



ABSTRACT

- Purpose:** The dominant hypothesis in regard to the evolution of the human ability to detect cheaters is that it evolved in the context of account-keeping reciprocity. However, systems of risk-pooling through transfers to those in need without the accretion of debt may be simpler, more ancient, and more widespread than account-keeping reciprocity. The purpose of this study is to compare humans' ability to detect cheaters across different situations including both account-keeping reciprocity and need-based transfers.
- Methods:** Data were collected using a series of treatments administered through Amazon Mechanical Turk (AMT). Participants were given a scenario and a version of a logical problem called the Wason Selection Task (WST). The WST involves deciding which of four cards must be turned over to determine whether a logical rule of the "if p then q" variety has been broken. A total of 400 people participated across four treatments.
- Results:** Findings from this study show that of the four different treatments, more participants were able to flip over the correct cards when the problem was framed with a need-based transfer system as opposed to both the abstract version and the account-keeping reciprocity version.
- Conclusion:** Cheater detection of the kind previously thought to have evolved in the context of account-keeping reciprocity could instead have originally evolved in the context of systems of risk-pooling based on need-based transfers.

BACKGROUND

- Cheater detection in humans**
 - Evolved from an adaptive problem in detecting cheaters in a social exchange²
 - Social exchange cannot evolve unless individuals evolved the ability to detect cheaters – individuals who take benefits from others without providing them in return²
- Need-Based Transfer Systems**
 - Risk-pooling is a way of taking on the risk of another party in exchange for their willingness to take on some of one's own.
 - In societies where one's future prosperity or poverty is unpredictable, people often develop systems of risk-pooling through transfers based on the need of the recipient. Well documented examples include food sharing among hunter-gatherers and stock friendships among pastoralists.¹
 - Cheating in account-keeping reciprocity consists of failing to repay debts.
 - Cheating in need-based transfers systems can take two forms: (1) failing to give to someone in need when you have the necessary resources; (2) asking for resource when you do not actually need them.

OBJECTIVES

- To examine the effect that framing social contracts with the logic of need-based transfers has on the ability of humans to detect cheaters
 - Replicate previous research on the impact of framing social contracts as account-keeping reciprocity on the ability for humans to detect cheaters
 - Examine the impact of framing social contracts as need-based transfer systems on the ability for humans to detect cheaters

METHODS

- Four separate treatments of the Wason Selection Task (N=100 per Treatment):**
 - Descriptive (no social contract)
 - Account-keeping reciprocity
 - Need-based transfers rule violation: failure to give (NBT Give)
 - Need-based transfers rule violation: asking when not in need (NBT Ask)
- Structure of Descriptive problem**
 - Rule: If P then Q
- Structure of Social Contracts**
 - Account-keeping: If given P, then you must give Q.
 - Need-based (give): If asked and able, then you must give.
 - Need-based (ask): If in need, ask; if not in need, don't ask.
 - Cards: P, not-P, Q, not-Q

You are an anthropologist studying the Namka, a hunter-gatherer society in the deserts of southwest Africa. The Namka live in groups that average about 30 people. The Namka make a living in a very simple way: Every day, all of the able-bodied adults leave camp and look for food. On any given day, some will be successful and others unsuccessful, but it is unpredictable which individuals will be successful or unsuccessful on a given day. So that those who are unsuccessful on a particular day don't simply starve, the Namka custom is for everyone to bring the food that they have hunted or gathered back to the camp at the end of the day. At that point, those who do not have enough food for themselves or their families can ask for it from those who were successful that day. People who do have enough food are not allowed to ask for additional food. Those who were successful are obligated to give to anyone who asks.

