

Experiments

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Why Experiments Work

Random assignment:

$$E(Y_{i,1} | T_i = 1) = E(Y_{i,1} | T_i = 0)$$

$$E(Y_{i,0} | T_i = 1) = E(Y_{i,0} | T_i = 0)$$

Example: Cross-Cutting Cleavages in Mali

Ethnicity vs. Cousinage

Example: Cross-Cutting Cleavages in Mali

TABLE 1. Experimental Design: Subjects Assigned to Treatment and Control Conditions

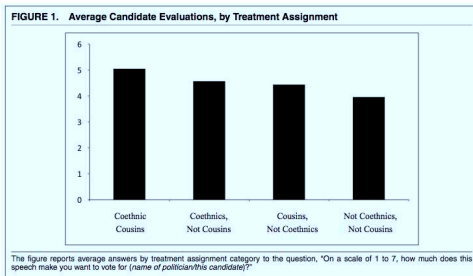
	Subject and politician are joking cousins	Subject and politician are not joking cousins
Subject and politician are from the same ethnic group	$N = 136$	$N = 122$
Subject and politician are from different ethnic groups	$N = 124$	$N = 152$
Politician's last name not given	Control conditions $N = 132$	
Subject and politician have the same last name	$N = 158$	

Example: Cross-Cutting Cleavages in Mali

TABLE 2. Typical Row of Our Random Assignment Matrix

Subject's Surname (Ethnicity)	(1) Coethnic/ Cousin	(2) Coethnic/ Not Cousin	(3) Not Coethnic/ Cousin	(4) Not Coethnic/ Not Cousin	(5) No Name	(6) Same Name
Keita (Maninka)	1. Sissoko 2. Konaté	1. Diané	1. Doucouré 2. Sacko 3. Sylla 4. Coulibaly 5. Touré	1. Diallo 2. Cissé 3. Dambelé 4. Théra 5. Touré 6. Togola 7. Watarra	Pas de nom	Keita

Example: Cross-Cutting Cleavages in Mali



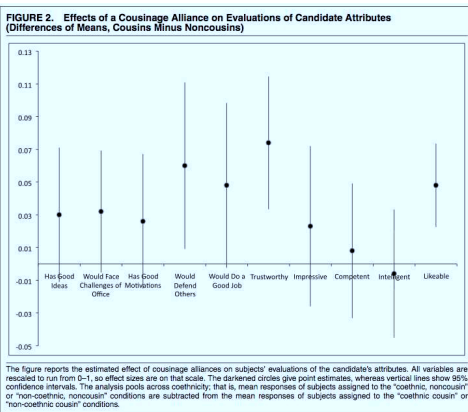
Example: Cross-Cutting Cleavages in Mali

TABLE 4. Average Candidate Evaluations, by Treatment Assignment

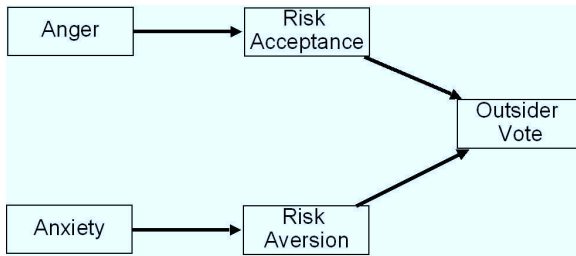
	Subject and politician are joking cousins A	Subject and politician are not joking cousins B	Difference of means A-B
Subject and politician are from same ethnic group C	5.05 (0.15)	4.57 (0.16)	0.49*** (0.22)
Subject and politician are from different ethnic groups D	4.44 (0.17)	3.96 (0.13)	0.48*** (0.21)
Difference of means C-D	0.61*** (0.22)	0.61*** (0.20)	
		Control conditions	
Politician's last name not given		4.33 (0.12)	
Subject and politician have same last name		4.84 (0.15)	

The cells report average answers to the question, "On a scale of 1 to 7, how much does this speech make you want to vote for (*name of politician/this candidate*)?" Estimated standard errors are reported in parentheses.
*** $p < .001$.

