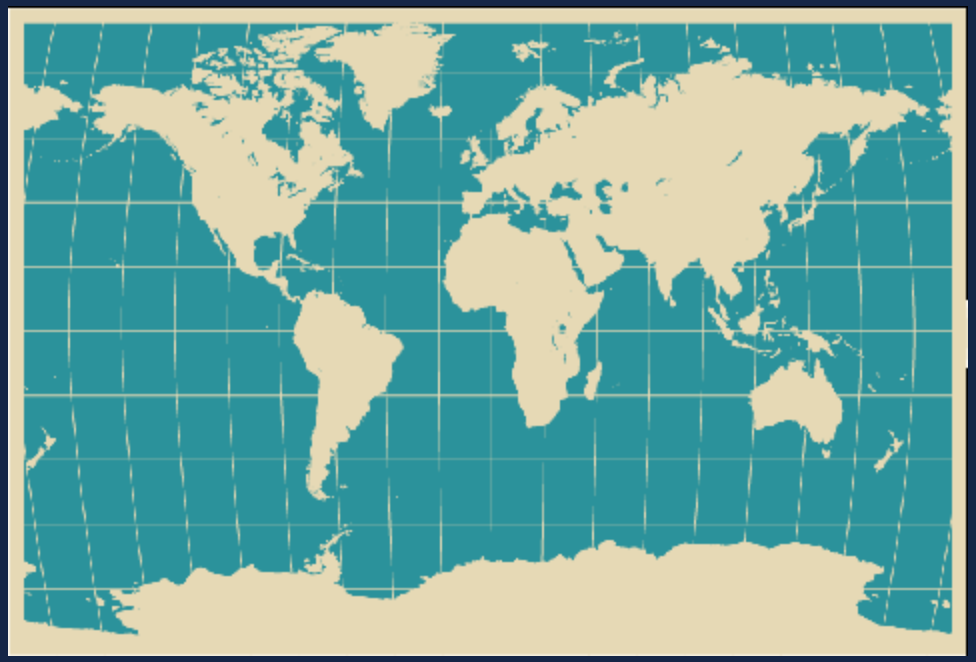
Designing a New Game Show

- *Where in the world is…?*



What did our consultant do?

ASK FOR EXPERT VOLUNTEERS

- Asked to fill in the survey
- 4 of 5 questions had a clue
- 1 “control” question with no clue

Survey

Indicator	Treatment (Clue)	Answer
Question1: What city is the highest capital city in the world?	*The city is located in Bolivia at approximately 3,700m above sea level*	*La Paz*
Question 2: According to the UN, what is the most populous city in all of Africa?	*This city is located alongside the Nile.*	*Cairo*
Question 3: In what state in the USA would you find the Channel Islands?	*Nicknamed the "Golden State," this state is also the most populous in the USA*	*California*
Question 4: Which of these rivers is the largest, in terms of water volume discharged per unit time?	*This river starts in the Andes Mountains*	*Amazon*
Question 5: Which two countries are linked by the Khyber Pass?	*You are on your own for this one!*	*Pakistan and Afghanistan*

Consultant's Results

Indicator	Treatment (Clue)	Answer	Score
All Questions			0.84
Question1: Highest capital city	*The city is located in Bolivia at approximately 3,700m above sea level*	*La Paz*	0.96
Question 2: Most populous city in Africa	*This city is located along the Nile*	*Cairo*	0.93
Question 3: Channel Islands state (USA)	*Nicknamed the "Golden State," this is also the most populous state in the USA*	*California*	0.89
Question 4: Largest river by volume	This river starts in the Andes Mountains	*Amazon*	0.96
Question 5: Countries linked by Khyber Pass	*You're on your own on this one!*	*Pakistan and Afghanistan*	0.46

Effect on correct answers…

No clue: 46% correct

With a clue: 94% correct

Mr. Evaluation Consultant

False Counterfactual…..

You’re Fired

Second Evaluation Design

- Consultant tries Randomization…
  - Random treatment group
    - 50% of people in the room received the clues
  - Random control group
    - 50% of people got questions only

Caveat: WE'VE LOST OUR EXPERTS!!

Results:
Consultant's Design vs. Random Design

Indicator	Treatment (Clue)	Answer	Selection	Treatment - Random	Control - Random
Average Score			0.94	0.58	0.29
Question1: Highest capital city	*The city is located in Bolivia at approximately 3,700m above sea level*	*La Paz*	0.96	0.61	0.29
Question 2: Most populous city in Africa	*This city is located along the Nile*	*Cairo*	0.93	0.57	0.14
Question 3: Channel Islands state (in USA)	*Nicknamed the "Golden State," this is also the most populous state in the USA*	*California*	0.89	0.48	0.14
Question 4: Largest river by volume	This river starts in the Andes Mountains	*Amazon*	0.96	0.67	0.67
Question 5: Countries linked by Khyber Pass	*You're on your own on this one!*	*Pakistan and Afghanistan*	0.46	0.26	0.24

Effect on Correct Answers… with Randomization

No clue: 29% correct

With clue: 58% correct

Lessons.....

- The consultant evaluation was not sufficient!
  - What was the evaluation design or identification strategy in each case?
    - How were the data generated?
  - What were the assumptions behind this strategy?
  - Do we have internal or external validity?
- How would the results inform your game show?