Incidental Perceptions Shape Strategies for Responding to Violence:
Evidence from a Lab-in-the-Field Experiment in Kenya

Aidan Milliff

Stanford

Decision-Making During Violence

How do ordinary people make strategic decisions when facing violence?

Observational study suggests perceptions of *control* and *uncertainty* shape preferences for approach/avoid and disruptive/moderate strategies of survival [7].

	Orientation to Threat	
	Avoid	**Approach**
Extreme	Flee	Fight
Moderate	Hide	Adapt

Disruptiveness (left axis label)

The way people perceive violence affects propensity to flee, fight, adapt to a violent environment, or hide from danger.

Why would this be true?

- *Control* appraisals associated with approach/avoid behavior in many settings outside violence [4, 2]
- "Unexpected" *uncertainty* is associated with larger behavior deviations in psych and neuroscience research [8, 6]

> I manipulate perceptions about hypothetical violence in a lab-in-the-field experiment.
> Changing perceptions changes strategy preferences.

(Primary) Hypotheses

H1: Higher perceived *control* increases likelihood of choosing "approach" strategies (i.e. fighting, adaptation).

H2: Higher perceived *uncertainty* increases likelihood of choosing "disruptive" strategies (i.e. fighting, fleeing).

Pre-registered at: https://osf.io/rehp3

Study Sample

- 1,506 participants from Katoloni locality, Machakos, Kenya
- ~ 48/52 men-women split
- Median education: Secondary
- 70% involved in agriculture
- Most attend church > monthly
- 37% violence exposure (family)

Machakos County

Lab-in-the-Field Setup

- Implemented by Busara Center for Behavioral Economics, with investigators from U. Capetown, Columbia, U. Dar Es Salaam, Harvard, Makerere U., MIT, U. Nairobi, Uganda Christian U.
- "Omnibus" design: 10 modules mostly-random order
- Other modules study: personality traits, savings and investment decisions, gambling, climate resilience, trust in mobile money etc.
- H1 and H2 treatments separately randomized (2×2 between subjects), QoI is marginal component effect of each treatment
- ≤ 20 participants in ~100 sessions do tasks on touchscreen tablets
- Lab sessions last up to 120 minutes, 329 Ksh. avg. incentive payout
- Perception treatment embedded in cash-incentivized game ⟶

Defense Game (H)

