were met with voter registration ads that charged users to register to vote while mining their data.<sup>40</sup>

A political action committee linked to a former member of Congress sent robotexts to Kansas voters to trick them into voting contrary to their preferences on a ballot initiative seeking to remove legal protections for abortion.<sup>41</sup>

Finally, Meta developed an AI chatbot, and within a few days of studying online chatter, it began spreading election denialism and antisemitic conspiracy theories.<sup>42</sup>

All these examples point to a clear conclusion. The harm of algorithmic discrimination and bias should be taken seriously, but also carefully. Election conspiracy theories do not meet a baseline standard of evidence and cannot be allowed to be used to inflict other real-world harms on voters of color while actual technological advances are used to purposely dilute the power of voters of color and attack their participation in our elections.

4. Groups with different viewpoints have weighed in on algorithms. Some suggest that more transparency is needed, while others want more privacy. Can you provide your perspective on whether more or less transparency is needed when it comes to algorithms?

Privacy and transparency are complimentary, not oppositional. Because there is no comprehensive regulation of algorithmic systems, nor mandated human oversight, algorithms can produce a myriad of harms, including discrimination and bias, without being detected. Having transparent requirements about how algorithms are trained, used, and deployed increases consumer awareness and choice, while preventing harm. Transparency as to how systems work or are designed, how models are built, what data is used, and what personal identifying information is collected all create necessary conditions for individuals to make informed choices about how they interact with products and services. Transparency also empowers individuals to make informed decisions about how to protect their privacy—including whether to interact with a system, provide their personal information, or consent to data collection.

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<sup>40</sup> CBS NEWS BAY AREA, *Google Removes Misleading Ads Related to Voting, Elections*, (June 30, 2020), <https://www.cbsnews.com/sanfrancisco/news/google-removes-misleading-ads-voting-elections/>.

<sup>41</sup> Isaac Stanley-Becker, *Misleading Kansas Abortion Texts Linked to Republican-aligned Firm*, WASH. POST (Aug. 2, 2022), <https://www.washingtonpost.com/politics/2022/08/02/kansas-abortion-texts/>.

<sup>42</sup> Christianna Silva, *It Took Just One Weekend for Meta's New AI Chatbot to Become Racist*, MASHABLE (Aug. 8, 2022), <https://mashable.com/article/meta-facebook-ai-chatbot-racism-donald-trump>.

Additionally, baseline privacy standards also help generate transparency. When data is collected only for the purposes of effectuating what consumers expect of a product, transparency about what information is collected and how algorithmic tools work is enhanced. The best way to protect private data is to not collect unnecessary data in the first place. Currently, we have a notice and consent framework, meaning companies create long, dense, and untransparent privacy policies, which consumers must agree to in order use a service, giving companies permission to make virtually any use of data they choose. Companies therefore collect, use and share vast amounts of personal data when developing or deploying algorithmic systems, leading to security risks, discriminatory practices, predatory advertising, and fraud based on personal information – often without the knowledge of the consumer themselves.

Enhancing transparency and protecting data privacy must go hand in hand to give consumers greater control over their personal data and how they interact with the marketplace.

5. Do you believe that large companies and platforms can use algorithms to stifle innovation or small businesses?

Yes. Innovation is particularly important to communities of color who have traditionally been shut out of the market or discriminated against because of the legacy of segregation and redlining. For instance, in 2020, Black people represented 14.2% of Americans, but only 2.4% of all employer-firm owners.<sup>43</sup> The unfair and discriminatory outcomes of algorithmic systems stifle responsible innovation and serve to exacerbate existing disparities. The median Black household has only about 15 percent of the wealth held by the median White household, about \$44,900 compared to \$285,000 in total assets.<sup>44</sup>

If large platforms or companies use existing data to lock in market power or current wealth dynamics, we know that they will be doing so at the expense of consumers of color and of Black and Brown entrepreneurs. Equal opportunity creates innovation by allowing those with diverse experiences and characteristics to participate in the market fully. If those with more market power or resources use algorithmic technologies to have an unfair advantage and consolidate monopoly, we expect that to come at the expense of consumers and entrepreneurs of color, who already face significant barriers to fair and equal participation in the market. That is unacceptable and should be addressed by Congress.

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<sup>43</sup> Andre M. Pery et al, *Who is Driving Black Business growth? Insights from the Latest Data on Black-Owned Businesses*, BROOKINGS (May 24, 2023), <https://www.brookings.edu/articles/who-is-driving-black-business-growth-insights-from-the-latest-data-on-black-owned-businesses/>.

<sup>44</sup> Aladangady, Aditya, Andrew C. Chang, and Jacob Krimmel, *Greater Wealth, Greater Uncertainty: Changes in Racial Inequality in the Survey of Consumer Finances*, FEDS Notes. Washington: Board of Governors of the Federal Reserve System, Oct. 18, 2023, <https://doi.org/10.17016/2380-7172.3405>.

