

Field-experiments on Pro-sociality and Observations of Hazardous Behaviour in a Volcanic Environment



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EHBEA 2025

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Research question 1

Are people more, or less prosocial in harsh environments?

- Findings are mixed, and studies often focus on economic scarcity. (e.g. Civali, Elbaek, & Capraro, 2024).
- We focused on the effects of the unpredictability and risk generated by living near an active volcano.
- Prior research suggests that in-group pro-sociality under harshness may be stronger than pro-sociality towards out-group members, who may be seen as competitors for resources in harsh environments (e.g. Chiaravallotti & Dyble 2019).

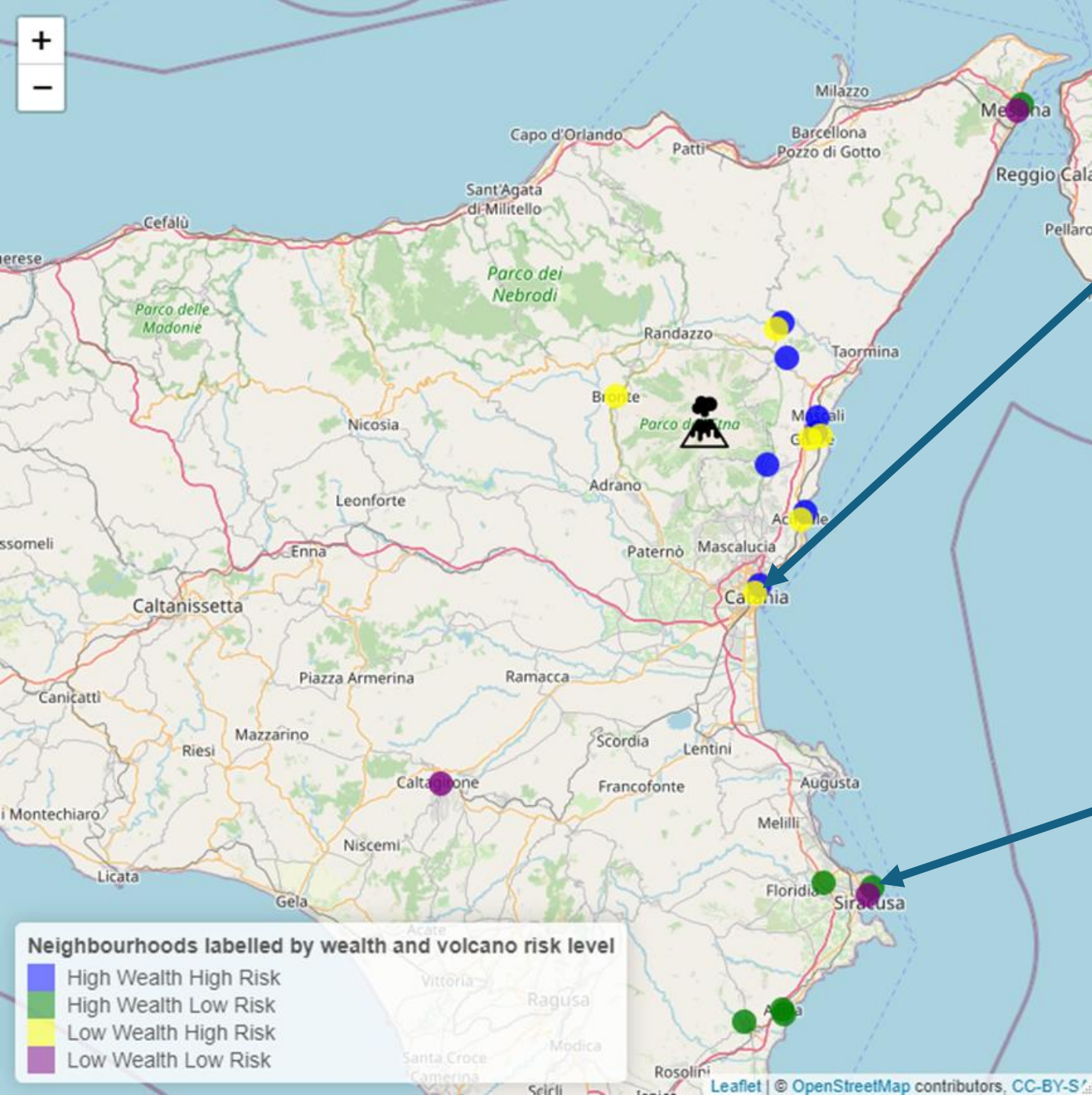
Hypothesis: Living under greater volcano risk leads to a decrease in trust and tolerance towards strangers, and an increase in pro-sociality towards in-group members.

Research question 2

Is hazardous behaviour more common in harsh environments?

