

Behavioral Game Theory:

Markets, Religion, Community Size, and
the Evolution of Fairness
and Punishment

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Theory

Experiment

Conclusion

The Dictator Game



Maximization of Pay-off

vs.

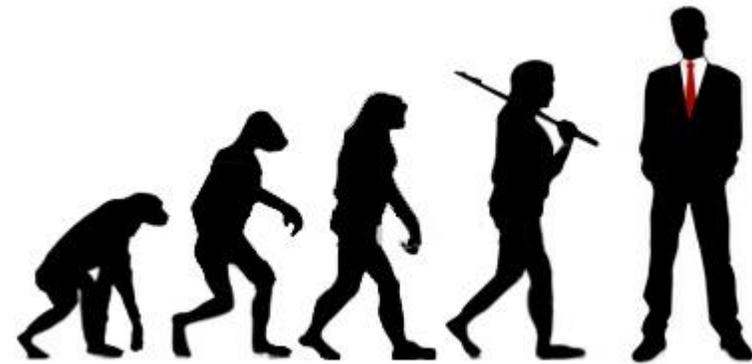
Costly
Fairness

Conflictive Theories

Expansion Theory



Evolution Theory



How Do We Measure Societies?



Subsistence Economy

Tribal Religion

Small Communities

Markets

Religion

Community Size



Market Economy

World Religion

Big Communities

What makes the difference?