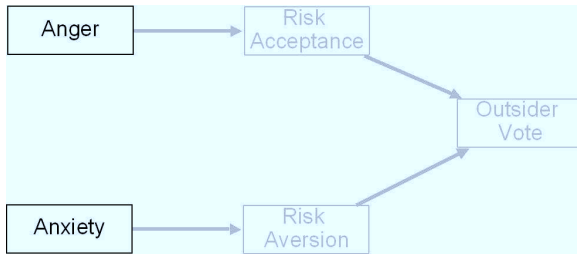
Example: Cross-Cutting Cleavages in Mali



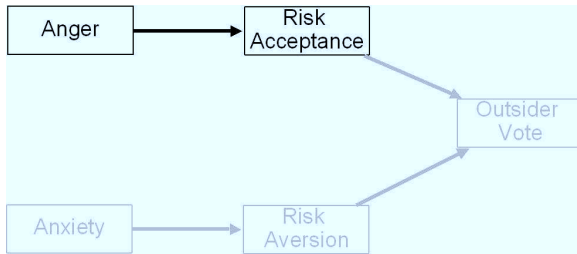
Theory



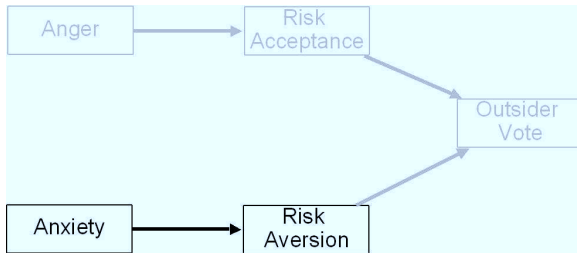
Theory



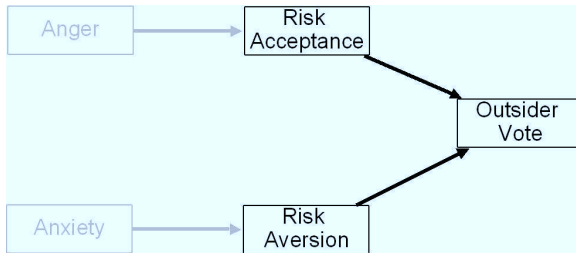
Theory



Theory



Theory



Experimental Design

- Subjects randomized to view one of three affect-inducing film clips, and to listen to mood-sustaining music.

Experimental Design

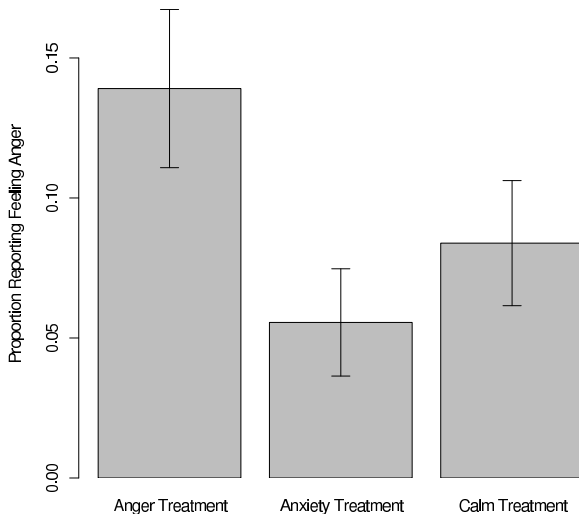
- Subjects randomized to view one of three affect-inducing film clips, and to listen to mood-sustaining music.
- Subjects then participate in a simulated Peruvian presidential election, with one candidate from a traditional party and one from a new party.