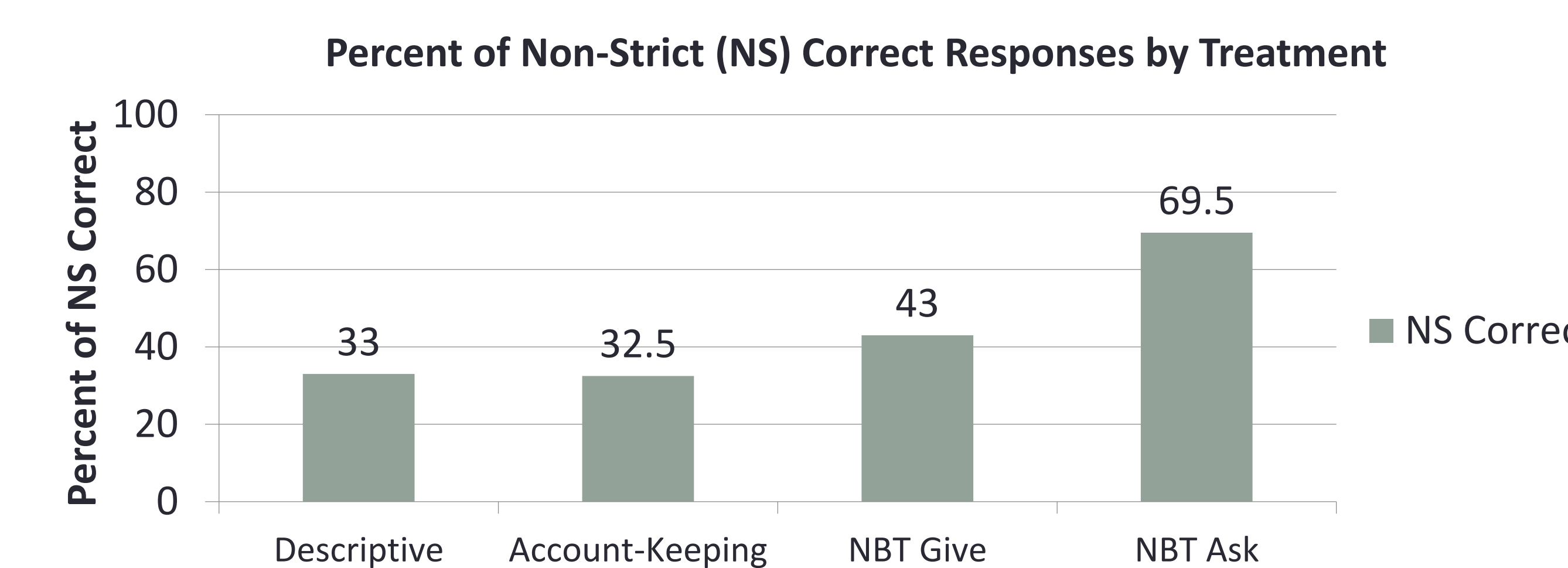
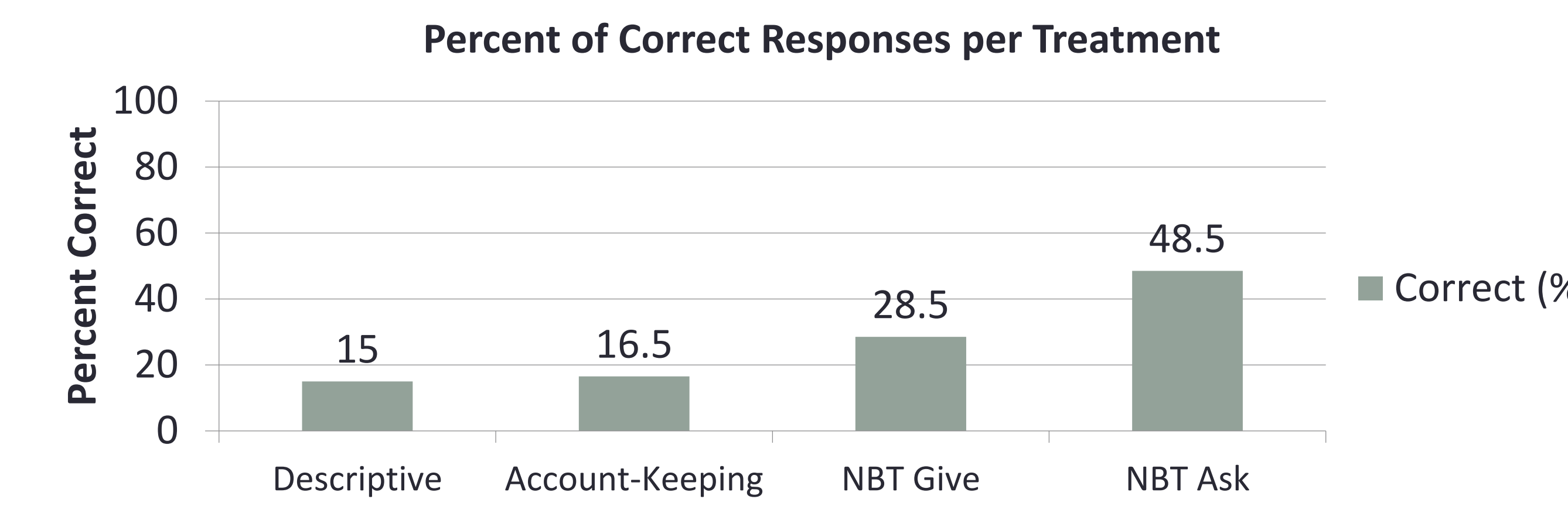
Despite their ethic of generosity and sharing, it is sometimes possible for Namka to hide food that they have obtained during the day. This means that they can also ask for food when they do not actually need it and to refuse to give food to others in need even though they actually do have food that they could give.