Family/ Clan

Applies to
known people

Fairness

Punishment



Anonymity/ Institutions

Applies to
unknown people



Evolution

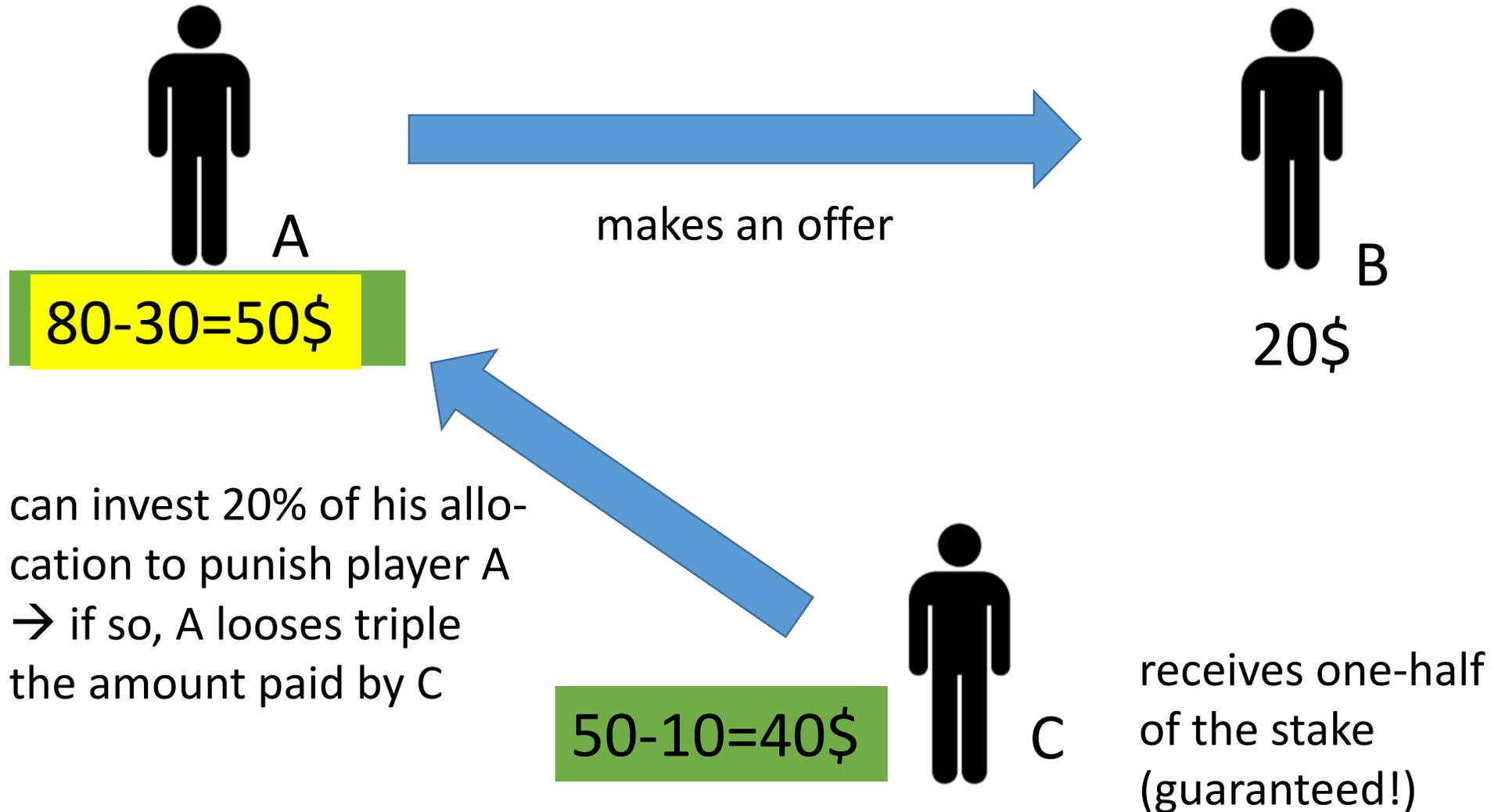


How to find out:
**Test for Norms
in anonymous
setting**



Experiment

“Third-Party Punishment Game”



Experimental Setting

Dictator Game (DG)	Ultimatum Game (UG)	Third-Party Punishment Game (TPG)
Measure of behavioral fairness	Measure of behavioral fairness	Measure of behavioral fairness
	Measure of punishment	Measure of punishment



Doloan/Noanasan

Population	Location	Mean Market Integration	Mean World Religion
Accra City	Ghana	100	97
Au	Papua New Guinea	1	100
Dolgan	Siberia	63	59
Gusii	Kenya	28	100
Hadza	Tanzania	0	0
Isanga village	Tanzania	70	99
Maragoli	Kenya	43	100
Orma	Kenya	72	100
Samburu	Kenya	69	66
Sanquianga	Columbia	82	84
Shuar	Ecuador	22	76
Sursurunga	Papua New Guinea	24	100
Tsimane	Bolivia	7	100
Missouri	United States	100	100
Yasawa	Fiji	21	100