Experimental Sample

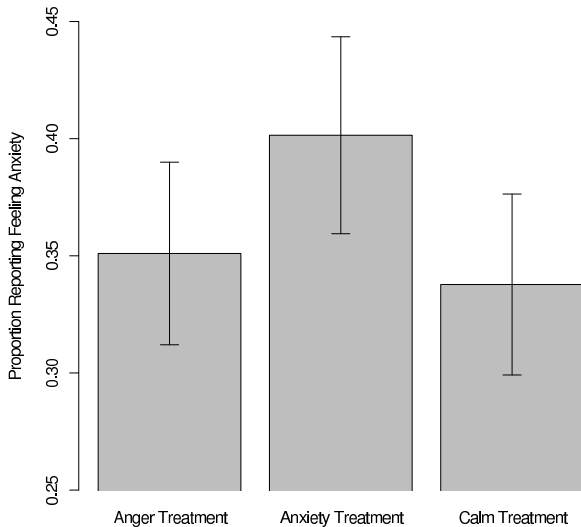
Variable	Anger	Other	P Value
Age	31.5	31.0	0.64
Social Class	2.0	2.1	0.07
Education	6.8	6.8	0.97
Ideology	4.7	4.6	0.56
News Usage	2.0	2.1	0.86

Table: Treatment and Control Group Demographics

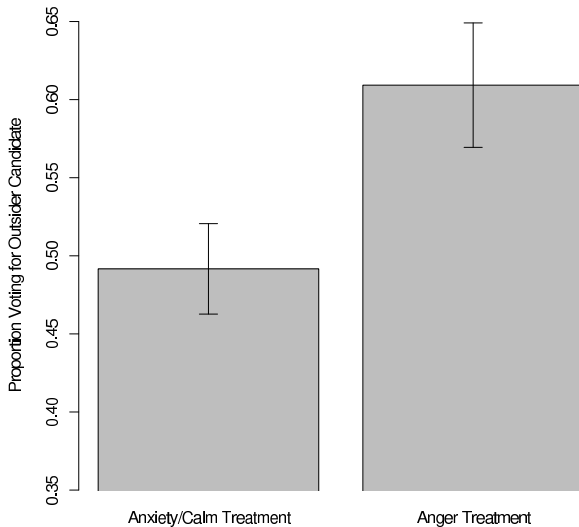
Treatment Compliance



Treatment Compliance



Affect and Vote Choice

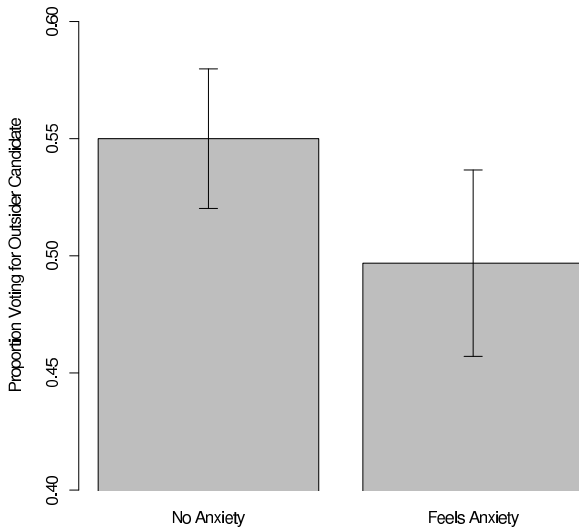


Affect and Vote Choice

Variable	Estimate (S.E.)	P Value
(Intercept)	0.372 (0.096)	< 0.001
Is Angry	1.709 (0.970)	0.079

Table: Instrumental Variables Analysis of Anger and Outsider Voting

Affect and Vote Choice



Risk as Mechanism

Variable	Estimate (S.E.)	P Value
(Intercept)	48.60 (1.45)	< 0.001
Anger Treatment	-8.11 (2.49)	0.001

Table: Affect and Aversion to Uncertainty

Risk as Mechanism

Variable	(S.E.)	P Value
(Intercept)	1.02 (0.05)	< 0.001
Aversion to Uncertainty	-0.01 (0.001)	< 0.001
Anger Treatment	0.02 (0.05)	0.67

Table: Test of Anger-Uncertainty-Outsider Voting Causal Path

Affect and Causes of Party-System Change

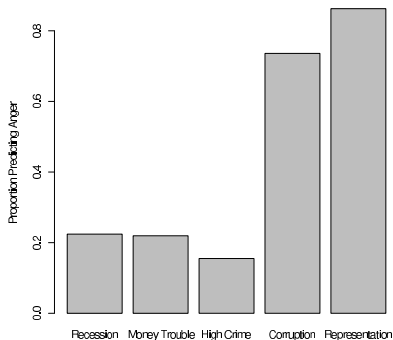


Figure: Situations and Predicted Anger Levels.

