Episode 1,061: The Search Engine Manipulation Effect: A Psychologist Looks at Google

Guest: Robert Epstein

WOODS: Well, I will tell you something. People are still — I don't think I want to say "reeling," but still processing what you had to say last time. We talked about adolescence in your previous appearance. I had a great discussion thread about that in my private Facebook group. And I guess it's funny I mentioned Facebook because we'll be getting to that in a little while. I want to start with a discussion of this phenomenon, search engine manipulation effect or SEME. And I'm wondering, is that a term you coined yourself?

EPSTEIN: It is; it is. It's one such term, yes. There are some related phenomena that I study as well, but that was the first one we discovered.

WOODS: Okay. So what I'd like you to do here at the outset is to describe for us what that is, and then I want to get into some of the research that you did to establish the existence of this phenomenon.

EPSTEIN: Well, before I get to that, since you mentioned that you were chatting with your Facebook friends, let me point out that there are two big problems that technology has introduced. The first, which I don't study, is surveillance and tracking. So when you're doing anything through social media, all of those conversations are being recorded and monitored and analyzed, and information about you and the people you're interacting with is all going into your profiles. And that information later is being shared and sold and distributed and used for more and more purposes. So pretty much everything we do online is tracked. It's the most extensive surveillance tool — the Internet, that is — it's the most extensive surveillance tool ever invented. I mean, it's incredible.

But I don't study that. That is a huge problem. And that is related also to a second problem, which people know almost nothing about, which I've been studying now for more than five years. And that's online manipulation. And in fact, they're related because, the more you surveil people, the more you know about them, the easier it is to manipulate them. I study methods of manipulation and I have stumbled upon to discover some new forms of manipulation that are unprecedented in human history. There have always been attempts to manipulate us and to manipulate the masses, manipulate votes. That's always been the case. But the Internet has introduced genuinely new ways for manipulating people that are really frightening. The more I've learned about these methods, the more concerned I've become.

So that's a pretty long intro, but that brings me to the first such method that we discovered, which turns out to be one of the largest effects ever discovered in the behavioral sciences, and this I call SEME, which stands for search engine manipulation effect. And in a nutshell, what this is is the impact that search results have on people's opinions, attitudes, beliefs, purchases, voting preferences when those search results favor one candidate or one cause over another. So by "favor," I mean if you click up on the high-ranking search results, you're going to connect to webpages that make that candidate or that cause look better than another candidate or cause. And when that happens, opinions shift.

So we have been doing experiments on SEME for, gosh, I guess five years now? More than that. And the findings are extremely disturbing. Just to give you a just a very quick peak here without giving you all of the details, but just a quick peak at what the numbers look like, the very first experiment we ever ran, which I think was in early 2013, I thought we could shift people's voting preferences using biased search rankings by 2-3%. That was my prediction. In the very first experiment we ever ran, we got a shift in voting preferences of 48%. That's a lot, because if you can shift 48% of people who are undecided about a candidate, of your undecided voters, if you can get shifts of that magnitude among people who are undecided on an issue or a candidate, my gosh, you can change the world. You can certainly flip elections easily enough.

WOODS: Right, so the study that I first read involved people, Americans who probably didn't know a whole lot about an Australian election. So these are going to be names they've never heard before, and they're shown results that skew one way or another. And it turned out that just these results, the way they were ranked influenced the way these people thought about these names they had never heard of before at an astonishingly high level. I mean, the results you got were quite robust.

But you may have thought, as you noted in your article, well, this is a small study isolated in one part of the United States. But it seems to be the case that you can replicate this under different conditions in different places all over the place.

EPSTEIN: Well, yes. In fact, that first experiment was small. It was just people from California. They were over a wide age range. We actually did our best to try to simulate the American voting population. But yeah, we were using an Australian election, real webpages, real search results, but an Australian election, because we wanted our participants to be undecided by definition. We thought that was an easy way to do it.