However, algorithmic harms are not just perpetuated by large companies. The rights of individuals, particularly those with a historical record of being marginalized, must be of primary importance to lawmakers.

6. What do you believe is the role of government in regulating algorithms? What, if any, unintended consequences would there be if Congress gets involved?

The persistence and proliferation of discriminatory conduct perpetuated through algorithms highlights the need for further action by the government. Government action is critical in ensuring equal access to the marketplace. When a firm imposes a greater burden on some people to access opportunities because of their protected characteristics, the additional time, money, effort, or humiliation to overcome that hurdle is an injury.<sup>45</sup> The “imposition of a barrier” creates “the inability to compete on equal footing.”<sup>46</sup> Thus, even if alternative services are available—and they are equal—it is inherently unjust and unfair to require consumers to avoid the harm. An individual cannot reasonably avoid discrimination because the very act of avoidance itself is a form of segregation that causes a substantial injury. We are all better off if equal opportunity is protected; compliance burdens or other effects of legislation are sound investments in a freer, fairer, and more innovative future marketplace.

The Lawyers’ Committee commends the Biden-Harris Administration for taking a series of actions to mitigate the risks of AI and algorithmic tools, including by outlining key principles for advancing civil rights and equity in the Blueprint for an AI Bill of Rights,<sup>47</sup> Executive Order 14091 (“Further Advancing Racial Equity and Support for Underserved Communities Through the Federal Government”),<sup>48</sup> Executive Order 14110 (“Safe, Secure, and Trustworthy Development and Use of Artificial Intelligence”),<sup>49</sup> and the Office of Management and Budget’s proposed memorandum on agency use of AI.<sup>50</sup> Together, these actions direct agencies across the federal government to use their existing authorities to prevent and remedy algorithmic discrimination.

Ultimately however, we need action from Congress to fully address the extent of the algorithmic harms happening today. Congress should enact legislation regulating the use of algorithmic technologies that prioritizes civil rights and consumer protections. That is why the Lawyers’ Committee is urging Congress to pass the “Online Civil

<sup>45</sup> See, e.g., *Heckler*, 465 U.S. at 740.

<sup>46</sup> *Ne. Fla. Chapter of Ass’n Gen. Contractors of Am. v. City of Jacksonville, Fla.*, 508 U.S. 656, 666 (1993).

<sup>47</sup> *Blueprint*.

<sup>48</sup> Exec. Order No. 14091, 88 Fed. Reg. 10825 (Feb. 16, 2023).

<sup>49</sup> Exec. Order No. 14110, 88 Fed. Reg. 75191 (Oct. 30, 2023).

<sup>50</sup> OFF. OF MGMT. & BUDGET, EXEC. OFF. OF THE PRESIDENT, Proposed Memorandum, Advancing Governance, Innovation, and Risk Management for Agency Use of Artificial Intelligence (Nov. 1, 2023), <https://ai.gov/wp-content/uploads/2023/11/AI-in-Government-Memo-Public-Comment.pdf>.



Rights Act,” and calling on Congress to protect civil rights *and* promote responsible development and use of Artificial Intelligence.

**PREPARED TESTIMONY AND STATEMENT FOR THE  
RECORD  
OF**

**DR. SARAH MYERS WEST**  
MANAGING DIRECTOR, AI NOW INSTITUTE

on behalf of herself and Amba Kak, Executive Director, AI Now Institute

**“THE NEW INVISIBLE HAND? THE IMPACT OF ALGORITHMS ON COMPETITION  
AND CONSUMER RIGHTS.”**

**BEFORE THE**

**U.S. SENATE COMMITTEE ON THE JUDICIARY  
SUBCOMMITTEE ON COMPETITION POLICY, ANTITRUST, AND CONSUMER RIGHTS**

Chair Klobuchar, Ranking Member Lee, and esteemed Members of the Committee, thank you for inviting me to testify on this important set of issues. My name is Sarah Myers West, and I am the managing director of the AI Now Institute, a leading policy research institute founded in 2016 to study artificial intelligence technologies. I hold doctoral and master’s degrees from the Annenberg School at the University of Southern California, where I studied the economics of the tech industry. I recently served as a Senior Advisor on Artificial Intelligence at the Federal Trade Commission, where my role was to provide technological expertise in support of the agency’s enforcement work. I worked across competition and consumer protection enforcement matters addressing the role of algorithmic systems in mediating vast swaths of the economy, an experience that underscored for me the importance of the issues we will be discussing today.

As someone who brings over 15 years of experience examining these issues, I deeply appreciate this Subcommittee’s ongoing attention to the role of algorithmic systems in shaping the economy at large, often in ways that harm consumers and workers while benefiting centralized actors.