Affect and Causes of Party-System Change

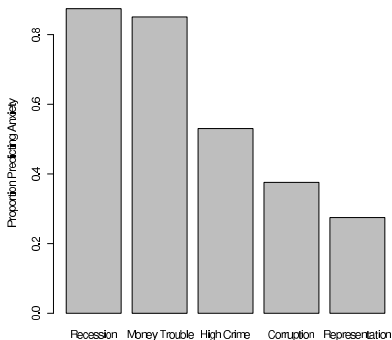


Figure: Situations and Predicted Anxiety Levels.

Setting Up Our Own Experiment

Analyzing Experiments in R

Experimental Realism

Experimental realism refers to impact in its most important sense: Do subjects believe the situation, problem, or issue they confront? Does it engage and interest them? Does it capture their attention? (McDermott 2002: 333)

Process Tracing in Experiments

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MouseLab

Experiments and Case Studies

Contrasts in terms of:

Experiments and Case Studies

Contrasts in terms of:

- Unit of analysis?

Experiments and Case Studies

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Experiments and Case Studies

Contrasts in terms of:

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- Temporal focus?

Experiments and Case Studies

Compatibility in terms of:

Experiments and Case Studies

Compatibility in terms of:

- Measurement strategies

Experiments and Case Studies

Compatibility in terms of:

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- Research foci

Experiments and Case Studies

Compatibility in terms of:

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- Research foci
- Causal processes?

Experiments and Case Studies

Strategies for combination:

Experiments and Case Studies

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- Experiment validates key step in case study causal chain

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Strategies for combination:

- Experiment validates key step in case study causal chain
- Case study traces causal process within experimental finding
- Comparative experimental results set the agenda for case study work

Validate a Causal Step

There is an important step between X and Y:

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- That involves individual-level or small-geographical-level causal processes
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- In which the cause is either manipulable or amenable to some kind of simulation

Validate a Causal Step

Design:

Validate a Causal Step

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- Recruit a theoretically relevant population

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- Randomize

Validate a Causal Step

Design:

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- Create a (simulated or real) manipulation connected with the cause
- Randomize
- Measure the outcome

Validate a Causal Step

Design:

- Recruit a theoretically relevant population
- Create a (simulated or real) manipulation connected with the cause
- Randomize
- Measure the outcome
- Use as a piece of the case study

Trace Causal Process

Causal processes are hard for experiments

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Even when causal relationships are firmly established, demonstrating the mediating pathways is far more difficult practically and conceptually than is usually supposed. (Green, Ha, and Bullock 2010)

Trace Causal Process

Design:

Trace Causal Process

Design:

- Carry out the experiment

Trace Causal Process

Design:

- Carry out the experiment
- Use in-depth interviews, focus groups, or documents to reconstruct decision-making or other processes during the experiment

Trace Causal Process

Experimental ethnography is a tool for answering questions about why programmatic attempts to solve human problems produce what effects, on average, in the context of the strong internal validity of large-sample, randomized, controlled field experiments. . . . This strategy can achieve experiments that create both a strong black box test of cause and effect and a rich distillation of how those effects happened inside that black box, person by person, case by case, and story by story. (Sherman and Strang, 2004: 205)

Set the Agenda

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- The history leading to that relationship is also important

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Design:

- Carry out the experiment in more than one context
- Note patterns of similarity and difference across contexts
- Use CHA to develop a candidate explanation of those patterns

Assignment

Design an experiment connected with your own research.

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- Specify treatment and outcome(s).
- Think about subject recruitment.
- Figure out where and how qualitative evidence could help improve the experiment.
- How will the experiment relate to your other research efforts?