And we did other experiments like that, and before we even got to the big experiments, we had learned something extremely disturbing — namely, we could not only shift people's voting preferences dramatically, but basically, we could do it in such a way, using again search rankings that favor one candidate or another, that virtually no one was aware that they were being manipulated. In other words, we got to the point where we knew how to do this manipulation so that literally no one was aware that they were seeing biased search rankings. So now we have an effect which is not only huge but which is invisible to people. That's kind of scary because when you manipulate people in a way that they can't detect, they end up thinking they've made up their own mind freely. That's kind of scary.

But we needed to expand this, so we did a national study online with more than 2,000 people, people from all 50 states. And we again replicated the effect. We got again this huge shift. But now we had a big enough study so that we could look at demographics. We could see whether the effect is larger for males, females, people who are Democrats, people who are Republicans, and so on. And we found enormous demographic differences. We were able to shift one group by 80%. This was just after one online search, by the way. That's how powerful this effect is.

In other words, people are extremely trusting of Google's search results in particular. They're very trusting of algorithmic output, I guess you could say. They think that that kind of output is untouched by human hands, it's very objective, there's no human emotions involved, so they trust it a lot. And they especially trust very high search rankings. And for some groups, this works better than for others. In other words, some groups are extremely trusting of search results, others a little bit less so. But ultimately, it turns out you can shift pretty much everybody using this phenomenon, again, which we call SEME.

WOODS: Then I'm interested in — you decided to try an experiment in India, and here you would be doing an experiment where people, you would be talking about a real election that they were going to take part in themselves. And the question was what kind of effect, when we deal with undecided voters, could we see with search engine manipulation effect. And you said, on average, we were able to shift the proportion of people favoring any given candidate by more than 20% overall and more than 60% in some demographic groups, and basically nobody had any awareness that they were even viewing biased search rankings. 99.5% showed no awareness of this. They had no awareness they were being manipulated.

Now, let's get to the big, big question people would want to ask here, though, is that it's of course very, very important that we've isolated that this really is a real effect and it really can change the way people think. And I'm sure it's not confined to elections. It could also change the way they think, no doubt, about a variety of controversial subjects in society. But the question would be, given that everybody — not everybody, but a huge proportion of people doing web searches, they're all using one search engine. They're all using Google. The question is: is Google actually doing this or not, and are we just being paranoid to think they might be doing it?

EPSTEIN: Okay, first of all, Tom, yes, we did confirm that this phenomenon works on any kind of opinion at all, not just voting preferences. So that we confirmed in other experiments. And yes, the India experiment showed that this works with real voters right smack in the middle of a real election. That's pretty scary. But you're right. Showing this over and over and over again in experiments that we design and control, that's one thing. Showing that Google, which controls about 90% of search in most countries in the world, showing that Google is actually doing this, that they're showing people search rankings that favor one cause or another or favor one candidate over another, that's different. That's a very different issue.

Now, without me even telling you how we did confirm this, let me just point out that in our experiments, all we were changing in different groups was the order in which they saw search results, again, real search results connecting to real webpages. We just kept changing the order, the ranking. Now, we also always had control groups in

which we mixed things up, in which the ordering didn't favor one candidate or another. In other words, in our control groups, we were using a kind of equal time rule.

So before I even tell you how we actually confirmed what Google is actually doing, let me just point out that if we just use common sense, it should be obvious that Google's search results always and in every country in the world are always going to be favoring one cause or one candidate because they have no equal time rule. The whole point of a search result is that they order things for us. There's never an equal time rule. So in any election, whether Google is paying attention or not, the algorithm itself is going to favor one candidate. That's simply what it's programmed to do. It's never going to be using an equal time rule.

Okay, so but we decided late 2015 that we had to answer that big question that you raised, and I have an article coming out about this soon. We worked in secret — my team and I worked in secret for several months. We developed a system for tracking the tracker — in other words, for monitoring what search results Google was actually showing people. We did this by setting up a Nielsen-type network of field agents around the United States, and we were looking over their shoulders as they conducted online searches for almost six months before the November election. So we could actually see what they were seeing as they conducted election-related searches. And we did this to see whether there was any kind of favoritism in search rankings.