In this testimony, I highlight three core areas of concern that I urge this Committee to consider as urgent priorities for intervention:

1. Concentration among the firms producing and deploying AI and algorithmic systems risks creating single points of failure through which flaws introduced in one system could have ripple effects throughout the economy.

2. Algorithmic systems distort the market by enabling companies with preferential access to data to charge higher prices.
3. There is a risk that these systems enable groups and individuals to be excluded from access to the market, including on the basis of membership in protected classes, thus scaling patterns of inequality.

I also offer three broad paths forward in terms of how we can start to address these harms proactively:

1. We need to use existing enforcement mechanisms to ensure strong oversight of this sector by robustly resourcing the agencies with existing authority. We already have a range of enforcement mechanisms that can be applied to anticompetitive and harmful uses of AI and algorithmic systems.
2. Second, we need specific bright line rules to curb AI use where it has demonstrated harms to consumers and competition. The passage of a federal data privacy law, including a strong data minimization mandate, should be an urgent priority given that it serves as a potent antidote to a range of algorithmically enabled harms, including harms to competition.
3. Lastly, we need legislation to tackle the market structure and gatekeeper power of dominant digital platforms, which hold an unprecedented amount of economic and political power.

As this hearing underscores, algorithmic systems have a profound impact on the economy at large in ways that are harming consumers, workers, and small businesses. In their most basic sense, algorithms, in the context of computation, are simply instructions that systems follow. They can be as simple as a decision tree, or as vast and complex as a transformer model, which is a type of deep learning architecture undergirding recent developments in artificial intelligence. Frequently, they apply statistical techniques to large swaths of data, often to arrive at a particular decision or recommendation: for example, tailoring the price of a given item based on processing personal data about a potential buyer, and setting the price to the maximum the system predicts that buyer will be willing to pay.

While many of the underlying techniques have existed for decades, such systems are supercharged by the surveillance business model promulgated by the tech industry: this incentivized the instrumentation of technologies that collect detailed and often intimate information about us as we move about our lives. These data traces can then be collected by firms either directly or purchased by others through third parties, creating information and power asymmetries that have profound societal effects that I've described as *data capitalism*.<sup>1</sup> Firms

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<sup>1</sup> West, Sarah Myers. (2019). Data Capitalism: Redefining the Logics of Surveillance and Privacy. *Business and Society*, 58(1). <https://journals.sagepub.com/doi/10.1177/0007650317718185>

use the data they are able to obtain through surveillance and other means to set prices based on their algorithmic prediction of what an individual is likely to pay. This fundamentally advantages firms with greater access to data, and disadvantages individuals wishing to purchase goods. This behavior is variously classed as algorithmic or personalized pricing, and includes *dynamic pricing*, or the use of algorithms to make frequent changes to the prices of goods, as well as *personalized pricing*, or the use of privileged information to set prices, enabling firms to extract the maximum amount of money from consumers possible based on information targeted to them.<sup>2</sup>

Through this constellation of practices, firms positioned at key chokepoints in the consumer economy are best positioned to leverage information asymmetries in a manner that is harmful both to competition and to consumers. This creates extended potential for collusion in markets where this otherwise would not be possible:<sup>3</sup> while this is most notable when we see systems go awry by producing spirals that lead to skyrocketing prices, such as surges in the cost of hand sanitizer during the pandemic, more frequently it takes shape in more invisible ways that are harder to identify from the outside.<sup>4</sup>

The harms associated with algorithmic pricing go beyond collusive behavior: algorithmic pricing can result in higher prices even in the absence of collusion,<sup>5</sup> and can be used to manipulate consumer behavior.<sup>6</sup> This urgently necessitates policy intervention that breaks down silos between competition enforcement, consumer protection law and data minimization, among others, and most important, attends to the tremendous concentration of power that is the hallmark of the tech industry.

It's particularly critical that we not discuss these technologies in the abstract, but attend to how they're actually being used. Often that's automating austerity, increasing corporate control, or supercharging a firm's ability to drive up prices to the maximum someone is willing to pay. This has profound effects for the public, when algorithms shape the public's access to resources, the cost and availability of credit and housing, or whether they are paid a fair wage at the end of a

<sup>2</sup> Personalised Pricing in the Digital Era - Note by the United States. (2018). OECD. [https://www.ftc.gov/system/files/attachments/us-submissions-oecd-2010-present-other-international-competition-fora/personalized\\_pricing\\_note\\_by\\_the\\_united\\_states.pdf](https://www.ftc.gov/system/files/attachments/us-submissions-oecd-2010-present-other-international-competition-fora/personalized_pricing_note_by_the_united_states.pdf).