Time Left: 1:25

LEFT   RIGHT
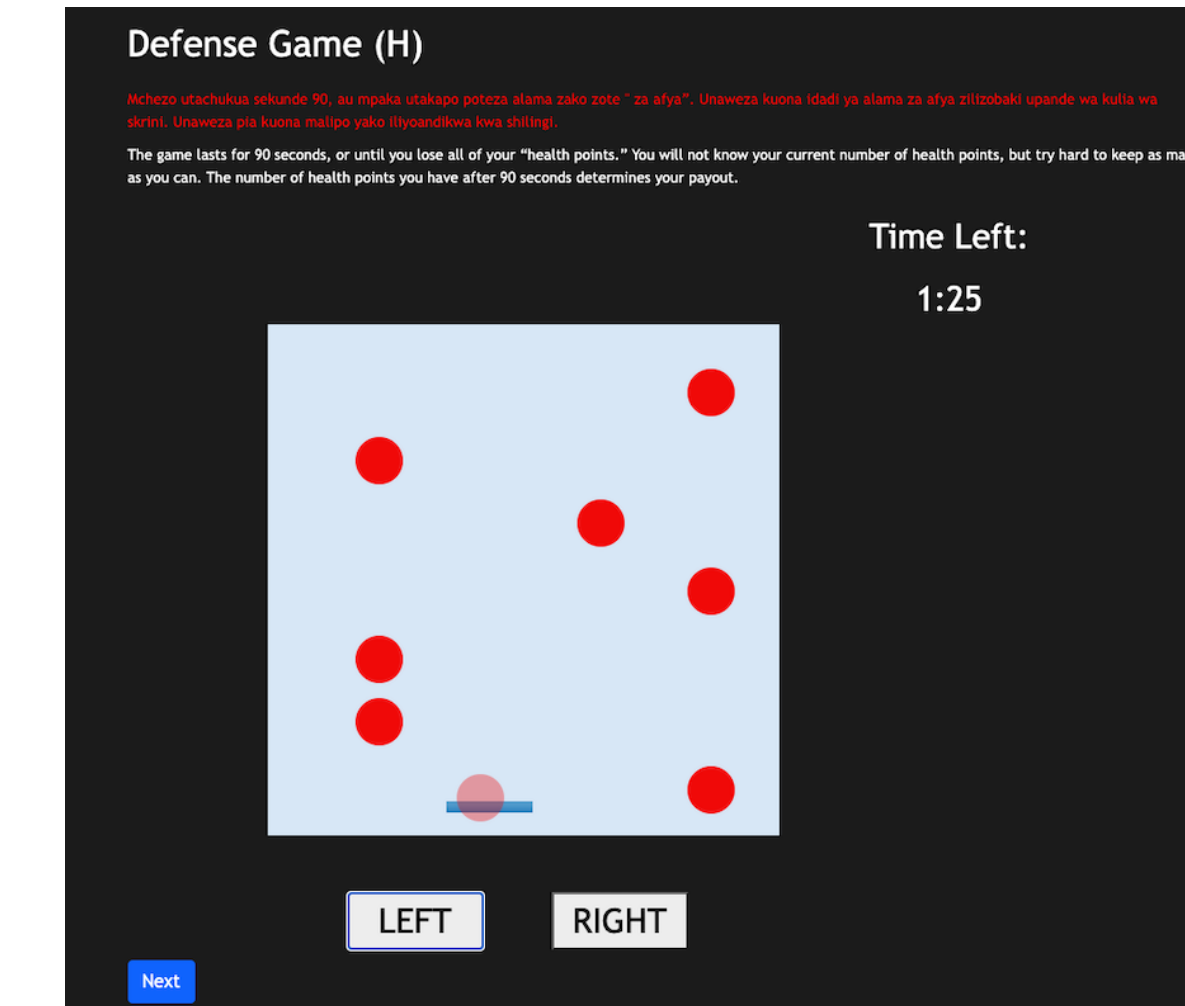
Manipulating Perceptions of Violence
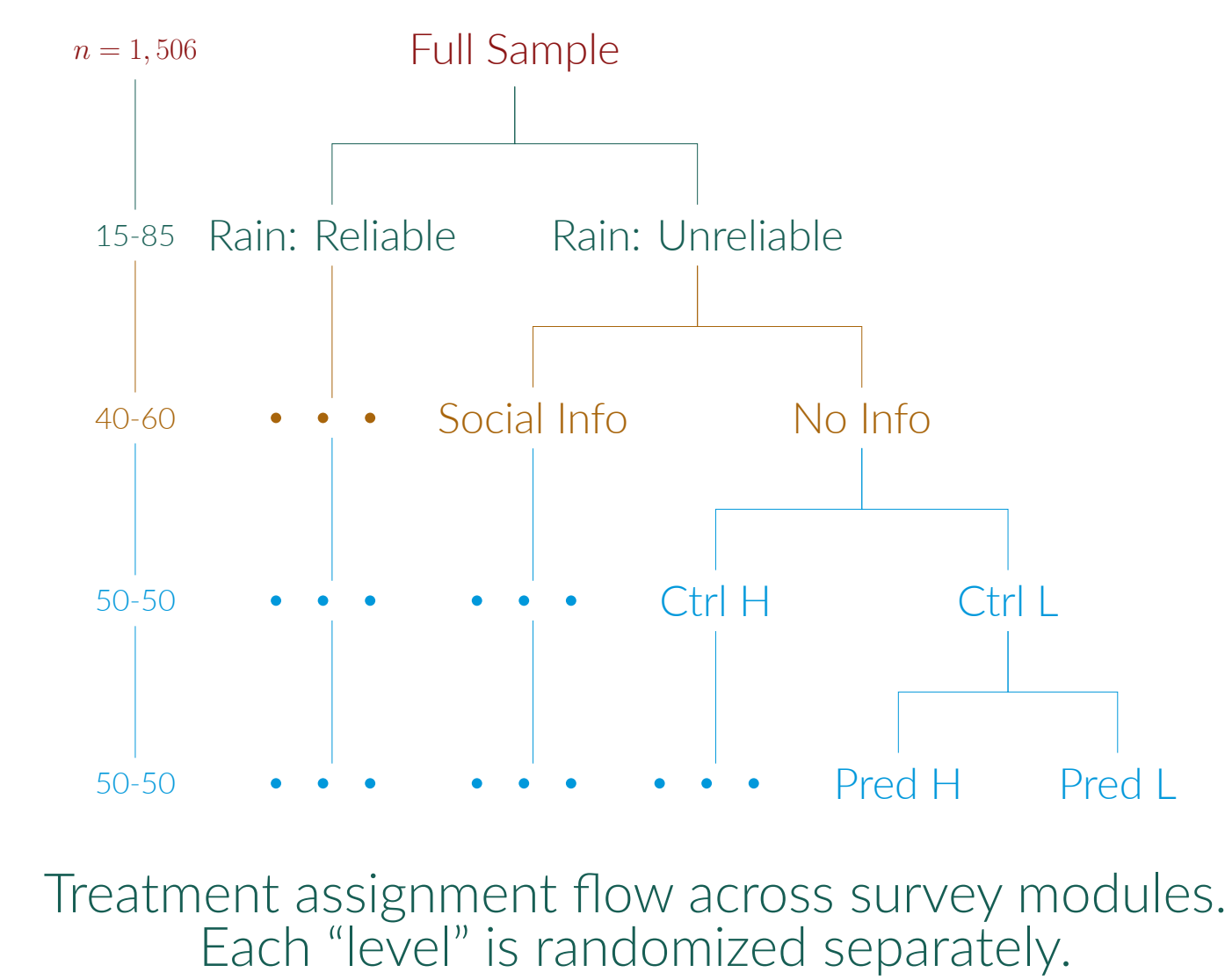
Treatment assignment flow across survey modules. Each "level" is randomized separately.