- Prior findings suggest that extrinsic (uncontrollable) mortality risk discourages healthy behaviour with regard to diet, exercise, and smoking (e.g. Pepper & Nettle, 2014, Brown & Pepper, 2024).
- We sought to investigate whether this finding might extend to simple health-protective behaviours such as seatbelt/helmet use when driving.

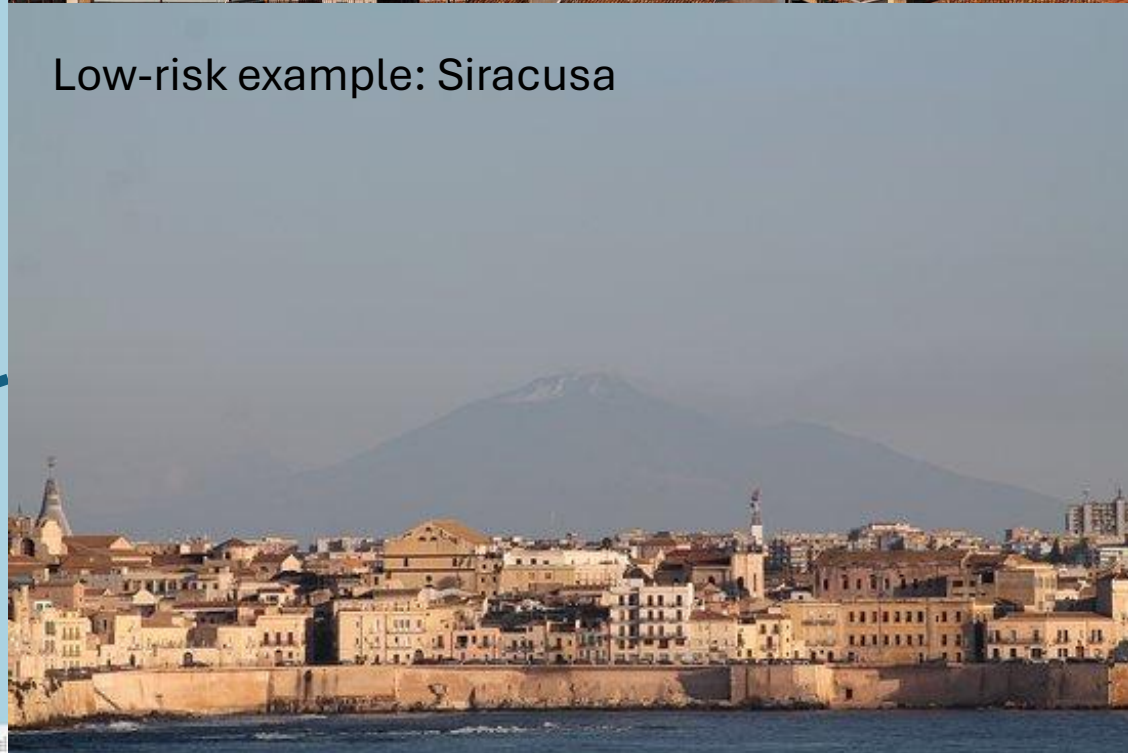
Hypothesis: People who in areas exposed to greater extrinsic risk will be more prone to hazardous behaviour (not wearing a helmet/seatbelt).



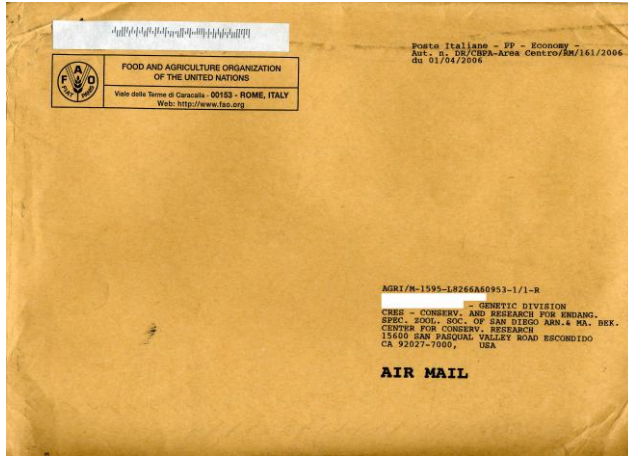
High-risk example: Catania



Low-risk example: Siracusa



Experimental methods: Research question 1



N = 300

1. Foreign name + foreign address
2. Foreign name + local address
3. Local name + foreign address
4. Local name + local address.



N = 299

1. Control condition
2. In-group condition (volleyball sports equipment)
3. Out-group condition (beach clothes, flip flops & tourist map)



N = 280

1. Control condition
2. In-group condition (volleyball sports equipment)
3. Out-group condition (beach clothes, flip flops & tourist map)

Observational methods: Research question 1

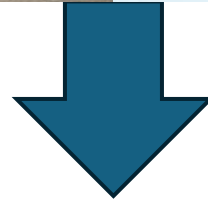


61.3 kilometres of transects:
Observed instances of people
casual greeting or chatting with
passers-by in the streets.