<sup>3</sup> Competition and Markets Authority. (2018). Pricing Algorithms. [https://assets.publishing.service.gov.uk/media/5bbb2384ed915d238f9cc2e7/Algorithms\\_econ\\_report.pdf](https://assets.publishing.service.gov.uk/media/5bbb2384ed915d238f9cc2e7/Algorithms_econ_report.pdf)

<sup>4</sup> Soper, Spencer and Porter Jr., Gerald. (2020, Mar. 5) That \$400 Bottle of Hand Sanitizer Is Very Hard to Police. *Bloomberg*. <https://www.bloomberg.com/news/articles/2020-03-05/that-400-bottle-of-hand-sanitizer-is-very-hard-to-police>

<sup>5</sup> MacKay, Alexander and Weinstein, Samuel. (2022). Dynamic Pricing Algorithms, Consumer Harm and Regulatory Response. [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3979147](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3979147)

<sup>6</sup> Mathur, Arunesh; Acar, Gunes; Friedman, Michael J.; Lucherini, Elena; Mayer, Jonathan; Chetty, Marshini; Narayanan, Arvind (November 2019). "Dark Patterns at Scale: Findings from a Crawl of 11K Shopping Websites". *Proceedings of the ACM on Human-Computer Interaction*. **3** (CSCW): 81:1–81:32. <https://dl.acm.org/doi/10.1145/3359183>

day's work. For example, in healthcare, we've seen numerous examples where insurers employ 'cost' as a proxy variable to decide whether or not to approve patients' access to certain resources. Research has demonstrated that when instrumented in practice, this can lead to the denial of critical care to particular groups.<sup>7</sup> Similar effects can be seen in 'digital redlining' that results in exclusion from key markets in housing and finance, among others.<sup>8</sup>

Algorithmic systems are optimized for incentives we already understand, and sometimes these incentives may violate existing law - so we shouldn't fall for an algorithmic mirage. These systems are tools that serve whatever interests the firm developing them is designing for, and are not at all neutral. That doesn't mean enforcement will be easy: there is a profound mismatch between the impact on people's wallets, opportunities, and life chances on the one hand, and the opacity and obscurity of the systems used to perpetuate this impact, on the other.<sup>9</sup> By denying the public information about how algorithmic systems affect their lives, each of us lacks the information we would need to ask others what we are seeing, to understand whether the decisions are accurate, to seek remedy or push back.

We have granted a staggering amount of power to the scant few firms with the data and computational infrastructure required to develop and deploy algorithmic systems, and given up consumer sovereignty in the process. This is why effective regulatory intervention that foregrounds bright line measures is particularly needed for this sector, otherwise enforcers and the public will constantly be playing catch-up.

But there are effective steps that we could take, and these should follow from a clear understanding of the problems at hand. To return to the points I started with:

**First, concentration among the firms producing and deploying algorithmic systems is working to create single points of failure that could have ripple effects throughout the economy.**<sup>10</sup> Overreliance on the same algorithmic model, or on the same data, presents imminent risks to financial stability, and could very literally trigger a financial crisis. And these risks aren't simply posed to financial markets. Anywhere these systems are deployed, from housing, to credit, to payments, to transportation, and well beyond, flaws, vulnerabilities, or malicious

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<sup>7</sup> Obermeyer, Ziad, Powers, Brian, Vogeli, Christine and Mullainathan, Sendhil. (2019). Dissecting racial bias in an algorithm used to manage the health of populations. *Science*, 366(6464): 447-453. <https://www.science.org/doi/10.1126/science.aax2342>.

<sup>8</sup> Gillard, Christopher. (2019, Nov. 21). Prepared testimony and statement for the record of Christopher Gillard PhD, Hearing on Banking on your Data the Role of Big Data in Your Financial Services, Before the House Financial Services Committee Task Force on Financial Technology.

<https://www.congress.gov/116/meeting/house/110251/witnesses/HHRG-116-BA00-Wstate-GillardC-20191121.pdf>

<sup>9</sup> Pasquale, Frank. (2016). *The Black Box Society: The Secret Algorithms That Control Money and Information*. Cambridge: Harvard University Press.

<sup>10</sup> Palma, Stefania and Jenkins, Patrick. (2023, Oct. 16). Gary Gensler urges regulators to tame AI risks to financial stability. *Financial Times*. <https://www.ft.com/content/8227636f-e819-443a-acba-c8237f0ec1ac>

configurations lurk as significant threats. The more broadly a single system is used across such domains, the greater the consequences.

Put simply, such systems are not infallible: to the contrary, where investigative journalists, security researchers, and enforcers have looked under the hood they often find that the underlying data on which these systems are trained is often flawed, leading to widespread errors in decision making.<sup>11</sup> Think about the frustration of experiencing an insurance claims denial because the evaluator on the other side was in a rush, or hadn't had their coffee yet that morning. We can think of algorithmic systems as taking each of those individual decisions and replicating them at massive scale, often with little to no scrutiny before they are commercially deployed.

