

Can Water Managers' Decision Making be Influenced by an 'Imported' Cultural Norm?

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Arizona water governance

- complex and fragmented institutional network impedes cooperation and regional solutions to water shortages
- creates a spatially uneven risk of shortage

Decision makers need to

- understand the institutional and systemic barriers to regional cooperation
- develop interventions based in social science

Goal is to enable more flexible, responsive decision making and urban climate adaptation



Maasai sharing norm: osotua

- similar physical environment dominated by semi-arid and savannah regions subject to frequent, unpredictable and lengthy droughts
- understanding of the physical environment
- social institutions include a sharing norm called osotua

Risk-pooling game

- we have developed a risk-pooling game to examine the impact of the osotua norm on behavior
- specifically designed to mimic the situation faced by both livestock owners and water managers, i.e., resources that vary unpredictably over time

Three underlying research questions

How can cultural norms be studied across cultures?

Can researchers explicitly circulate cultural norms and study the consequences?

How does the nature of a locally-based cultural norm change as it moves across cultures?

Preliminary testing with students: players increase the size of their gifts under the osotua frame

	Unframed games (n = 14)	Maasai/osotua framed games (n = 20)
Mean final payoff	204.27	196.54
Mean number of requests	21.64	21.8
Mean amount requested	66.65	64.67
Mean amount given	11.15	16.73
Mean amount given as a percent of amount requested	16.73%	25.97%
Percent rounds in which player starved	10.71%	

Osotua gifts are given in response to requests based on real need and do not exceed the amount requested. If players increase the size of their gifts under the osotua frame, the osotua sharing principle may have the potential to improve relations among water management actors in central Arizona.



Implementing the research

- Undergraduates play the risk-pooling game with an unknown partner in a computer lab. Each pair will have read one of three framing texts prior to gameplay.
- Graduate students studying policy and public affairs complete a survey on cultural norms and institutional cooperation in water governance.
- Semi-structured interviews with local water managers on their beliefs and attitudes regarding risk management, institutional cooperation, norms in water management, and the potential for sharing norms across cultures.



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