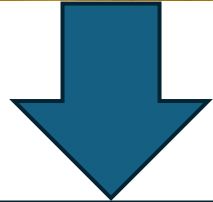
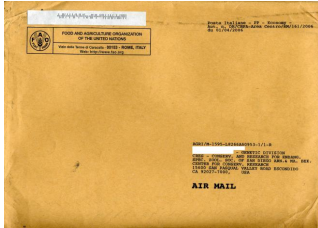
61.3 kilometres of transects:
Checked community notice
boards for communications
related to local
festivities/gatherings.

Observational methods: Research question 2

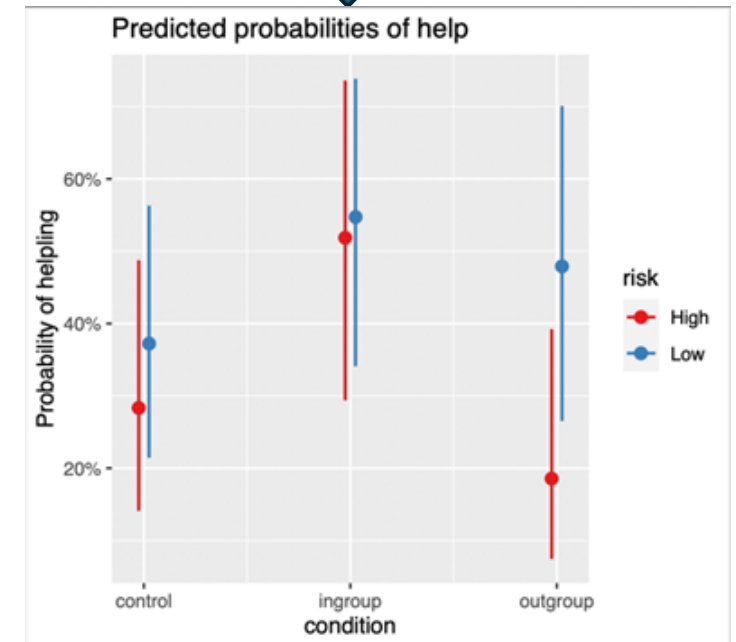
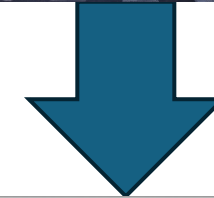
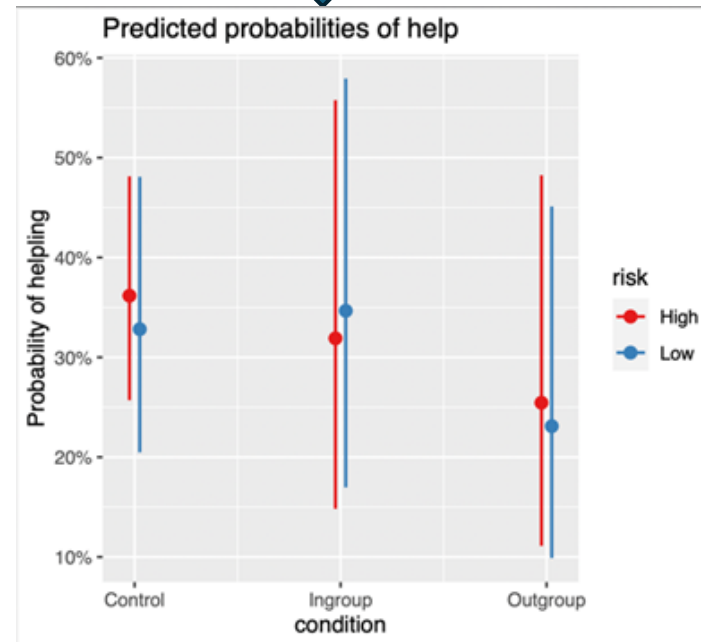
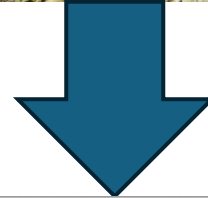


N = 1613 (13 hours observation)
Observed whether road users
were wearing seatbelts (cars) or
helmets (motorbikes).

Experimental methods: Research question 1



Insufficient
power for
analysis!



Observational methods: Research question 1



Slightly higher number of greetings in high-risk locations than low-risk locations ($m_{\text{high-risk}} = 0.17$; $m_{\text{low-risk}} = 0.07$; $t = -2.1185$, $df = 15.423$, $p = 0.051$).



Community notices on the municipality boards were more numerous in high-risk locations ($m_{\text{high-risk}} = 6.60$; $m_{\text{low-risk}} = 1.44$; $t = 3.124$, $df = 15.431$, $p = 0.002$).

Observational methods: Research question 2