**Second, algorithmic systems enable companies that gain preferential access to data to charge higher prices, leveraging network effects to undermine competition and exploit consumers.**<sup>12</sup> For example, car insurance firm Allstate used what it described as a 'price adjustment algorithm', to make determinations about changes to customer policies. To the public, they claimed that they were doing this to improve customer retention. Whether this was actually the intent, we do not know. What we do know is that in practice the algorithm was employed to identify which customers the system predicted were 'willing to pay', using the data Allstate collected from its customers to squeeze more money out of them through rate hikes of up to 20 percent, while instituting rate increases of only five percent from others.<sup>13</sup> This should perhaps not surprise us. The insurance industry, like most other market actors, is incentivized to increase revenue and profits. And an algorithm that does this, even at the expense of the rest of us, is perversely fulfilling these incentives.

In another example, reporters at the *Wall Street Journal* found that Staples was adjusting prices for consumers if Staples knew a competitor store was in the same zip code, increasing the cost if there were no alternatives close by. While this practice was applied across many regions, its effect could produce higher prices for customers in rural areas not because of distance or inventory, but simply because Staples leveraged its information to extract more money from

<sup>11</sup> For instructive examples, see: Charette, Robert N. (2018, Jan. 24). Michigan's MiDAS Unemployment System: Algorithm Alchemy Created Lead, Not Gold. *IEEE Spectrum*. <https://spectrum.ieee.org/michigans-midas-unemployment-system-algorithm-alchemy-that-created-lead-not-gold>; Burgess, Matt, Schot, Evaline, and Gabriel Geiger. (2023, Mar. 6). This Algorithm Could Ruin Your Life. *WIRED*. <https://www.wired.com/story/welfare-algorithms-discrimination/>.

<sup>12</sup> Mackay, Alexander and Weinstein, Samuel. (2021, Dec. 15). Dynamic Pricing Algorithms, Consumer Harm, and Regulatory Response. 100 Wash. U. L. Rev. 111. [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3979147](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3979147)

<sup>13</sup> Varner, Maddy and Sankin, Aaron. (2020, Feb. 25). Suckers List: How Allstate's Secret Auto Insurance Algorithm Squeezes Big Spenders. *The Markup*. <https://themarkup.org/allstates-algorithm/2020/02/25/car-insurance-suckers-list>.

people they assumed would be unwilling to experience the inconvenience of finding an alternate store.<sup>14</sup>

Companies are harmed by this behavior too: firms can leverage unique access to data and network effects to exclude others from competing with them. For example, rental companies like RealPage that own properties across multiple real estate markets can leverage information across these holdings to tailor price recommendations in ways smaller companies cannot.<sup>15</sup> RealPage also has cross-ownership of additional holdings that may provide rich troves of data, such as its tenant screening software offering.<sup>16</sup> Similarly, many large tech firms have both vertically integrated holdings as well as ownership or stakes in companies in particular sectors, and are incentivized to leverage these information asymmetries to get ahead of their competitors. For example, after acquiring the VPN app Onavo, Facebook used data from Onavo users to monitor competitors. The company then used this data to inform its attempt to acquire Snap and its successful acquisition of WhatsApp.<sup>17</sup> Such practices are particularly concerning where firms have access to data in markets that are particularly sensitive, such as healthcare and finance.

And we need to mention workers and work. In the workplace, we have already seen multiple troubling examples in which, algorithmic techniques have been used to drive wages down. Dr. Veena Dubal, a Professor of Law at UC Irvine, has studied and written about the use of algorithmic models to determine the wages of rideshare drivers. Her work revealed this model as reliant on algorithmic wage discrimination, that may violate competition laws.<sup>18</sup> For example, rideshare drivers have reported observing that bonuses that are key to making their base salary may be rendered harder to reach the closer they are to attaining them.<sup>19</sup> This is far from a fair day's pay for a good day's work. And here we begin to see the dual bind that so many of us are faced with—personalized pricing and algorithmic price discrimination on one end, that extracts as much money as possible from us as we engage in purchases necessary for survival. And on the other end, wage discrimination and algorithmic wage arbitrage, that reduces our pay in unfair

<sup>14</sup> Valentino-DeVries, Jennifer, Singer-Vine, Jeremy and Soltani, Ashkan. (2012, Dec. 24). Websites Vary Prices, Deals Based on Users' Information. *The Wall Street Journal*.  
<https://www.wsj.com/articles/SB10001424127887323777204578189391813881534>

<sup>15</sup> Vogell, Heather, Coryne, Hanu, and Little, Ryan. (2022, Oct. 15). Rent Going Up? One Company's Algorithm Could Be Why. *ProPublica*. <https://www.propublica.org/article/yieldstar-rent-increase-realtor-rent>

<sup>16</sup> Kirchner, Lauren and Goldstein, Matthew. (2020, May 28). Access Denied: Faulty Automated Background Checks Freeze Out Renters. *The Markup*. <https://themarkup.org/locked-out/2020/05/28/access-denied-faulty-automated-background-checks-freeze-out-renters>.

