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Bill Adair:

Hello and welcome to Policy 360. I'm your host, Bill Adair. I'm a professor of the Practice of Journalism and Public Policy at the Sanford School of Public Policy. Before coming to Duke, I founded the Pulitzer prize winning website PolitiFact. Recently, a team of students in our Duke Reporters' Lab has been working in fact checking in a pretty innovative project that is called Share the Facts. It is for the Amazon Echo, which is a new device that allows you to ask questions and get instant responses.

Alexa:

Welcome to Share the Facts. We consolidate fact checks from some of the most respected journalists in the US. Ask me to check a fact you're wondering about.

Bill Adair:

Basically, if you're the user, you can direct your Echo, which is known as Alexa, to ask the fact checker whatever political question you're wondering about. So, we launched it right before the 2016 election and since then have been doing some extensive user testing to try to make it better. And so joining me here are Julia Donheiser, one of our student researchers, and Rebecca Iannucci, who is the editor and project manager in our Reporters' Lab. Welcome to Policy 360.

Julia Donheiser:

Thanks for having us. Good morning.

Rebecca Iannucci:

Thank you. Good morning.

Bill Adair:

So, Rebecca, why don't you start? Describe the app and then we can talk a little bit about the testing that we did to try to make it work better.

Rebecca Iannucci:

So, the app ideally will retrieve any fact check or fact check result that you're wondering about if you want to clarify something you've heard in the news. So, if you hear on the news that Donald Trump maybe had the largest inauguration crowd size and you want to know if that's true, you can ask the Echo if that is true or false.

And ideally she should be able to retrieve a published fact check either from PolitiFact, or FactCheck.org, or the Washington Post fact checker. That is how it's supposed to work. And in many cases, based on our user testing, it didn't work that way. We're finding that sometimes when fact checks are very recent, the Amazon Echo does not have those accessible yet, so they can't be retrieved quite as well. But the way it should go is ask her a question and she gives you the published fact check right back to you.

Bill Adair:

So, why don't we try one for the Iraq War? Julia, do you want to try?

Julia Donheiser:

Sure. Alexa, ask the fact checkers. Is it true that Donald Trump opposed the Iraq War?

Alexa:

Washington Post rated at four pinocchios when Donald Trump said that, "I opposed the Iraq War."

Bill Adair:

Cool. So, now that's a good example of it working. And I guess we should explain to people what it's doing is it is looking in a database of fact checks that have been done by PolitiFact, the Washington Post, FactCheck.org and looking for matches. And so the keyword is really important, whatever keywords that you say when you ask the query. So, why don't you explain a little bit what you did in asking it different questions and then maybe we can try one.

Julia Donheiser:

Sure. So, what we did in the process of asking Alexa different fact checks was we went from more information to less. So, we started off with a full question, "Alexa, ask the fact checkers. Did Donald Trump oppose the Iraq war?" And then we went to less information. And so we would ask her but with only keywords. And we would say, "Alexa, ask the fact checkers. Donald Trump, Iraq war."

And what we actually found was that when we went to less information and only said keywords, she had a lower hit rate, which we thought was really interesting, because we thought it would be we asked a question, it would match our keywords with the keywords and the fact check. Some sort of coding magic going on there. But yeah, that wasn't the case.

Bill Adair:

And, of course, one of the problems was the words that are in the statement that the Post, or PolitiFact, or FactCheck.org checked are what really matters, right? So, it's just looking for a match.

Rebecca Iannucci:

And I think we also found that a major issue for this particular app is just Alexa hearing you properly and getting the right words down. There's a way as the Amazon Echo user to see on your phone exactly what Alexa is hearing from you. And when we checked that in referencing what we were actually asking her, her understanding of our sentences was off a lot of the time.

She was hearing other names, other words, gibberish in some cases. And so that really did affect a lot of the times that she did not successfully retrieve a fact check. This is purely because she wasn't understanding us properly. So, I think that's something to certainly keep in mind going forward.

Bill Adair:

And were there particular types of claims that seem to get better hits than others? What were our big lessons beyond just the keyword realization?

Rebecca Iannucci:

I know that, as I mentioned before, newer fact checks were not retrieved particularly well. I think at the time the Bowling Green Massacre was a big buzz word in the news and we asked her a few times about that. And on the first two or three days, she didn't have an answer, but on the fourth, she could retrieve a fact check about it.