And indeed, we found consistent favoritism, not just in their rankings overall but in all ten search positions on the first page of search results. Overall and in all ten search positions, there was on average a bias, if you want to call it that, toward one candidate, and that's Hilary Clinton. Now, that's not going to shock anybody, but here we actually preserved 13,000 searches, more than 98,000 webpages. We knew how the searches linked to the webpages. We know the search rankings that people were seeing. So we actually have this amazing database that we've preserved from the 2016 election in which we know what Google, Bing, and Yahoo were showing people. We know what they were showing people.

Think about that. That's never been done before. This was an incredible breakthrough. And there really was favoritism. We know from of course our years of experiments that when there is favoritism, that shifts the votes of undecided voters. In this case, maybe, possibly over time, several million votes might have been shifted this way toward Hilary Clinton without anyone knowing that this was occurring, and, let me add, without leaving any kind of paper trail, usually — except we preserved this information. Normally there's no paper trail, but we preserved this information. Think about that.

WOODS: All right, obviously a lot more to talk about, and we'll do that after we thank our sponsor.

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All right, I know in a minute you're going to probably want to say a little something about Facebook as well, but let's finish up our discussion of Google. What are some other ways that it's at least conceivable that Google can manipulate opinion?

EPSTEIN: Well, we've gone way beyond our SEME research. So early in 2018, we are going to be going public with our next big batch or research findings, and they show the power that search suggestions have to shift votes, opinions, purchases, and so on. Those are those suggestions you get when you first start to type a search term. Google is instantly flashing suggestions at you, and those aren't random suggestions and those are not showing you what other people are searching for. Those are manipulating you, and we show in the new research the incredible power that search suggestions have to shift people's searches one way or another to control what it is they actually search for. And that effect, which we call SSE, the search suggestion effect, is so powerful that, if you're starting with a group of undecided people who, let's say if they had to vote today, would vote 50/50 on an issue, using carefully engineered search suggestions, which is what Google uses, I can turn a 50/50 split into a 90/10 split with no one knowing they're being manipulated.

Now, there's also those answer boxes that we're studying, those boxes they're showing you at the top of the page where they just give you an answer to your question and, generally speaking, you don't even look at the search results. Well, that's another very powerful form of influence. We're trying to pin down those numbers right now in new research. And that applies to the answers they give you on Google Assistant on your Android phones. It applies to the answers that they're now giving you on Google Home, that audio device they're selling by the millions.

And you want a big shocker here? Well, guess what: Siri, Apple's Siri draws its answers from Google's search engine, so even when you're not using Google, you're using an Apple product, you're still being influenced by Google. So I could go on and on about Google, but actually, the problem is larger than Google, so we might want to talk about Facebook or even other companies. There's so much of this out there, it boggles the mind.

WOODS: Yeah, let's talk about Facebook. Now, let me just say something about Facebook. Let's just imagine that there were nothing sinister about it. In principle, it's an amazing platform and it can accomplish an incredible amount of good and it brings a lot of people together who share interests and causes and families who are spread over the globe. It has the potential to do a lot of good, and I think even under the current constraints, it still does a lot of good.

And I go on there in the full knowledge that, yeah, I'm not going to share certain kinds of information on it, but I feel like if I were — I'm not going to be an Internet hermit and just abstain from using any of these services because that would hurt me professionally and that would not do me any good. I am going to use them and I know there are some people who say I'm not going to fly because of the TSA and stuff. And I get that. I don't like the TSA either. But I'm not going to not fly, because then I'm paying the penalty. Well, I'm not going to not use one of the most amazing platforms in the history of the world in ways that benefit me because then I'd just be shooting myself in the foot. So I would not go to that extreme.

But at the same time, I have no problem talking about the ways in which this thing can be manipulating people. So how have you done research in that area?