<sup>17</sup> Bell, Karissa. (2018, Dec. 5) 'Highly confidential' documents reveal Facebook used VPN app to track competitors. *Mashable*. <https://mashable.com/article/facebook-used-onavo-vpn-data-to-watch-snapchat-and-whatsapp>

<sup>18</sup> Dubal, Veena. (2023). On Algorithmic Wage Discrimination. *Columbia Law Review* 123(7).  
<https://columbialawreview.org/content/on-algorithmic-wage-discrimination/>

<sup>19</sup> Qadri, Rida and Mateescu, Alexandra. (2021, Jun. 20). Uber and Lyft: woo drivers with stable pay, not short-term honeypots. *The Guardian*. <https://www.theguardian.com/commentisfree/2021/jun/20/gig-economy-companies-uber-lyft-drivers-pandemic>.

and often incontestable ways. In both cases, everyday people lose, and large, data-rich firms that benefit from obscure infrastructures and vast information asymmetries benefit.

**Third, because algorithmic systems function by classing people into particular types, they frequently serve to exclude entire groups from access to the market. This means that systems trained on historical data frequently scale longstanding patterns of inequality.**<sup>20</sup> *Digital redlining* describes the use of algorithmic systems to replicate historical patterns of inequality by training algorithmic decisionmaking technologies on biased data. For example, investigative journalists at the Markup identified distortions in the algorithms used to evaluate mortgage applicants, which led to a systematic increase in denial of access to lending for borrowers of color who were otherwise similarly qualified.<sup>21</sup> In the context of tenant screening, reporters found a widespread use of so-called ‘wildcard searches’, in which criminal background checks were turning up the records of the wrong individual due to small discrepancies in the spelling of a last name - say, Johnsen instead of Johnson. These discrepancies led individuals to be wrongfully denied the rental of apartments, excluding them from housing they were otherwise well-qualified for.<sup>22</sup> These kinds of errors are mundane but profound in their consequences, particularly in markets with limited alternatives - increasingly likely given growing concentration in the tenant screening industry.<sup>23</sup>

**The thread that cuts across all of the examples above is the more fundamental issue raised by granting this level of economic - and political - power to a limited number of firms.** One of the animating principles of our competition laws is that granting too much centralized economic power to too few is harmful to our democracy. High levels of concentration within a tech industry still reliant on consumer surveillance as its fundamental business model renders large tech firms the engine driving the proliferation of these practices, regardless which particular market is under the microscope. This means that policy interventions tackling the concentration of power in the tech industry will have profound effects on the algorithmic harms I’ve just described. This means we need policy interventions that confront, rather than further entrench, this concentration. I have three key recommendations in this vein:

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<sup>20</sup> Gandy, Oscar. (1993). *The Panoptic Sort: A Political Economy of Personal Information*. Oxford: Oxford University Press.

<sup>21</sup> Martinez, Emmanuel and Kirchner, Lauren. (2021, Aug. 25). The Secret Bias Hidden in Mortgage-Approval Algorithms. *The Markup*.

<sup>22</sup> Kirchner, Lauren and Goldstein, Matthew. (2020, May 28). Access Denied: Faulty Automated Background Checks Freeze Out Renters. *The Markup*. <https://themarkup.org/locked-out/2020/05/28/access-denied-faulty-automated-background-checks-freeze-out-renters>. <https://themarkup.org/denied/2021/08/25/the-secret-bias-hidden-in-mortgage-approval-algorithms>.

<sup>23</sup> Consumer Financial Protection Bureau. (2022). Tenant Background Checks Market. [https://files.consumerfinance.gov/f/documents/cfpb\\_tenant-background-checks-market\\_report\\_2022-11.pdf](https://files.consumerfinance.gov/f/documents/cfpb_tenant-background-checks-market_report_2022-11.pdf).



**First and foremost, I'd like to underscore the importance of using existing enforcement mechanisms to ensure strong oversight of this sector, including robustly resourcing the agencies with existing authority.** We already have a range of enforcement mechanisms that can be applied to anticompetitive and harmful uses of AI, including the Sherman and Clayton Acts and the FTC Act. Robust enforcement of consumer protection law can likewise be used to ensure responsibility for the use of these algorithms, including using the Fair Credit Reporting Act, and offering greater legal clarity about what FCRA covers. In fact, agencies like the FTC, CFPB, EEOC etc, with limited resources, have still brought enforcement against some of the worst practices including cracking down on algorithmic wage manipulation,<sup>24</sup> unlawful deceptive secondary use,<sup>25</sup> and algorithmic discrimination.<sup>26</sup> The work of enforcement agencies far predates the current hype around AI, however, this present hype wave does mean there will be more work on their hands, so first and foremost on the list of priorities should be to ensure that these agencies have the resources they need commensurate to the growing scale of the problem.