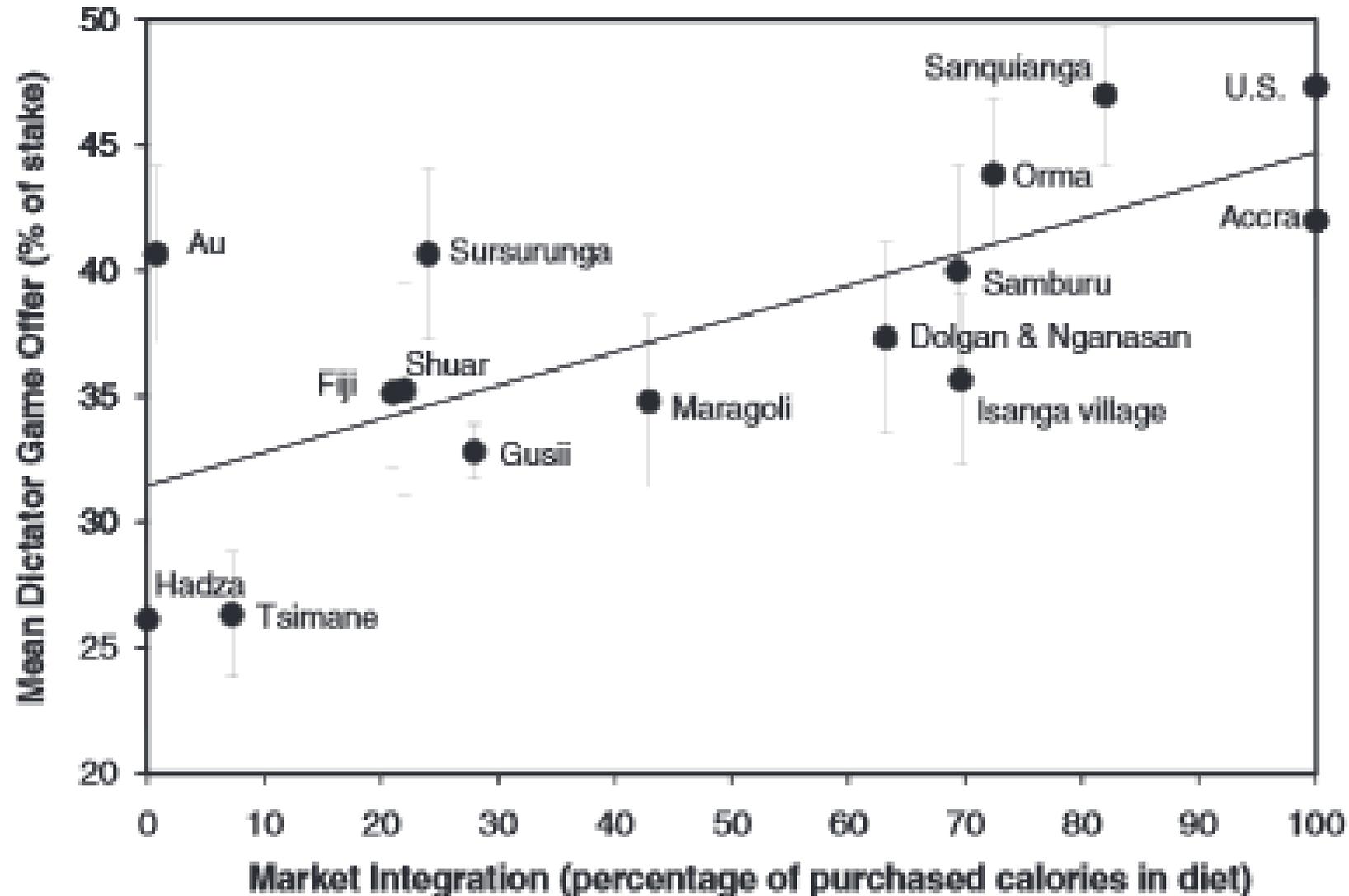
Results: Linear Regression Model for Offers

(additional control variables: sex, age, community size, education)