Control Manipulation

- Participants assigned to higher/lower game difficulty
- Randomizes ability to keep in-game "lives," worth real money (≃ a loaf of bread)
- Successful manipulation:
  - 44.6 Ksh. inter-group difference in payout ($p < .001$)
  - 29pp difference in perceived control over outcome ($p < .001$)
- 95% power for 7pp. effect

Uncertainty Manipulation(s)

- Participants see more/less information about game
- Successful manipulation for high difficulty group ($p = .006$), high variance in other group
- **BUT** other omnibus modules manipulate uncertainty about other concepts
  - Future reliability of livelihood
  - Riskiness of small gambles
- ≥ 89% power for these effects

Control and Uncertainty Perceptions Affect Strategy Preferences

Control :: Approach

- High control perception increases preference for approach strategies by **7.5pp** in an pre-registered index of four decisions
- Results robust to clustering at session level
- Big signal, considering treatment intensity

HC2 Robust SEs, clustered by lab session
Covs. including other treatments.
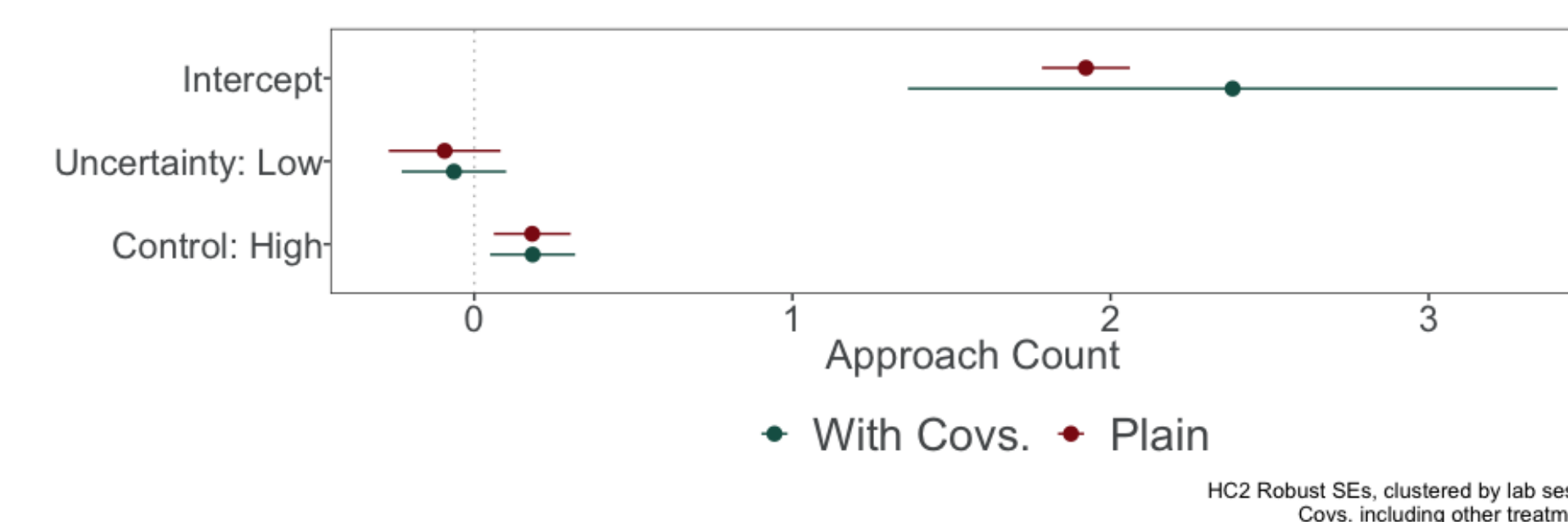
Uncertainty* :: Disruptiveness