Second, we need specific bright line rules to curb AI use where it has demonstrated harms to consumers and competition. In this testimony, I highlighted several practices that would benefit from clear and easily administrable restrictions, rather than procedural safeguards or vague standards that are open to creative interpretation and misuse by companies. The Illinois' Biometric Information Privacy Act is instructive as an example of combining a bright line rule that prohibits companies from profiting from the sale of sensitive data with a private right of action. The BIPA has resulted in several successful enforcement actions with market-wide ripple effects, including banning the now notorious company Clearview AI from selling its sensitive database of millions of our faces illegally scraped from the internet for profit. This is closely related to the need for a strong data minimization mandate that puts in place a broader framework of limits on how companies collect, use, and store data. The passage of a federal data privacy law, including a strong data minimization mandate should be an urgent priority given that it serves as a potent antidote to a range of algorithmically enabled harms. As we, Accountable Tech and EPIC emphasize in the 'Zero Trust AI Framework', data minimization rules are essential levers at a time when AI is tipped to further exacerbate information asymmetries between individuals and communities, on the one hand, and the large corporations that create and collect data about them which has increasing power over their lives, on the other.<sup>27</sup> Enforcers have already enforced data minimization requirements – in a recent case about Alexa, the FTC penalized Amazon for retaining the digital imprints of children's voices

<sup>24</sup> FTC v. Amazon Flex, <https://www.ftc.gov/legal-library/browse/cases-proceedings/1923123-amazon-flex>

<sup>25</sup> FTC v. Everalbum, <https://www.ftc.gov/legal-library/browse/cases-proceedings/192-3172-everalbum-inc-matter>

<sup>26</sup> FTC v. Bronx Honda, <https://www.ftc.gov/news-events/news/press-releases/2020/05/auto-dealership-bronx-honda-general-manager-pay-15-million-settle-ftc-charges-they-discriminated>

<sup>27</sup> "Zero Trust AI Governance", Accountable Tech, AI Now Institute, and EPIC, August 10, 2023, <https://ainowinstitute.org/publication/zero-trust-ai-governance>.

indefinitely solely for the purpose of improving its AI system Alexa.<sup>28</sup> These kinds of secondary use practices are endemic throughout the industry, and need to be curbed. However, we need a stronger ex-ante enforcement regime rather than one-off actions: we have to stop playing whack a mole, identifying harms long after they've occurred.

Lastly, we need to strengthen our legislative tools to be prepared to effectively tackle the market structure and gatekeeper power of dominant digital platforms. These firms hold an unprecedented amount of economic and political power, which extend across the tech stack. There are several proposals already on the table that are instructive, including the American Innovation and Choice Online Act and the AMERICA Act, both of which highlight the importance of tackling large tech firms' gatekeeper role and influence in the broader economy. Preparing our regulatory and enforcement capabilities to meet the needs of the moment by tackling concentrated power in the tech industry is an urgent challenge, one which will have beneficial and wide-reaching effects for the public, for businesses and for our democracy.

I thank the esteemed members of the Subcommittee for convening us today to discuss these important issues.

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<sup>28</sup> FTC v. Amazon, [https://www.ftc.gov/news-events/news/press-releases/2023/05/ftc-doj-charge-amazon-violating-childrens-privacy-law-keeping-kids-alexa-voice-recordings-forever?utm\\_campaign=ftc\\_and\\_doj\\_charge\\_amazon&utm\\_content=1685561109&utm\\_medium=social&utm\\_source=twitter](https://www.ftc.gov/news-events/news/press-releases/2023/05/ftc-doj-charge-amazon-violating-childrens-privacy-law-keeping-kids-alexa-voice-recordings-forever?utm_campaign=ftc_and_doj_charge_amazon&utm_content=1685561109&utm_medium=social&utm_source=twitter)

Questions from Senator Tillis  
for Sarah Myers West

Witness for the Senate Committee on the Judiciary Subcommittee on Competition Policy, Antitrust,  
and Consumer Rights Hearing on “The New Invisible Hand? The Impact of Algorithms on  
Competition and Consumer Rights”

1. **The AMERICA Act would prohibit large digital advertising companies from owning more than one part of the digital ad ecosystem. In your opinion, should this take effect today do you see any unintended consequences?**

We need to strengthen our regulatory toolkit to more effectively tackle the market structure and gatekeeper power of dominant digital platforms, including the prevalence of cross-ownership across key components of the digital economy. As outlined in my written testimony, proposals already on the table, including the AMERICA Act, are instructive for how to do so: preparing our regulatory and enforcement capabilities to meet the needs of the moment by tackling concentrated power in the tech industry is an urgent challenge, one which will have beneficial and wide-reaching effects for the public, for businesses and for our democracy.

