

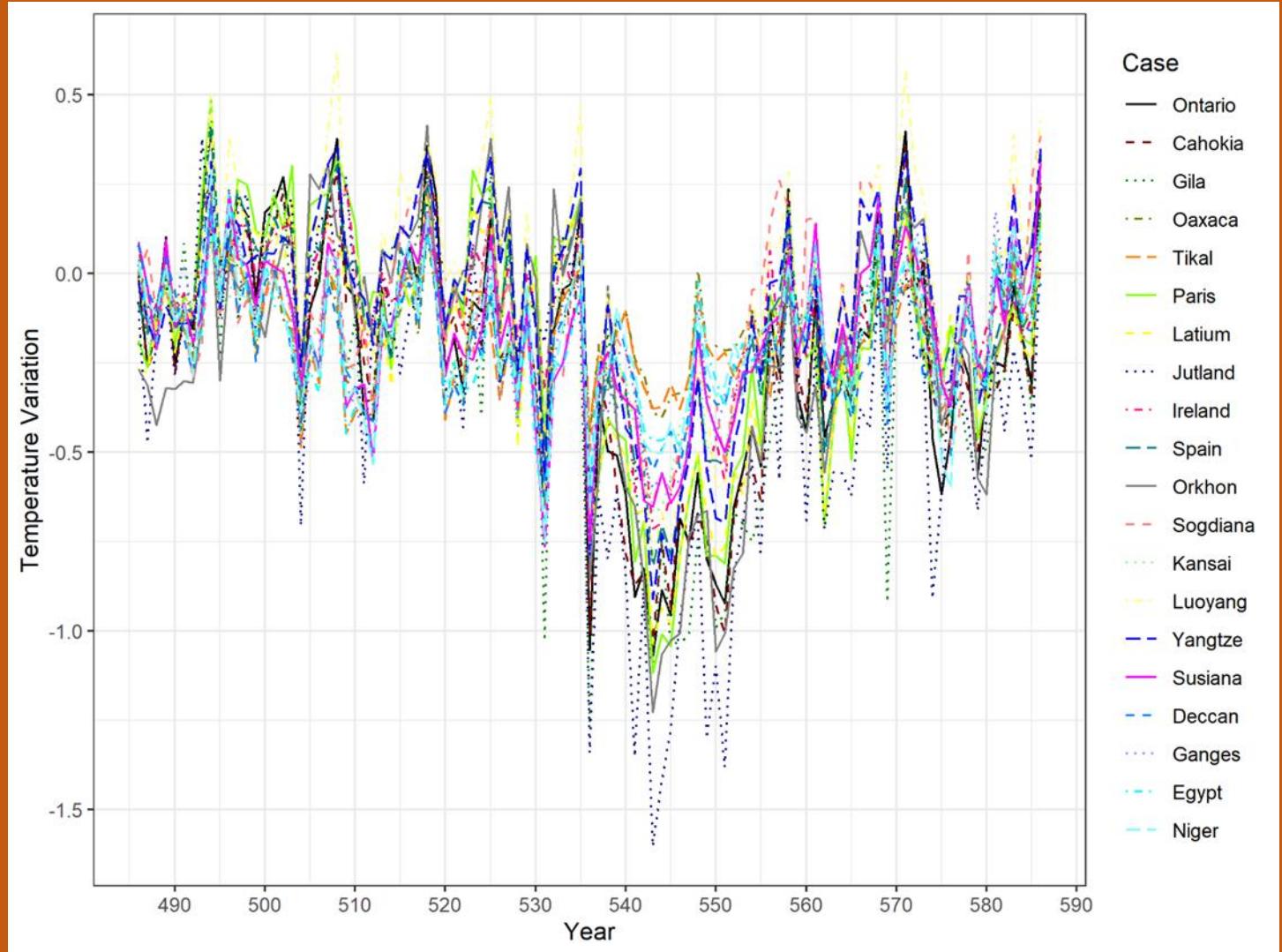
Social Capital and Social Resilience: Different Approaches for Different Disasters

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Late Antique Little Ice Age 536 to ca. 560 CE

caused by two massive
volcanic eruptions



Resilience to Natural Disasters

- **Resilience:** “to successfully avoid crossing into an undesirable system regime, or to succeed in crossing back to into a desirable one” following a disaster (Walker, Holling, Carpenter and Kinzig 2004).
- **Flexibility Theory:** More “flexible” social structures provide greater resilience to disaster than more “rigid” social structures.
- **Tightness Theory:** Societies with stronger social norms that are adhered to rigidly are more resilient to disaster.

Cases



- Temperature change as percent of total (green)
- Social change as percent of total (blue)

Variables

- **Independent**

- **Corporate-Exclusionary Index**: five variables measuring the extent to which political participation, community orientation, and interaction across communities within and outside the polity is encouraged by leaders.
- **Looseness-Tightness Index**: six variables measuring the strength of social norms and the degree to which they are enforced.

- **Dependent**

- Six variables measuring change following the catastrophic natural disaster: Population, Health, Conflict, and Community, Regional, and Ritual Organization. Also the **Social Change Index** combining all six variables.

Results

One-tailed Pearson correlations	Social Change Index	Controlling for political hierarchy	Bayes Factor
Corporate-Exclusionary Index	.463 (p < .02)	.537 (p < .009)	.716
Looseness-Tightness Index	.374 (p < .052)	.187 (p < .065)	1.587

Support for “Flexibility Theory” but not for “Tightness Theory”

WHY?

Discussion

- LALIA marks a catastrophic disaster, and “Flexibility Theory” applies well in that context, but
- “Tightness Theory” appears to apply well to smaller, episodic disasters

WHY?

- Catastrophic disasters require society-wide responses
 - = bridging social capital
- Episodic disasters require community responses
 - = bonding social capital

Social Capital and Social Resilience

- **Social Capital:** social networks and interpersonal relationships that tie communities together
- **Bridging Social Capital:** networks of social ties that link diverse individuals and groups together across and between communities
- **Bonding Social Capital:** inter-relational ties that bond together individuals within communities and social groups

Policy Implications

- Build **bridging social capital** where there are catastrophic hazards
= foster local participation in planning and decision-making;
ongoing communication across agencies and stakeholders
- Build **bonding social capital** where there are episodic hazards
= support community-building organizations and activities
- Build **both** through collaborative forums.

Takeaway

We need to design risk-reducing social capital the same way we design risk-reducing infrastructure, with specific hazards in mind.



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