EPSTEIN: Well, on another show on another occasion, we should talk a little more about that surveillance issue, because I think if you knew a little bit more about what was being tracked when you're online and even now when you're offline and how the information was being used, I think you'd be a little more cautious than you're being. And I did publish an article a few months ago which your listeners can find, which is called "Seven Simple Steps Towards Online Privacy," which I would urge you to look at and I urge your listeners to look at, as well.

Now, regarding Facebook, I also published an article which — this was before the election — pointing out five different ways in which Facebook could very possibly influence the outcome of the election with no one knowing that they had done so. So this is one of the reasons why we need that tracking system that my team and I developed last year. We need that scaled up and we're working on doing that now, but it must be scaled. Like, we have to keep an eye on what these companies are showing.

Because let's just imagine that on the morning of November 8th, 2016, Election Day, let's imagine that Mark Zuckerberg, the head of Facebook, is sitting there and he's thinking, *Should I press the Enter key or not? Should I press the Enter key or not?* What does that mean? Well, he had the option that morning or the night before of hitting Enter and sending out go-out-and-vote reminders exclusively — *exclusively* — to people supporting one candidate. In this case it would have been Hilary Clinton. If he had done that, that could easily have caused 400,000 people or so, maybe a little bit less, maybe a lot more to get off their sofas and go vote who otherwise would have stayed home.

Now, we know that those reminders from Facebook have this impact because Facebook did research on this, which it published in 2012. We know exactly the impact that those reminders would have had. Did Mark Zuckerberg hit the Enter key or not? Well, we weren't monitoring that and there is no system in place to monitor things like that yet. We're building a big system like that now. The point is we don't know. That's a kind of manipulation that has a massive effect on an election entirely under the control of one person. He makes the decision. Or it could have been — some ambitious employee of Facebook of course could also have done it if they had the right password authority or the right hacking skills.

Now, that's just one way in which Facebook can manipulate the world without people knowing. What if it had been doing this selectively for months before the election? What if it had been selectively selling out go-register-to-vote reminders just to people of one political party. I mean, it knows what party you're a member of. It knows which candidates you support. It knows everything about you. And it makes its money by sending out targeted ads, so it can certainly send out targeted messages. So we're studying this as well. We call this TME or the targeted messaging effect. So Facebook has all kinds of ways of manipulating us.

There was a whistleblower, as I'm sure you're aware. A few months ago, someone who had worked at Facebook and said that he was part of a team that was selectively removing conservative news stories from Facebook's newsfeed. Well, that's going to have a big effect on people's opinions if you're selectively removing certain kinds of

political news items from their newsfeed. And that we learned from an actual whistleblower.

So there's so much going on here that sometimes people wonder whether I am paranoid. I am definitely not paranoid. There's a very fine line, as Alan Dershowitz once said, between paranoia and caution. My concerns are based on rock-solid, meticulous research. I'm concerned because I'm becoming more and more aware of what's actually happening. I wish I were imagining this stuff, but I'm not.

WOODS: Have you done work on any platforms other than Facebook and Google?

EPSTEIN: Well, we're looking at another kind of effect, which unfortunately might have been in use by multiple companies last year. The one that concerns us most, believe it or not, is Tinder. And you're thinking, *Tinder? That's some sort of hookup website, isn't it?* Yeah, well, normally you swipe left or swipe right if you like or don't like someone's photo. But Tinder set up a Swipe the Vote app last year months before the election, in which you swipe left or right depending on how you answer a question about immigration or the wall or anything like that. And so you do a few swipes and then Tinder was telling you which candidate you should vote for that will support your views.

Now, think about that. Who's controlling that algorithm? That kind of phenomenon, which we call OME or opinion matching effect, that's incredibly powerful. And that kind of tool — again, implemented by several companies last year but Tinder being the biggest of them — it manipulates people's opinions invisibly, also leaves no paper trail. I mean, this is a whole crazy new world that we're in right now, and it's getting crazier, and we need to study and understand these new phenomena. We need to put names on them and we need to figure out how to suppress these manipulations.