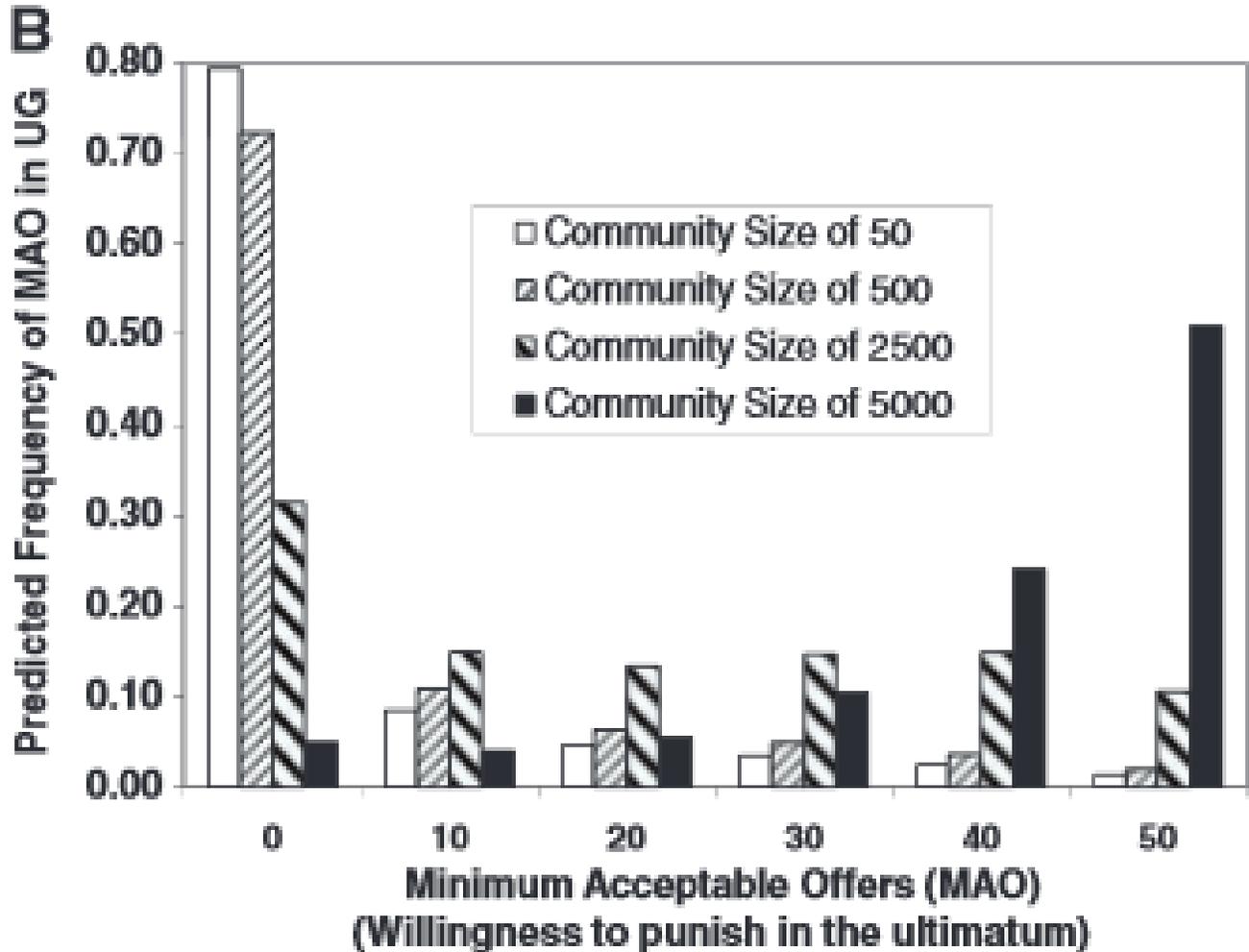
Variables	All offers*	DG offerst
MI	0.12 ± 0.023 (<0.001)	0.17 ± 0.035 (<0.001)
WR‡	5.96 ± 2.04 (0.0036)	6.4 ± 3.61 (0.079)
Income (per U.S. \$1000)	0.096 ± 0.089 (0.28)	-0.012 ± 0.15 (0.93)
Wealth (per U.S. \$1000)	0.0012 ± 0.006 (0.83)	0.0013 ± 0.008 (0.88)
Household size	-0.24 ± 0.21 (0.24)	-0.13 ± 0.31 (0.67)
Observations; R ²	920; 0.084	336; 0.10

Variables	UG offerst	TPG offerst
MI	0.098 ± 0.035 (0.005)	0.11 ± 0.044 (0.044)
WR‡	10.4 ± 2.67 (<0.001)	0.45 ± 3.06 (0.879)
Income (per U.S. \$1000)	0.16 ± 0.10 (0.13)	-2.25 ± 0.94 (0.017)
Wealth (per U.S. \$1000)	-0.0056 ± 0.008 (0.43)	1.2 ± 0.25 (<0.001)
Household size	-0.24 ± 0.2 (0.37)	-1.0 ± 0.43 (0.019)
Observations; R ²	319; 0.14	265; 0.10

Results: Market Integration & Mean Dictator Game offers



Community Size & Punishment



→ The bigger the community, the earlier unfair behaviour is punished

Conclusion

Two Theories:

~~Expansion of Norms~~

Evolution of Norms

Societies are different

- Caution with interpretation of experiments