For the past few weeks, you and your field assistants have been collecting data on the Namka's foraging by following everyone who leaves camp every day. As a result, you have a complete record of who was successful and who was not. At the end of each day, you have also noted every time that someone has either asked for food or has given food to someone else.

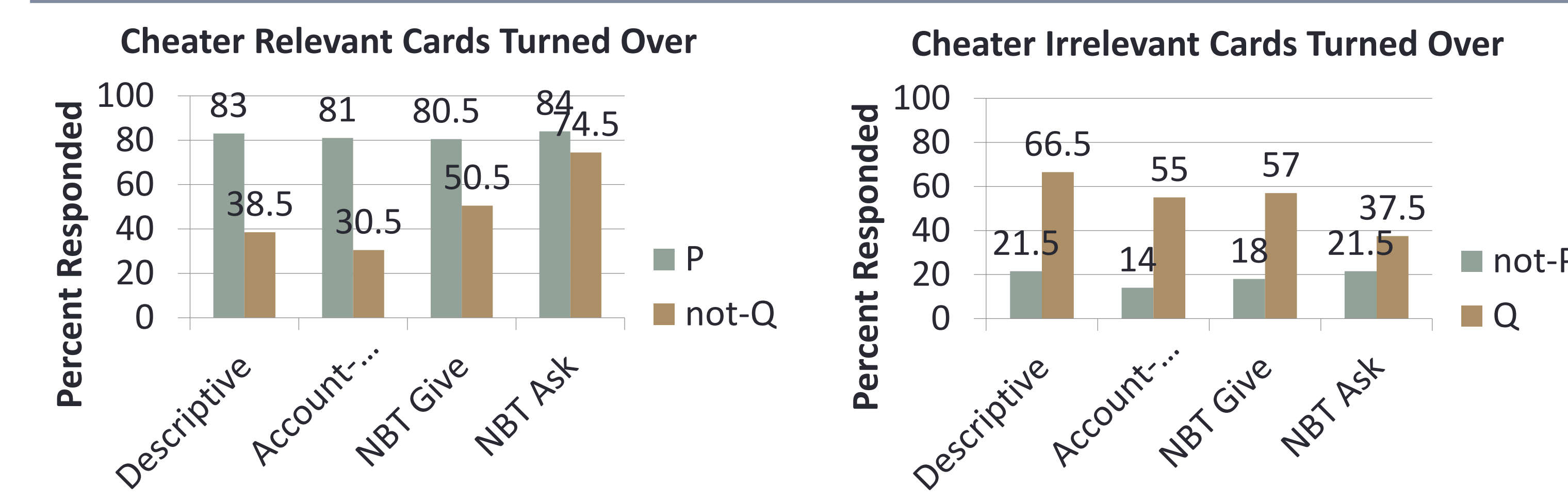
The cards below represent part of your data set. On one side of each card is information about whether a person was successful or unsuccessful on a particular day. On the other side is information about whether that same person requested any food to anyone else that day. You want to know whether the Namka really do follow their rule about food sharing. Indicate only those cards you definitely need to turn over to see whether the Namka sharing rule has been followed.

Food requested	Food not requested	Unsuccessful	Successful
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RESULTS



RESULTS



STRENGTH OF ASSOCIATION BETWEEN TREATMENT AND STRICT CORRECT RESPONSE

	χ^2	P Value (P >)
All Treatments	82.209	0.000
Descriptive Vs. Account-Keeping	1.657	0.198
Descriptive Vs. NBT Give	16.858	0.000
Descriptive Vs. NBT Ask	63.142	0.00
Account-Keeping Vs. NBT Give	8.258	0.004
Account-Keeping Vs. NBT Ask	46.678	0.000
NBT Give Vs. NBT Ask	16.894	0.000

CONCLUSIONS

- When a social contract is framed as a need-based transfer system, respondents can detect cheaters as well or better than when such a contract is framed as an account-keeping reciprocity system.
- Need-based transfer systems offer an alternative explanation for the explanation of the evolution of the human ability to detect cheater on social contrasts.
- Further research is needed on different forms of need-based transfers.

WORKS CITED

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