Preregistration Report (09/28/2017)
Title: The A/B Illusion: Experiment 4 New Vignette Pilot Testing
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Research Questions:

The A/B illusion is a hypothesized phenomenon in which individuals perceive the decision to run a randomized, controlled experiment (e.g., comparing two interventions, policies, or practices) on human subjects as less appropriate than simply implementing one of those alternatives without testing its effects. The A/B Illusion was previously anecdotally observed and described (Meyer, 2015), but it had never been experimentally investigated until our pilot research. The research questions we are asking include:

1. Can we demonstrate the A/B illusion in naive research participants?
2. Assuming we are able to detect an effect, do any demographic variables or other individual differences either amplify or attenuate the A/B illusion?
3. What kinds of reasons do participants give for endorsing the A/B illusion, and what kinds of reasons do participants give for approving of unilateral implementation of untested policies?

Pilot Testing Vignette Scenarios

The purpose of pilot testing our new vignettes is to determine whether participants object to the scenarios in any unforeseen ways, as well as to check for general clarity as we construct new vignettes in different domains where the A/B Illusion may emerge.

Each of the vignettes we are pilot testing has been constructed to have an A condition, a B condition, and an A/B condition. Our goal is to determine whether our own intuitions about the appropriateness of policy decisions are also held by laypeople. We have previously tested these vignettes as standalone (A, or B) policies. The present pilot testing is to determine how appropriate participants view their combination (into an A/B test).

The domains being tested in this round include online dating, direct-to-consumer genetic testing, and autonomous vehicles. We will survey 30 people per vignette, fully between-subjects, with a compensation rate of $0.15 per completed response.

Survey materials are below.

In all scenarios, participants are asked to rate the appropriateness of the decision (1-5 Likert scale from very inappropriate to very appropriate), and to provide "a few sentences" on why they chose that response. Red text denotes variations from A, B vignettes.

Online dating (restricting contact)

A: Customers who sign up for an online dating service are matched with each other based on their answers to questions about their tastes and habits. The system is set up to only allow customers to contact people who are recommended as a match. The CEO of the dating service wants to improve customer satisfaction by introducing a new way to match people together. He thinks of a way to do this. So, he decides to program his website to report users are a match when they are **very** similar to each other, based on the questions they answered.

B: Customers who sign up for an online dating service are matched with each other based on their answers to questions about their tastes and habits. The system is set up to only allow customers to contact people who are recommended as a match. The CEO of the dating service wants to improve customer satisfaction by introducing a new way to match people together. He thinks of a way to do this. So, he decides to program his website to report users are a match when they are **somewhat** similar (but not TOO similar) to each other, based on the questions they answered.

A/B: Customers who sign up for an online dating service are matched with each other based on their answers to questions about their tastes and habits. The system is set up to only allow customers to contact people who are recommended as a match. The CEO of the dating service wants to improve customer satisfaction by introducing a new way to match people together. He thinks of two ways to do this. So, he decides to run an experiment by randomly assigning customers to one of two test conditions. For half of customers, his website will report users are a match when they are **very** similar to each other, based on the questions they answered. For the other half, his website will report users are a match when they are **somewhat** similar (but not TOO similar) to each other, based on the questions they answered.

Genetic testing (only enough sample for one test).

A: People sometimes get genetically tested to learn more about their ancestry. However, genetic testing can also reveal important health risks that people wouldn't otherwise learn they have. The research director at a popular genetic testing company wants to help customers learn more about their health risks, but the company's testing system only collects enough genetic material to run one health-related test. So, the research director decides that in addition to testing for ancestry, the company will also test customers for their risk of developing **certain kinds of cancer** later in life. Customers will have the option of viewing these results or not.

B: People sometimes get genetically tested to learn more about their ancestry. However, genetic testing can also reveal important health risks that people wouldn't otherwise learn they have. The research director at a popular genetic testing company wants to help customers learn more about their health risks, but the company's testing system only collects enough genetic material to run one health-related test. So, the research director decides that in addition to testing for ancestry, the company will also test customers for their risk of developing **dementia** later in life. Customers will have the option of viewing these results or not.

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the company will test half of customers for their risk of developing **dementia** later in life. The company will test the other half of customers for their risk of developing **certain kinds of cancer** later in life. All customers will have the option of viewing these results or not.

Genetic testing (Prevention)

A. Some genetic mutations lead to health conditions that can make a person sick, or even cause them to die. Many of these health conditions can be prevented or slowed by taking certain steps once a person knows they have the genetic mutation, but others cannot. A certain genetic testing company currently only returns "genealogy" results, about customers' family tree and national origin, but the CEO wants to help as many people as he can. So, he decides that he will offer all of his clients the option to see if they have any genetic risks for health conditions **that can be prevented or reduced**. Customers will have the option of viewing these results or not.

B. Some genetic mutations lead to health conditions that can make a person sick, or even cause them to die. Many of these health conditions can be prevented or slowed by taking certain steps once a person knows they have the genetic mutation, but others cannot. A certain genetic testing company currently only returns "genealogy" results, about customers' family tree and national origin, but the CEO wants to help as many people as he can. So, he decides that he will offer all of his clients the option to see if they have any genetic risks for health conditions**, whether or not these health conditions can be prevented or reduced**. Customers will have the option of viewing these results or not.

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Autonomous vehicles (Control)

A: Many people like the idea of completely self-driving cars, which are capable of navigating the road without input from a human driver. These kinds of cars can make people's lives easier and reduce accidents, but some of them prevent people from taking control of their car in the case of an emergency. The CEO of a company developing self-driving cars wants people to have as much freedom as possible on the road, while also remaining safe. So, he decides that **all of the company's cars will have a lever that allows drivers to switch between self-driving and human-driving modes**.

B: Many people like the idea of completely self-driving cars, which are capable of navigating the road without input from a human driver. These kinds of cars can make people's lives easier and reduce accidents, but some of them prevent people from taking control of their car in the case of an emergency. The CEO of a company developing self-driving cars wants people to have as much

freedom as possible on the road, while also remaining safe. So, he decides that **any use of the brakes, gas pedal, or steering wheel by a human driver will automatically override self-driving mode on the company's cars**.

A/B: Many people like the idea of completely self-driving cars, which are capable of navigating the road without input from a human driver. These kinds of cars can make people's lives easier and reduce accidents, but some of them prevent people from taking control of their car in the case of an emergency. The CEO of a company developing self-driving cars wants people to have as much freedom as possible on the road, while also remaining safe. The CEO thinks of two different ways to balance freedom and safety, so he decides to run an experiment by randomly assigning cars to one of two test conditions. Half of cars the company sells will have a lever that allows drivers to switch between self-driving and human-driving modes. The other half will be programmed so that any use of the brakes, gas pedal, or steering wheel by a human driver will automatically override self-driving mode on the company's cars.