*with combined treatments

- Effect of main uncertainty treatment is small, insignificant (**3.8pp**, $p = .443$)
- When uncertainty treatment is aligned with rainfall un-reliability, gambling uncertainty treatments, effects are surprisingly large (**35.5pp**, $p = .005$; **17.7pp**, $p = .032$)
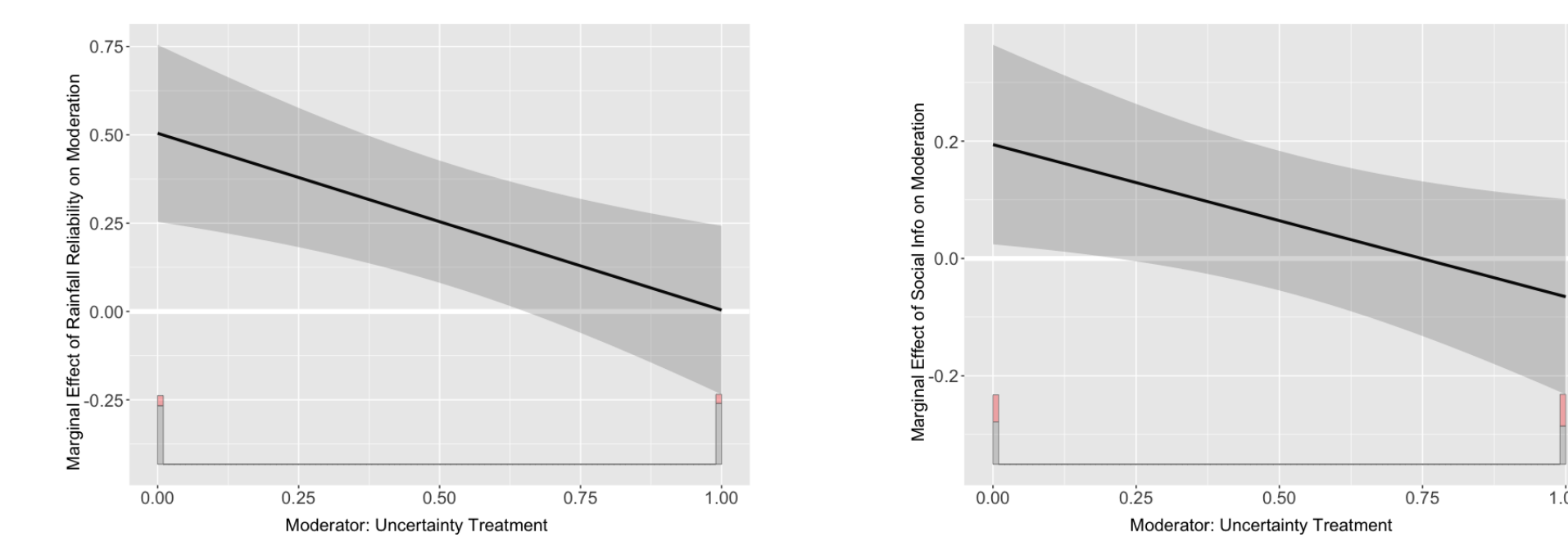
Interactions [3]: Rainfall × Ambiguity, Social Uncertainty × Ambiguity

Interference & Incidental Treatments

Substantive Finding

- Very incidental perceptions (even holdovers from other modules) *may* affect strategy preferences during hypothetical violence
- Difference driven by interpretation not information: Hypothetical violence description held constant across all treatment conditions

Experimental Methods Implications

- In studies with multiple treatments, previous, seemingly un-related treatments can spill-over. Important to:
  - Know how they relate to D in your study
  - Check that treatment statuses are not correlated
  - Consider controlling for them?
- Beware of especially exciting treatments [1]!

A study participant wins a soccer bet

Discussion

- "Shared" studies are increasingly common
- Many independently randomize, randomize order, ignore other modules
- This procedure shouldn't bias estimates, but you might *mis-characterize the treatment*
- It's also a missed opportunity for more precision [5]

References

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