If we don't, I can tell you for sure that democracy is a joke. It will become little more than a joke maybe even now than has already occurred. Especially if you think about it, if these big companies are united in supporting one candidate or one cause, which I think they were this past election, then we're just pawns. I mean, our freedom is little more than an illusion, and democracy — democracy is a joke.

WOODS: Well, I'm not as worried about democracy as I am about individual liberty, and I am concerned about these problems, but at the same time, I think there's a much too facile conclusion to be drawn here that we can solve these problems by either having a government takeover or regulating them like utilities, because I think the trend on the government level is not a good one. I think there's a — especially when I look at the opinions of millennials, where something like 40% of them want to criminalize hate speech. Those are the people who are going to be voting in a few years. Those are the people who are going to be staffing these agencies. And if they're in charge, you know these people are not exactly subtle and careful when they decide who's guilty of hate speech. Anybody they disagree with is guilty of hate speech. So I'm not sure that that's the solution either. So maybe the best we can do at the moment is to, at the very least, get people informed and understanding what's going on around them.

EPSTEIN: Well, being informed unfortunately doesn't really help. One of our most robust findings we've gotten over and over again is that, even when people are informed, even when they can see bias in search rankings, it doesn't help. They shift even farther in the direction of the bias. So I agree with you that government stepping in is not necessarily the solution here. We do have solutions to offer, but I think the most powerful thing that we must do no matter what the government does, no matter what laws or regulations are passed, we must at least set up systems that monitor these companies that are monitoring us. Just monitoring will help keep them honest, because if we're detecting manipulations, we detect that Mark Zuckerberg pressed the Enter key on the morning of Election Day, we'll know that instantly and we'll be able to inform authorities or just inform the media and make these things known in general to people. And that's our best protection, is knowledge.

WOODS: You have a website for the work you've done on adolescence. Do you have a single place where people can find your research on this? If not, I can link to some articles.

EPSTEIN: Well, first of all, people can go to the website of the nonprofit where we do most of our research, which is AIBRT.org, or they can go to my general website, which is DrRobertEpstein.com or even DrEpstein.com. And there you'll see a breakdown of all the different research areas that I'm involved in, and one of them is Internet studies and there you can get all kinds of stuff. So that's the best way I think to follow up on this.

WOODS: Now, given how new obviously the Internet is relatively speaking, is it the case that it's still a fairly lightly-touched topic in psychology? Is it getting more and more attention?

EPSTEIN: Oh, it's way too new. I mean, I'm getting invited to speak about these things around the world at different kinds of conferences and so on. I've spoken about the research twice recently at Stanford University in the same building where Larry Page and Sergey Brin built the Google search engine. But this is still too new. this is a new world of influence unlike any that has ever existed before.

And to me, fake news and that whole issue about fake news and Russia and so on is all just a joke. It's a big distractor. It's nothing. In terms of influence, it's just nothing compared to these effects that we're looking at. Fake news, that's a competitive kind of phenomenon, and you can see the news stories right in front of your eyeballs. The effects we're looking at are really subliminal. You can't see them and you can't fight them. You also can't counteract them because they're in the hands of a couple of huge companies, so how do you counteract that if that company wants to support one cause or candidate?

So no, this is new stuff. It'll get out there more and more of course over time. It'll be in the textbooks; there'll be greater awareness. But I don't think even that's going to protect us, because it just moves too fast. Technology's moving too fast. No law or regulation is ever going to catch up with this stuff, as far as I can tell.

WOODS: Well, I think it's worth — people, it's really worth your time to read some of the material that — in fact, you sent me some links to some great stuff you've written

on precisely this, and so I'll have some really meaty links up at TomWoods.com/1061, including the links to the website you just gave but also to some reading people can do on this subject. Well, very, very interesting and important research, and once again, I really appreciate your time. It's stuff I'm not sure I could get very many people to talk to me about yet again in an entirely different area. That's very rare for a guest to do that twice on this show, so thanks so much.

EPSTEIN: You're very welcome, Tom. Thanks for listening. I really appreciate it.