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So, I think by that point, Bowling Green had been added to the database and there was now a published fact check about it. But for the most part, successful retrievals were done on really old claims that had been getting repeated a lot in the news about the war in Iraq, Hillary Clinton's email server, or things like that.

Bill Adair:

So, some the funniest ones we had were on the inauguration. Why don't we try a few on the inaugural crowd size and just to get some differences here. I'll start and then you guys can try some too. Alexa, ask the fact checkers. Was Donald Trump's inaugural crowd the largest ever?

Alexa:

Gossip Cop rated it zero and Hollywood Life said that Kanye west is performing at Donald Trump's inauguration.

Bill Adair:

So, that was one that involves our entertainment partner, Gossip Cop, which fact checks rumors in Hollywood coverage and also uses Share the Facts. But it obviously triggered because of just a couple of keywords. You guys, why don't you try and see if you have a better success than I do?

Rebecca Iannucci:

Is it a variation on the same kind of thing? Alexa, ask the fact checkers. Is it true that Donald Trump had the largest inauguration crowd?

Alexa:

Gossip Cop rated it zero and Hollywood life said that Kanye west is performing at Donald Trump's inauguration.

Bill Adair:

All right, I think the key might be record crowd. Julia, why don't you try something involving record crowd, or something like that? I think that'll work.

Julia Donheiser:

Alexa, ask the fact checkers if it's true that Donald Trump had a record size inaugural crowd.

Alexa:

I'm sorry. I couldn't find anything about that subject. Please ask the question again.

Bill Adair:

Alexa, ask the fact checkers was Sean Spicer correct that the crowd for the inauguration was a record, the largest to see in an inaugural ever?

Alexa:

There was a problem with the requested skills response.

Bill Adair:

So, this is not unusual. We encountered a lot of this when we were doing our testing and this is actually part of our learning. It can be a little frustrating when we can't get the right matches, but this is all part of figuring out the limitations of our own database, as well as the limitations of the Amazon Echo and its ability.

So, our next challenge now is to try to improve this by possibly tweaking the settings to the extent we can. We're also going to be starting testing with the Google Home and we'll be doing the same thing again. Are we going to run into the same problem with the Google Home that we ran into here? Is this just the limitation of what's in our database?

Rebecca Iannucci:

I think, yes. We have to be very cognizant of the pitfalls of technology, especially when it's voice-based technology. Simply hearing what someone is saying and picking that up completely accurately is a major hurdle to overcome. And I don't know that I'm personally not the one to talk about that at all, not a computer science person at all, but I do know that that's a big issue and that should be addressed as much as it can as we develop these tools.

But we did a lot of testing that just showed there are subtle differences in the way you can ask a question that might give you a better response. In some cases, we asked the Echo a question and then the next time we would ask her in the form of a statement. So, is it true versus ask if it's true. And those would give us different variations of responses. So, I think there are just subtle differences that developers and people involved with this technology need to pick up on more and think about more as they make headway on this.

Bill Adair:

It'll be interesting to see with the Google Home if there's a difference there, because the Google Home has basically the same concept. You ask it a question. But it has some things that it does differently and in some cases, better than the Echo. For example, the weather, which I asked both of them. The Google Home tends to be a little more accurate for temperature forecast, whatever, because of whatever source it's using. Julia, finally tell us what you got out of this. So, did you come away with any big takeaway?

Julia Donheiser:

Well, for me, the biggest part was seeing where we could actually improve this app, because we can't really... We're the Reporters' Lab. We're not going to go out there and improve voice recognition technology and automatic transcription of questions. And we can't really change the fact that we don't have immediate access to the APIs of every fact checking site out there.

And so a lot about the process for me was just being able to identify where we could actively improve this product, which was in the code. Once we have what's transcribed, how do we match those words up with the fact checking database? How do we think about how people are going to ask these questions? Because unlike us, not everyone knows the wording of every fact check that's out there and in the Alexa app.

And so, yeah, it's really about making it accessible and making it so that the average user can ask a fact check really casually without the precise wording that we're doing. And that's where there's room for improvement.

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Bill Adair:

Well, thank you, Rebecca and Julia, for being with us. Alexa, thank you.

Alexa:

My pleasure.

Bill Adair:

I'm Bill Adair. Thank you for joining us.