Preregistration Report (09/20/2017)
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 and a B condition. In this series of pilot tests, we are not combining these policy decisions into an A/B condition. Our goal is to determine whether our own intuitions about the appropriateness of policy decisions are also held by laypeople. After vignette scenarios have been found to be adequately matched for perceived appropriateness, we will proceed by combining them into an A/B condition for future experimentation.

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.

Autonomous Vehicles (revised acceleration condition)

A: Self-driving cars, which are currently being developed by several companies, are programmed to control all aspects of driving without any human involvement. However, there are a number of difficult problems in programming self-driving cars. For instance, cars in heavy traffic face significant danger at yellow traffic lights. The director of software engineering at a company developing self-driving cars wants to reduce accidents at yellow lights, and he thinks of a way to do this. He decides that in order to reduce collisions in heavy traffic, all of the company's cars will be programmed to **match the accelerating or braking behavior of nearby cars** when they are close to a traffic light as it turns yellow.

B: Self-driving cars, which are currently being developed by several companies, are programmed to control all aspects of driving without any human involvement. However, there are a number of difficult problems in programming self-driving cars. For instance, cars in heavy traffic face significant danger at yellow traffic lights. The director of software engineering at a company developing self-driving cars wants to reduce accidents at yellow lights, and he thinks of a way to do this. He decides that in order to reduce collisions in heavy traffic, all of the company's cars will be programmed to **brake** when they are close to a traffic light as it turns yellow.

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.

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.

Genetic testing (Prevention)

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.

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Autonomous vehicles (Control)

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**.

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**.

Online Dating (Matching Paradigm)

A: The founders of a new dating app are deciding how to suggest potential matches to its users. All users are able to view every other user's profile and message him or her, but every day the app suggests to each user one new "match," or person that he or she might like. The founders come up with a computer program for generating these matches. They decide that match suggestions will be based on the number of friends and friends-of-friends that users have in common on Facebook.

B: The founders of a new dating app are deciding how to suggest potential matches to its users. All users are able to view every other user's profile and message him or her, but every day the app suggests to each user one new "match," or person that he or she might like. The founders come up with a computer program for generating these matches. They decide that match suggestions will be based on the percentage of "profile questions" that users answer in the same way.