2. **Development of AI will only continue to grow and as a result more and more sophisticated AI tools will become available and the use of AI tool more prevalent. What can Congress do now to better to plan for the impact on competition, without stifling AI innovation?**

At present, the necessary ingredients for AI development, including data and the computational infrastructure needed to process it, are heavily concentrated in the hands of only a few firms. This heavily tilts the playing field in their favor - while new ‘AI startups’ abound, as a rule these new entrants must establish some kind of relationship with one of the bigger players in order to participate in AI development. This creates numerous ancillary harms, incentivizing toxic competition in the market, an overabundance of economic power in only a few hands, and stifling innovation.

There are a number of measures Congress can take now to ensure fair competition in AI, starting by robustly resourcing the agencies responsible for enforcement of our existing laws, which include a range of pleasures that can be applied to anticompetitive uses of AI. We also need bright line rules to curb AI use where there are demonstrated harms to consumers and competition - as I mentioned in my testimony, the passage of a federal data privacy law should be an urgent priority given its importance to addressing AI-enabled harms: in particular, inclusion of a strong data minimization mandate would be an effective measure to address harms to competition. And regulation that addresses the gatekeeper power of dominant tech firms is likewise critical to curbing the unprecedented amount of economic and political power concentrated in their hands.

3. **Can algorithms be manipulated by bad actors to censor free speech, specifically during an election cycle? And if so, how?**

The central role of large tech firms that utilize algorithmic systems to mediate our information ecosystem grants them an enormous amount of power, which is particularly concerning in the context of an election. But the current opacity of algorithmic systems makes it difficult to definitively answer the question: we lack key information we need as a public to understand and deliberate on whether algorithmic decisions - whether that be the decision to serve a particular piece of content or charge a price or make a recommendation - are accurate, let alone to seek remedy or push back. This is precisely why the kinds of measures I describe in my answer to Question 4 are particularly needed.

**4. Groups with different viewpoints have weighed in on algorithms. Some suggest that more transparency is needed, while others want more privacy. Can you provide your perspective on whether more or less transparency is needed when it comes to algorithms?**

We strongly need greater algorithmic transparency: algorithmic systems are in widespread use across the economy, and are used to make decisions that significantly impact the public, whether by setting prices, determining access to resources, or shaping our information environment. Algorithmic transparency offers a step toward addressing information asymmetries that give dominant firms significant power: but it won't be enough. In addition to strong transparency mandates, we need to consider the contexts in which algorithmic systems are used: in workplaces, in schools, in our healthcare systems, algorithms are deployed frequently by those with greater power on those with comparatively less power, and simply knowing more about the algorithmic system used does not necessarily mean members of the public have the capacity to opt out, or to seek remedy when a system is in error. This is why bright line rules crafted to protect consumers and competition are a necessary complement to mandates for transparency.

**5. Do you believe that large companies and platforms can use algorithms to stifle innovation or small businesses?**

Yes; we have significant evidence that they already do across at least three fronts. For one, algorithmic systems enable large firms to deal with increased amounts of complexity: they can more effectively coordinate using large amounts of data across highly differentiated products, and this extends their capacity for collusion into places where it otherwise would be impossible to execute with practice. Second, the sprawling ownership of large tech companies and their platform ecosystems offers them significant scope to use algorithmic systems to preference their own goods and services, stifling innovation and harming small businesses that try to compete. Third, the utilization of algorithmic systems often acts to reinforce the existing network effects of large companies, creating incentives for firms to extract as much out of consumers as possible, collecting and retaining significant amounts of data and shoring up their dominant position. This exacerbates the surveillance business model that has led to considerable downstream harms.

**6. What do you believe is the role of government in regulating algorithms? What, if any, unintended consequences would there be if Congress gets involved?**

Strong intervention by government in this market is long overdue: the behavior of the biggest firms indicates a willingness to disregard existing law and essentially experiment in the wild. Given the significant impact of these systems on the public there's no excuse for companies to release tools when they can't assure they're compliant with existing law, but many of the systems already in widespread commercial deployment have not been adequately evaluated before being deployed. This is most harmful to the public, which bears the brunt of the impact, but it's also harmful for the businesses that procure AI systems for use: it means that enterprise firms who are users of algorithms often lack the information needed to verify whether these tools work as intended, whether they are adequately secure, and whether they introduce ancillary harms. Regulatory intervention is not only appropriate, it's sorely needed to protect the public and the economy at large.

## A P P E N D I X

**The following submissions are available at:**

*<https://www.govinfo.gov/content/pkg/CHRG-118shrg60435/pdf/CHRG-118shrg60435-add1.pdf>*

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