### **Web Appendix**

#### **Measurement Details**

Evaluation of the recommender system. Items on recommendation quality, perceived complexity, personalization, perceived relative knowledge:

- "The recommendation was of high quality," 1 = strongly disagree, 7 = strongly agree
- "The recommendation seems like it was generated by a complex process," 1 = strongly disagree, 7 = strongly agree
- "The recommendation didn't feel like it was chosen for me," 1 = strongly disagree, 7 = strongly agree
- "The recommendation system probably knows what's best for me even when I don't know myself," 1 = strongly disagree, 7 = strongly agree

# **Example Stimuli**

Figure W1. Recommender system waiting screen.

Thank you for your responses.

The computer is now generating recommendations for you.



Figure W2. Experiment 2a: headphones choice set.

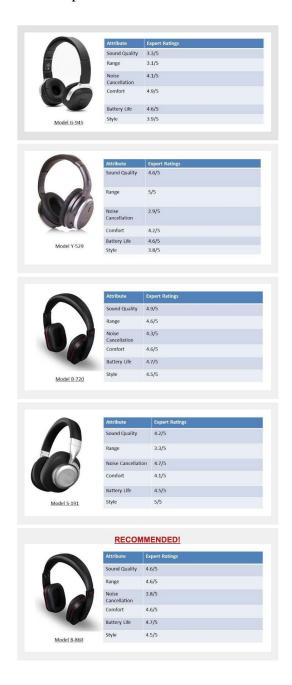


Figure W3. Experiment 2b: low decision difficulty choice set



**Figure W4.** Experiment 3: algorithm expertise information.

# Low Algorithm Expertise

The business school has been collaborating with the computer science department and the medical school to create a recommendation system for patients who are confused about the right course of action.

We are testing the software of that system. The system is very new and is still being fully developed based on feedback.

### High Algorithm Expertise

The business school has been collaborating with the computer science department and the medical school to create a recommendation system for patients who are confused about the right course of action.

We are testing the software of that system. The system has already undergone several months of testing and development based on the responses of many hundreds of participants.

**Figure W5.** Misinformation warning applied in Experiment 4.

# Algorithms and machine learning are increasingly being used to make more decisions – how should this be approached?

This week, a <u>BuzzFeed survey</u> found that three in four American adults who see fake-news headlines believe them. It's not hard to see why: A website peddling made-up news stories can easily look nearly as polished as The New York Times, and it's impossible to keep up with the sheer volume of information published online every minute. And when people believe fake news stories, bad things can happen.

Fact-checkers need a hand if they're going to catch up with the pace and breadth of the material shared every day on Facebook, Twitter, and elsewhere around the internet. As soon as next year, they might get that help—in the form of computer algorithms and artificial intelligence.

There are several ways to determine whether a story is true or not, says Carlos Castillo, a data scientist at a research center in Spain called Eurecat. The simplest is to just to consider the source: If the story was published in a prestigious newspaper, for example, or by a decorated journalist, it's probably more likely to be trustworthy. Another method is to study the way a story is shared on social media: the kinds of words used to describe it, the sorts of users who post it, and the way people respond to it. And a third method is to examine the story itself, by analyzing its internal logic, combing it for claims, and checking those claims against known facts.

Computers will never completely take over the role of humans in the fact-checking process. I asked my colleague who fact-checks magazine articles about where algorithms would be most useful in her job—and where they probably wouldn't be able to help. She said computers could be useful for searching through large amounts of information, but that she'd be suspicious of their ability to evaluate nuances in human tastes and writing, like unraveling the assumptions underpinning an argument, or assessing new ways of describing complex scientific processes.

**Figure W6.** Suspicious (left) versus non-suspicious (right) web environments. Non-suspicious stimulus is equivalent to Experiment 1 choice set.

